

THE CHALLENGE OF RAISING PUBLIC AWARENESS FOR THE DEVELOPMENT OF A CIRCULAR ECONOMY IN GEORGIA

GURANDA CHELIDZE

Caucasus University

Tbilisi, Georgia

gchelidze@cu.edu.ge

OLGA TRETIACOV

Moldova State University

Chişinău, Republic of Moldova

olga.tretiacov@usm.md

Abstract

In recent decades, the issue of human economic activity, which involves the consumption of natural resources on an annual basis whilst reducing the resources available for future use, has become increasingly salient. This dynamic is detrimental to the environment, ecology and the economy, and consequently raises the issue of transitioning from a linear economy to a circular economy.

The paper discusses the policy developed for the development of the circular economy in the European Union, the action plan based on this policy and its significance not only for the EU Member States, but also for the countries on the way to rapprochement with the EU, including Georgia.

Since signing the Association Agreement with the European Union in 2014, Georgia has taken steps in a number of areas to bring its country in line with European standards and legislation in the areas of environmental protection, climate change and others. Georgia is embarking on an accelerated path of transition to a circular economy, which requires the joint participation of many stakeholders - government agencies at all levels, the business sector, academia, investors and consumers.

Based on official documents of the European Union and Georgia, as well as studies conducted by different sectors, the article discusses several examples of the legislative framework necessary for the development of the circular economy in order to raise public awareness, different measures taken in response to the existing needs in this direction, their results and recommendations for further actions.

Keywords: *circular economy; public awareness; sustainable development; environmental policy; European Union; Georgia*

JEL Classification: *Q56, Q58, O13, K32, D83*

1. INTRODUCTION

In recent decades, the issue of human economic activity has become relevant, as it annually increases the number of natural resources consumed while reducing resources intended for the future. Such dynamics damage the environment, ecology, and economy raises the question of transitioning from a linear economy to a circular economy.

Against the backdrop of today's economic and environmental challenges, the circular economy is widely regarded as one of the most effective models for the sustainable use of resources and waste minimization. However, the successful implementation of this model depends heavily on public awareness. In Georgia, the concept of the circular economy is still in its infancy, and public knowledge of it is limited. This is precisely why raising public awareness is one of the most important prerequisites for developing this model. "The circular economy requires technological innovation and behavioral changes in society" (Geissdoerfer *et al.*, 2017).

Informing and educating society in this direction is critically important, as the circular economy requires changes at both the individual behavior and business practice levels. Several important details should be highlighted in this regard: It is essential to address existing societal challenges and manage change at the consumer level. A circular economy involves maximizing the use of resources and recycling to minimize waste. In order to achieve this, consumers need to know how to reduce waste, select sustainable products and participate in recycling; Encouraging businesses – An informed society creates demand for environmentally responsible products, which compels businesses to shift to circular models; Cultural transformation - Raising public awareness creates new social norms and values based on the smart use of resources and environmental protection; Low level of awareness among the population – Many citizens still do not have a full understanding of the concept of the circular economy and its benefits; Lack of education in schools and universities – this topic is rarely included in formal education. Naturally, these are issues that require considerable effort. This paper examines the steps taken in this direction in Georgia, the results achieved and future tasks for developing the country's circular economy.

Since signing the Association Agreement with the European Union in 2014, Georgia has made significant progress in aligning its legislation with EU standards and has embarked on a proactive journey towards integration with the EU. As the 'Association Agreement' is implemented, raising awareness of European values and rules among the population has become particularly relevant. This is important for approaching European standards and improving living standards.

As in other countries, it is important to assess how public knowledge and behaviour influence the development of the circular economy in Georgia, and how consumer changes and social norms and values are formed.

2. ASSOCIATION AGREEMENT AND ENVIRONMENTAL COMMITMENTS

The “Association Agreement between Georgia and the European Union”, signed in 2014, is an ambitious and innovative “new generation” agreement. It includes a Deep and Comprehensive Free Trade Area (DCFTA) component, as well as important concrete mechanisms for rapprochement with the European Union. For Georgia, the Association Agreement with the EU establishes a new legal framework for cooperation between the two sides and allows for closer collaboration in all priority areas (Association Agreement between Georgia and the European Union, 2014).

The Association Agreement addresses environmental issues, among other things. In the field of environmental policy and climate change, it includes the following key commitments:

Legislation harmonisation: Georgian legislation is moving closer to EU environmental directives and regulations. This includes the regulation of waste management, air and water pollution, and the protection of biodiversity and other environmental issues.

Developing sustainable development strategies: Georgia is responsible for developing and implementing national strategies and action plans on climate change, energy efficiency, and the circular economy.

Institutional capacity building: Georgia is responsible for strengthening the relevant institutional and administrative capacity to ensure the implementation of existing legislation.

Specific commitments to the circular economy include:

Improving the waste management system in line with relevant EU directives. Georgia has improved its waste management system to include waste reduction, recycling and reuse; Harmonisation of regulations and standards: Georgian legislation has been brought closer to EU technical regulations and standards to facilitate the implementation of the circular economy's principles; Promotion of sustainable production and consumption: Georgia has developed policies and strategies that promote sustainable production and consumption.

Thus, the Association Agreement is an important tool for Georgia in developing its circular economy. This includes harmonising legislation, developing strategies, and strengthening institutional capacities. Fulfilment of the Association Agreement's obligations contributes to Georgia's circular economy development. Promoting economic growth: Adopting circular economy principles promotes efficient use of resources and the development of new business models; Improving the environment: Improving waste management and reducing pollution improves the environment. Enhancing social well-being: Implementing sustainable development strategies enhances social well-being and job creation.

3. DEVELOPMENT OF THE CIRCULAR ECONOMY IN GEORGIA AND RAISING PUBLIC AWARENESS

The Georgian government has introduced legislative changes based on EU environmental and economic policy principles. These reforms aim to improve waste management, increase resource efficiency, and raise environmental standards.

The government has also set up agencies and mechanisms to develop and implement circular economy policies. These agencies have contributed to the development of sustainable development strategies and their effective implementation.

Since 2014, when the Ministry of Environment and Agriculture of Georgia began implementing the principles of the circular economy, it has organised awareness-raising campaigns and meetings with politicians, NGOs and business representatives. The second stage involved assessing the country's potential for implementing the circular economy and identifying priority sectors in which circular models could be implemented most effectively. The third stage involved developing a circular economy strategy.

Georgia is actively establishing partnerships to learn from the experience of more advanced countries and implement circular approaches, with the aim of becoming a leading regional player. The Government of Sweden and the Swedish International Development Agency (SIDA) currently provide the main assistance to Georgia. The first step in developing a circular economy is raising awareness. The activities implemented by the Union of Nature Researchers of Georgia “Orchis” are of particular interest in this regard. This programme provides stakeholders with recommendations on how to accelerate the implementation of circular model principles at different levels of economic activity (Prasek *et al.*, 2022). „Orchis”, a non-governmental, non-profitable organization that was founded in 1997 with the aim to protect environment and involvement in elaboration and implementation of environmental protection measures to create better and safer environment for society. „Orchis” actively promotes an accelerated transition to a green economy in Georgia. This involves promoting and implementing environmental, social and corporate governance, green finance and green procurement practices, while taking into account international best practices. “Orchis” believes that, by working closely with the government, the business sector, financial institutions, the Academy of Sciences and other relevant stakeholders, civil society can play an important role in the green transformation process and the implementation of circular economy principles at various levels of economic activity.

„Orchis” projects form the basis for the accelerated implementation of the circular economy. They are also important for fulfilling the commitments undertaken under the Association Agreement with the European Union, as well as

for inclusion in the European Green Deal process. This, in turn, ensures the implementation of the sustainable development agenda.

As part of this project, “Orchis” has planned lectures and training sessions on environmental degradation and human health, waste management and sustainable development goals, and biodiversity and climate change adaptation issues at various higher education institutions in 2023. One of the first events took place at Sulhan Saba Orbeliani University, where presentations on the following topics were given to students and faculty: „Environmental Pollution and Human Health”, „Sustainable Waste Management: Challenges and Development Prospects”, and 'Biodiversity, Climate Change, and Sustainable Development'. These discussions aroused great interest and prospects for future cooperation in the field of environmental protection and the circular economy were outlined ("Orchis" Green Transformation).

“Orchis” educational activities and campaigns are an effective means of achieving the Sustainable Development Goals. These goals have a broad scope, addressing the interconnected elements of sustainable development: economic growth, social inclusion, and environmental protection. In this context, raising awareness among the general public, including university students, is important. Protecting biodiversity, addressing climate change and ensuring proper waste management and care for human health are important components without which the SDGs cannot be achieved. Notably, “Orchis” is supported by the Georgian Ministries of Environment and Agriculture, Education and Science, Economy and Sustainable Development, and Regional Development and Infrastructure, as well as receiving financial support from the Government of Sweden.

4. LEVEL OF PUBLIC AWARENESS OF CIRCULAR ECONOMY IN GEORGIA

The Circular Economy Awareness Programme, developed by “Orchis”, provides basic information on the circular economy and circular business models, as well as financing opportunities. It also offers guidance to various stakeholder groups, including policymakers, financial institutions, and project promoters, on accelerating the adoption of circular economy principles at different levels of economic activity. Launched in November 2019, the programme featured an international circular economy expert and eight one-day conferences for various target groups. Notably, all conferences were attended by Members of Parliament, senior civil servants at central and local levels, and private sector representatives. Key issues discussed at the conferences included general information on circular economic transition pathways, the legacy of the industrial era, current trends, and the challenges and opportunities they present. Other topics covered included a comparison of linear and circular approaches, circular economy business models, and information on EU circular economy policies. These include the initial 2015 circular economy package and the new Circular Economy Action Plan adopted in

2020. Two books on the circular economy have been published, as well as several thematic articles in the journal. Environmental education is crucial for the development of the circular economy. Back in 2014, the Centre for Environmental Information and Education, supported by the German Society for International Cooperation (GIZ), conducted a small study which assessed environmental education in formal and non-formal sectors in Georgia, identifying achievements and requirements.

A study entitled “Assessing of Environmental Education and Awareness in Georgia” at the National Level was conducted in 2022. It was carried out by the Institute for Social Studies and Analysis (ISSA), at the initiative of the Centre for Environmental Information and Education, and with the support of the United Nations Development Programme (UNDP) and the Government of Sweden (Assessing the level of environmental Education and Awareness in Georgia, 2022).

According to the survey, the majority of respondents (an average of 60 per cent) rarely or never read environmental information or discuss environmental issues with others. Furthermore, although the majority of both urban and rural residents rarely read environmental information or discuss environmental issues, a higher proportion of rural residents than urban residents never or rarely read environmental information (64 per cent in rural areas versus 60.5 per cent in urban areas). Additionally, it is noteworthy that the proportion of individuals seeking information on significant environmental issues increases with educational attainment (30.5% of individuals with secondary education and 42% of individuals with higher education always or often receive such information) (Level of Environmental Information and Education in Georgia, 2022).

In recent years, activities aimed at promoting both formal and non-formal environmental education have been based on the Third National Environmental Action Programme, as well as objectives and goals defined by international agreements. Notable efforts include changes to the national textbook accreditation standards, which now incorporate sustainability principles; these principles have been reflected in all primary-level textbooks. In 2020, a supplementary textbook titled “*Environmental and Agricultural Education in Schools*” was published. A teacher training process has begun, and educational programs in vocational education have been updated accordingly.

Environmental education is a continuous process, and it is essential to implement consistent and uninterrupted actions, as the level of environmental education and awareness remains a challenge to this day.

Environmental awareness was identified as one of the key challenges in the thematic inquiry report by the Environmental Protection and Natural Resources Committee of the Parliament of Georgia, titled “*The Current Situation in the Field of Municipal Waste*.” The lack of education and awareness is also highlighted by the findings of various studies conducted under different projects on specific

environmental issues. Notably, the 2020 monitoring report of the project "*Clean Region – The Road to Europe*" emphasized this problem.

According to experts, environmental education should be prioritised at state level to encourage behavioural change regarding environmental issues. We agree with this, as the current situation is hindering the development of the circular economy and recycling infrastructure.

Studies in the Georgian environmental sector also indicate that public awareness is lacking due to a combination of insufficient information dissemination and infrastructural problems. For instance, many people do not understand the importance of correctly analysing and sorting waste, which results in lower recycling rates. In addition, the lack of recycling facilities and insufficient information campaigns at state level hinder population involvement and behavioural change. It can be said that raising awareness among Georgian citizens is one of the biggest challenges to developing a circular economy.

These results confirm that, to successfully implement the circular economy, it is necessary to develop and implement intensive education and communication programmes that reach different groups, from schoolchildren to professionals and civil society. According to other authors who have conducted research in both Georgia and other countries, social change and raising awareness are important conditions for the systematic implementation and sustainability of the circular economy (Geissdoerfer *et al.*, 2017).

These are clearly issues that require a great deal of work. The question arises: what can be done to raise awareness? The most effective methods are information campaigns through the media and social networks, the development of educational programmes for schools and universities, partnerships with local authorities and businesses, and pilot projects at a community level, such as markets for renewable materials and the development of environmental education centres and platforms. Various social media pages that provide information about the circular economy have proved interesting in this regard, including details of educational events and information about the nature and importance of the circular economy.

As part of our research into the study of the research question, we conducted a quantitative study. Two hundred respondents aged 18–25 were interviewed. The results showed that up to 85% of respondents were familiar with the Facebook page "Tene", which is active in protecting the environment from plastic waste and informing the public about its harmful effects. The page explains how the "Tene" bin helps us to recycle plastic so that we can use recycled plastic productively. Respondents are well aware of the importance of recycling plastic, protecting the environment from harmful substances, and making use of recycled plastic in other products. However, only a small proportion confirm that they participated in "Tene's" campaign, which offered a USB cable instead of a plastic bottle (Phone chargers in exchange for plastic bottles, 2021). Respondents are well aware of the importance of recycling plastic, protecting the environment from harmful

substances, and repurposing recycled plastic. However, only a small proportion confirm that they participated in Tene's campaign, which offered a USB cable instead of a plastic bottle.

In Georgia, knowledge of the circular economy is largely confined to environmental organisations, academic institutions, and specific business sectors. For ordinary citizens, the concept is often unfamiliar or is only associated with recycling.

In April 2021, a survey was conducted to investigate the level of awareness of the circular economy in society. Of the 80 respondents from different age groups, three-quarters were female and one-quarter were male. Half of the respondents were aware of the circular economy, while the other half were not. However, 90% of respondents felt that planning for a circular economy was inevitable. Interestingly, many respondents had heard of Georgian enterprises that had adopted the principles of the circular economy.

Clearly, the most effective way to address existing issues is to educate the population about the importance and effectiveness of the circular economy. Over the past few decades, various eco-friendly organisations and platforms working on circular economy principles have been established around the world, and events have been held to share experiences and expertise (Dolidze, 2021).

Strengthening Georgia's circular economy through resource efficiency and cleaner production' is of great interest to businesses. Resource Efficient and Cleaner Production (RECP) enables companies to implement comprehensive, continuous, preventive environmental strategies for their processes, products, and services, thereby improving efficiency and reducing risks to people and the environment. In short, RECP helps companies minimise the environmental impact of their operations, reduce their use of resources and increase their productivity.

Georgia has more than 41,000 manufacturing companies, 85 per cent of which are small and 9 per cent of which are medium-sized (Strengthening the circular economy in Georgia through resource-efficient and clean production, 2024). EU4Environment has shown that Georgian businesses are interested in achieving sustainability by reducing energy, material and water consumption and contributing to a cleaner environment. As material and energy costs are a significant part of production costs, inefficient use of natural resources not only wastes money, but also significantly contributes to climate change and environmental degradation. The EaP GREEN and EU4Environment programmes developed environmental, health and safety recommendations and proposed them to companies based on their specific needs, resources, capacities and priorities. Awareness raising activities were also carried out, national service providers were trained, and guidelines on RECP (Strengthening the circular economy in Georgia through resource-efficient and clean production, 2024).

Enterprises demonstrated a deep understanding of the role, purpose and benefits of the RECP methodology among their senior management. However,

while a few companies retained their original RECP-trained teams, most experienced rapid staff turnover. This emphasises the need for continuous practical training combined with awareness-raising activities to ensure the consistent application of lessons learnt from RECP.

Georgia's experience shows that international cooperation programmes have played a crucial role in generating demand for knowledge and services that were previously unavailable in industries promoting RESP and the circular economy over the last decade. Entrepreneurs are increasingly interested in participating in programmes that provide their industries with training and technical assistance. They are also motivated by the expected benefits and success stories of RECP demonstration companies. However, it remains important to strengthen the capacity of institutions implementing circular economy projects to disseminate relevant knowledge of the circular economy to society (Strengthening the circular economy in Georgia through resource-efficient and clean production, 2024).

An interesting document in terms of raising public awareness is the “*Food Waste Management Concept*,” which clearly outlines the transition to a more structured and scalable level of FLW (Food Loss and Waste) management, both at the decision-making and public awareness levels. This concept paves the way for international standards and best practices. The issue has become even more relevant following the adoption of the *Food Loss and Waste Reduction and Food Storage Law* by the Parliament of Georgia on October 4, 2023.

In this regard, alongside all other steps, awareness-raising campaigns are crucial. Initiatives are being developed at the national level for the public, especially schools, consumers, and primary producers, to help them understand the environmental and socio-economic impacts of food loss and waste. These campaigns aim to promote sustainable behaviors, including responsible purchasing, proper storage, and waste reduction practices.

Producer-focused campaigns are underway, with efforts to raise awareness among primary producers in collaboration with local activity groups. This will help reduce FLW and improve FLW management practices at the production level. It is important that the Ministry of Environmental Protection and Agriculture, the National Food Agency, local self-governments, the private sector, and civil society organizations ensure the implementation of awareness-raising and training programs about the significance of FLW reduction. The involvement of international organizations and donors is also essential, as they support targeted awareness campaigns aimed at strengthening the culture of FLW reduction in Georgia. While the concept is well-structured and aligned, it is designed for the period from 2025 to 2028. Therefore, it is currently impossible to assess the outcomes.

Access to a clean and healthy environment is one of the basic human rights enshrined in the Georgian Constitution. However, the production and import of plastic in Georgia has increased by 71% over the last decade, which has had a

direct impact on environmental pollution. There has been particular growth in the production and import of single-use plastic products. Around 93% of these products end up as waste in coastlines and illegal landfills.

In response to this challenge, the non-governmental organisation CENN (Caucasus Environmental NGO Network), supported by the United Nations Development Programme (UNDP) and Norway and in partnership with the Ministry of Environmental Protection and Agriculture, implemented the “Reducing Plastic Pollution in Georgia” project in 2024. The project consists of four main components: sectoral training on the circular economy; campaigns for businesses and schools; educational activities for schoolchildren, including green camps; and a large-scale media campaign on reducing plastic waste. As part of the project, meetings have been held to offer participating companies and organisations advice on business sustainability. The project is also collaborating with schools to develop a plastic prevention programme (Khidureli, 2024).

5. CONCLUSION

Although Georgia has made significant progress in environmental protection and tackling climate change,

The development of the circular economy depends heavily on public knowledge and behaviour. Public knowledge of circular economy principles is a key factor in its successful implementation. People who are familiar with these principles (e.g. waste reduction, resource reuse and recycling) are more likely to choose environmentally responsible products. In other words, they are empowered to make the right choices. Public initiatives emerge as a result of this knowledge, raising awareness and shaping values and demand. Behaviour directly changes the market, reducing resource wastage and contributing to economic growth.

References

- 1) Dolidze, T., Benefits of implementing circular economy principles. [online] Available at: <https://geoeconomics.ge/?p=13464> [Accessed 04.05.2025].
- 2) Geissdoerfer, M., Savaget, P., Bocken, N. M. P. and Hultink, E. J. (2017). The Circular Economy – A new sustainability paradigm? *Journal of Cleaner Production*, 143.
- 3) Khidureli, S., End plastic pollution in Georgia. (2024). Web page. [online] Available at: <https://bm.ge/news/proeqti-shevamtsirot-plastmasit-dabindzureba-saqartveloshidaitsyo-ras-gegnavs-cenn-i-kampaniis-farglebshi> [Accessed 05.05.2025].
- 4) Prasek, D., Chelidze, M., Pavliashvili, S. and Kimeridze, M. (2022). Assessment of the circularity level of the Georgian economy.
- 5) "Orchis" - Green Transformation. Web page. [online] Available at: <https://unglobalcompact.ge/sustainability-spotlight/orqisis-mwvane-transformacia/> [Accessed 04.05.2025].
- 6) Assessing the level of environmental Education and awareness in Georgia, (Research Analytical Report). (2022). [online] Available at: <https://georgia.un.org/en/254717->

- assessing-level-environmental-education-and-awareness-georgia [Accessed 03.05.2025].
- 7) Association Agreement between Georgia and the European Union. (2014). Web page. [online] Available at: <https://matsne.gov.ge/ka/document/view/2496959?publication=0> [Accessed 05.05.2025].
 - 8) Environmental and Agricultural Education in Schools (2020). [online] Available at: <https://www.eiec.gov.ge/Ge/EducationalResources> [Accessed 03.05.2025].
 - 9) "Orchis" - Green Transformation. Web page. [online] Available at: <https://unglobalcompact.ge/sustainability-spotlight/orqisis-mwvane-transformacia/> [Accessed 04.05.2025].
 - 10) Phone chargers in exchange for plastic bottles. (2021). [online] Available at: <https://at.ge/2021/07/17/damteni/> [Accessed 03.05.2025].
 - 11) Report 2024, Ministry of Environmental Protection and Agriculture of Georgia. Web page. [online] Available at: <https://mepa.gov.ge/Ge/Reports> [Accessed 03.05.2025].

This volume brings together academic contributions and scientific abstracts presented at the ECO4ALL International Interim Conference (Iași, 9–10 May 2025), organized within the framework of the COST Action CA22124 – ECO4ALL. The papers explore current topics regarding the consumer-centric circular economy, such as extended producer responsibility, cross-border consumer protection, green public procurement and legal regulations for sustainability. The volume reflects an interdisciplinary vision and contributes to shaping a common European agenda for the green transition.

Acknowledgment

The Conference Proceedings of COST Action CA22124 ECO4ALL is the result of the ECO4ALL Mid-term International Conference “CHALLENGES, PROCESSES AND POLICIES FOR CIRCULAR ECONOMY THAT WORKS FOR CONSUMERS” Iași, May 9–10, 2025 and is based upon work from COST Action CA22124 – ECO4ALL “EU Circular Economy Network for All: Consumer Protection through reducing, reusing, repairing”, supported by COST (European Cooperation in Science and Technology – www.cost.eu).

ISBN online: 978-606-714-944-9