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CROMO ALAPÍTVÁNY

WE-DEMOCRACY PROJECT
Online Survey National Report - Hungary

August 2023

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1. Introduction

In the framework of the online social survey, the **CROMO Foundation** is investigating citizens' knowledge, attitudes, habits and needs regarding the circular economy at national level as part of the WE-Democracy international project (Noone left behind – Empowering citizens to participate in democratic processes – EACEA call). The first step is to complete an online questionnaire.

The project was launched in May 2023 and the questionnaire was available to the Hungarian population from 25 May 2023. Responses closed on 31 July 2023.

The aim of the project is to empower citizens to make policy decisions together with decision-makers through cooperation in the field of the circular economy.
The focus is on the circular economy, which is being explored in cooperation by the organisations representing the project countries (Bulgaria, Greece, Hungary, Italy, and Romania).

The questionnaire survey aims to assess the current knowledge and attitudes of the population towards the circular economy, the factors that could increase their commitment to it, and the barriers that hinder this commitment.

The report covers the efforts made in Hungary to promote the circular economy, giving a brief overview of the local specificities and legal regulations.
It sets out the methodology for reaching respondents. It presents demographic characteristics, respondents' environmental knowledge and concerns, their cooperation, and their effectiveness in analysing the questionnaire survey responses. Finally, a summary of the results of the responses and the conclusions drawn are used to make recommendations and suggestions to national legislators.

2. Country context

The concept of a circular economy or circular economy is an important element of sustainable development. It is about extending the life cycle of products as much as possible, thus allowing for the least possible new material and energy inputs and the associated increase in specific carbon footprint.[1]
It is important to design the life cycle of a product so that it flows in a virtually closed system, extending its useful life, optimising the rate of use, and then, at the end of its life, its components and materials being recycled or reused to re-enter the economic cycle. So in the circular economy, waste is effectively eliminated, either because it is used as part of a technical cycle or because it is safely decomposed back into nature, enriching natural capital.
In addition to the use of materials, it is also important that the circular economy cannot be based on the use of fossil fuels, but only on renewable and environmentally friendly energy sources.

In Hungary, the circular economy has become important as part of the EU's environmental and sustainability directives. In 2018, three organisations, the Ministry of Innovation and Technology, the Business Council for Sustainable Development in Hungary (BCSDH), and the Embassy of the Netherlands, founded the Circular Economy Platform, with the aim of working together with companies and NGOs to accelerate the circular economy transformation. The Platform currently has nearly 100 members and its main activities are knowledge sharing, dissemination of corporate best practices, circular product design training and the development of a service to measure circularity.

At the beginning of March 2021, the Hungarian parliament dealt with the issues of the circular economy in the framework of an amendment to the law (Law on the Amendment of Certain Laws on Energy and Waste Management). From 2021 onwards, there is a shift and transition towards the circular economy, with varying degrees of success.[2] The Act II of 2021, also known as the Waste Management Code, aims to provide a legal basis for the transition to a circular economy, including making producers responsible for the products they produce and waste. At that time, there was no comprehensive strategy or roadmap setting out the goals, tools and actions needed for the national economy to make the transition to a circular economy.

In March 2022, another circular economy initiative, the Circular Economy Technology Platform, was established by the Ministry of Innovation and Technology, with corporate and industry experts, which also helps to implement the model. But despite all the initiatives, until circularity is properly established in law and the country has a concrete strategy for transition, it is difficult to operate circularly in a linear economy.

Within the use of natural resources, Hungary recorded the highest increase in land use, i.e. the increase in the area covered by artificial surfaces (buildings, roads, parking lots, etc.) among EU countries between 2012 and 2015. Another important measure is resource productivity (a measure of the total amount of materials directly used by an economy

[1] https://hu.wikipedia.org/wiki/Körforgásos_gazdaság
[2] https://www.portfolio.hu/gazdasag/20210305/itt-a-korforgasos-gazdasag-ami-magyarorszagon-is-hamarosan-az-eletunk-reszeve-valhat-472578

[EUR/kg]), where the performance of the Hungarian economy has deteriorated spectacularly compared to the EU average. While in 2010, the EU average resource productivity was 1.7 times better than Hungary's, in 2018 this number increased to 2.4, which is uniquely high in the EU. The relative deterioration of these two indicators means that the Hungarian economy can only achieve economic growth with declining resource efficiency, i.e. the goal of decoupling economic growth from environmental pollution has not yet been achieved. [3]

In Hungary, uptake has been slow due to the exposure of the economy to battery development, production and recycling. Nuclear energy is seen as a green energy (thus triggering the construction of more nuclear power plants). Wind power is currently not available for residential or commercial installation, and solar capacity is insufficient. The Greening of transport is an important factor and progress has already been made (green bus programme).
Waste management has been centralised and the focus is shifting from conscious production to waste management. 70% of PET bottles are not recycled.[4]

Under the funding possibilities of the 2021-27 EU cycle, a budget of HUF 1,200 billion is available for the planned developments under the Environment and Energy Efficiency Operational Programme in five main priorities (KEHOP Plus, GINOP Plus, TOP Plus, DIMOP Plus, CAP Strategic Plan). In addition, several funds of the Recovery and Resilience Facility (RRF) are available to support the transition to a circular economy. There is currently no direct application for support to the circular economy in Hungary.

In March 2023, the National Circular Economy Strategy was presented, which was prepared with the assistance of the OECD:
https://www.oecd.org/environment/waste/circular-economy-country-studies.htm
In April 2023, the Circular Economy Academy webinar series was launched to present the Strategy. It presents best practices, key priority areas (biomass, food, construction and plastics) and measures with a significant impact.

Goals to be achieved by 2040:

- - The Government invests in research and introduces incentives to promote resource efficiency through innovation, eco-design, product sharing and reuse. Hungary aims to double its resource productivity (GDP/DMC) and reach the target of €2/kg.
- - In order to close the material loop and use materials more sustainably, measures will be taken to double (to 15%) Hungary's recycling rate.
- - The Government will support innovation and the development of new business models. Hungary aims to increase the number of circular jobs by 30% (to 2.5% of the total workforce) in industry, agriculture and services.[5]

Meanwhile, the country's resource productivity has been steadily and significantly deteriorating since 2012, as the only one in the European Union.

Among the large Hungarian multi-companies, MOL has come up with plans and strategies for the transition to a circular economy. Currently, the 2030 target for Hungary to switch to a circular economy does not seem achievable, as action plans have not been prepared in

[3] Bartus, Fenntartható pályán? A társadalmi-ökológiai fenntarthatóság állapota és trendjei
[4] https://hvg.hu/zhvg/20220615_Sosem_lesz_korforgasos_a_gazdasag_jogi_szabalyozas_nelkul
[5] Towards a National Circular Economy Strategy for Hungary | OECD iLibrary (oecd-ilibrary.org)

time, the public perception does not reflect it (85% of Hungarian people do not even know the meaning of the model or only understand it as recycling[6]) and companies are not necessarily interested. Most businesses have no idea about circularity or how to integrate the concept in practice. The model is only popular among start-ups, e.g. Munch, which connects restaurants, commodity retailers and cafés with consumers as a food rescue service. The leftover food can be uploaded to an app by businesses and customers can buy it cheaper. Car-sharing services also fall into the circular category, but community platforms for sharing equipment are also popular in Hungary. Another example is Pilze-Nagy ltd., where they make raw material from hay, which they use to grow mushrooms and produce biogas from waste.

Overall, in order to reach its goals for the transition to a circular economy by 2040, Hungary needs to focus on critical measures and efforts.
To fully realise the potential of the circular economy, Hungary needs to adopt a comprehensive circular economy policy framework. Further policies are needed to achieve absolute decoupling so that resource use or some environmental pressure declines while economic activity continues to grow. Promoting and investing in recycling and eco-design can increase the availability of green jobs, products and services. Improving product reuse and repair can generate local product loops that create local jobs and make the economy less dependent on imports.[7]

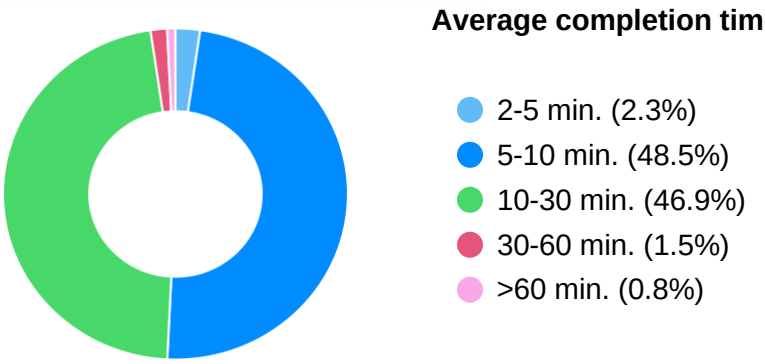
3. Methodology

The link to the questionnaire was distributed as widely as possible by the CROMO Foundation. It was made available on its own website and social networking sites, where it could activate its associated community.
The Foundation staff also promoted the project and the questionnaire through their own network.
It was also shared with several professional and other groups in order to reach the widest and most diverse social strata: university alumni networks, intellectuals who could also be lecturers on the topic, the mailing list of the large families association - large families are one of the biggest consumers among the population and their awareness of the issue is crucial, agricultural sector, promotion in a group of active gardeners.

With hundreds of people reached, the required number was quickly gathered. 263 people viewed or started to fill in the questionnaire, of which 131 valid responses were received within the deadline. The response rate was 49.4% among those who viewed the questionnaire. All respondents accessed the online questionnaire via the link provided. The average completion time was 5-10 minutes (48.5%) and 10-30 minutes (46.9%).

Figure 1: Average completion time

[6] https://g7.hu/adat/20210528/a-magyarok-85-szazaleka-nem-ismeri-azt-a-gazdasagi-modellt-amely-fele-a-kormany-elindult/
[7] https://www.oecd-ilibrary.org/sites/1178c379-en/index.html?itemId=/content/publication/1178c379-en



The online survey was available to the Hungarian population from 25 May till 31 July 2023.

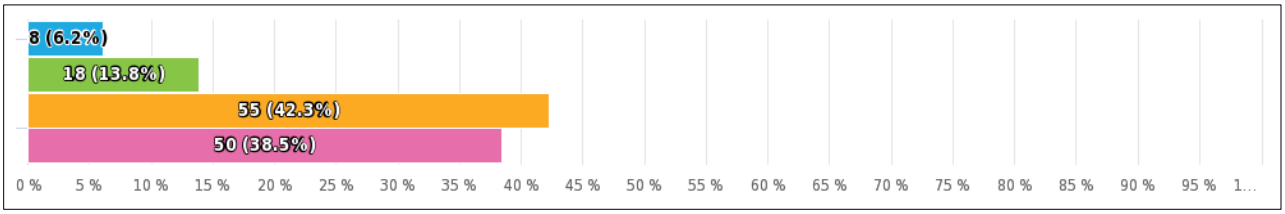
4. Sociodemographic data

The age distribution of respondents varies widely: from 18 to older age groups. The highest response rate was among the middle-aged, 42.3% (55 respondents) aged 40-54, with 38.5% (50 respondents) aged over 55. The younger age group had a lower response rate, with almost 20% between 18 and 39 years.

Table 1: Demographic Data - age

Answer Choices	Responses	Ratio
18-24	8	6.15%
25-39	18	13.85%
40-54	55	42.31%
55+	50	38.46%

Figure 2: Demographic Data - age



The gender gap is significant. Of the respondents, 28 are men and 103 are women. There was one error among the respondents, those who marked more than one respondent indicated to us that they were in the female category. Thus there was no "non-binary" response.

Table 2: Demographic Data - gender

Answer Choices	Responses	Ratio
Man	28	21.54%
Woman	102	78.46%

Non binary	1	0.77%

It is assumed, but not proven, that women are the most interested in this topic. The majority of male respondents were aged 40 and over, but middle-aged women are also in the majority, as the overall proportion of young people is low.

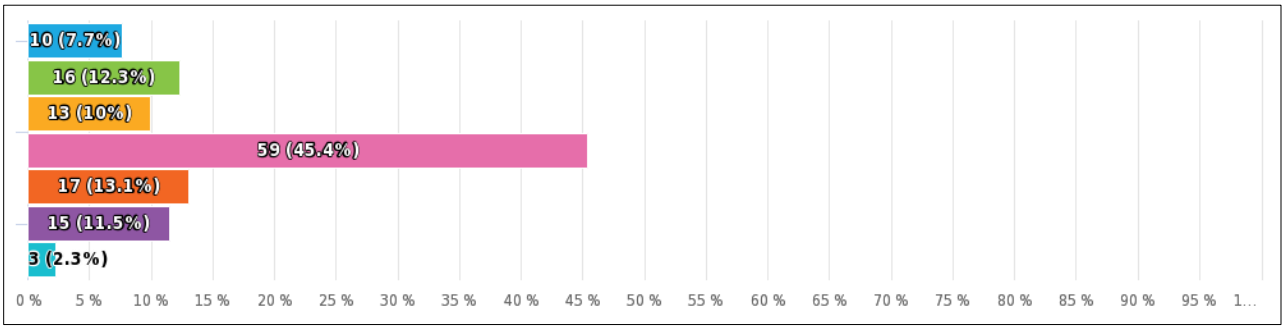
The majority of respondents live in Hungary (126), 1 respondent lives in Romania and 3 did not specify their country of residence. It is safe to say that the responses have Hungarian characteristics.

There is also a wide range in terms of the occupation of the respondents, with the majority being in employee status. Almost equal proportions are represented by entrepreneurs, university staff, NGO staff and pensioners. A smaller group is made up of students (9 persons) and the proportion of unemployed is negligible (2.3%, 3 persons).

Table 3: Demographic data - Education

Answer Choices	Responses	Ratio
Student	10	7.69%
Academic	16	12.31%
Civil Society Organisation worker	13	10%
Employee	59	45.38%
Self-employed	17	13.08%
Retired	15	11.54%
Unemployed	3	2.31%

Figure 3: Demographic data - Education

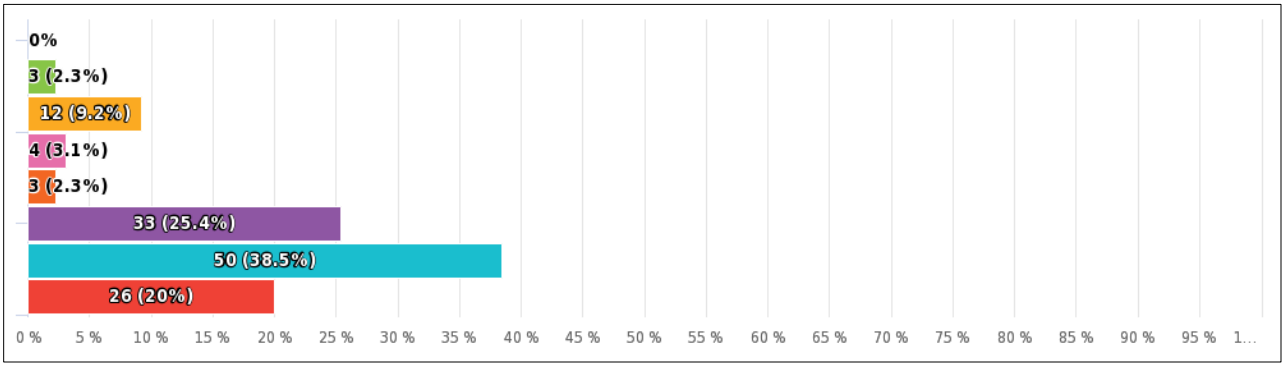


From the definition of occupations, it could also be inferred that respondents have some kind of completed education. Without inference, the responses confirm this. There are no respondents without qualifications. There are only 3 respondents who have completed up to grade 10 of secondary school with a primary education.

Table 4: Demographic data - employment status

Answer Choices	Responses	Ratio
No qualification		0%
Lower secondary education	3	2.31%
Upper secondary education	12	9.23%
Post-secondary non-tertiary education	4	3.08%
Short-cycle tertiary education	3	2.31%
Bachelor or equivalent level	33	25.38%
Master or equivalent level	50	38.46%
Doctoral or equivalent level	26	20%

Figure 4: Demographic data - employment status



The chart also shows that the majority (38.5%, 50 people) have a master's degree or equivalent, and 26 (20%) have a doctorate.
Overall, 40% of the respondents have a bachelor's or intermediate degree, while 60% have a master's or doctorate. Respondents indicated the highest level of education completed.

Overall, the sociodemographic data show that educated middle-aged Hungarian women workers have the highest propensity to respond in the study population. Young men and men were not very sensitive to the topic. The participation of entrepreneurs in the survey is desirable because of their potentially crucial role in the circular economy, and their responses are therefore particularly important for us.

5. Environmental knowledge and concerns

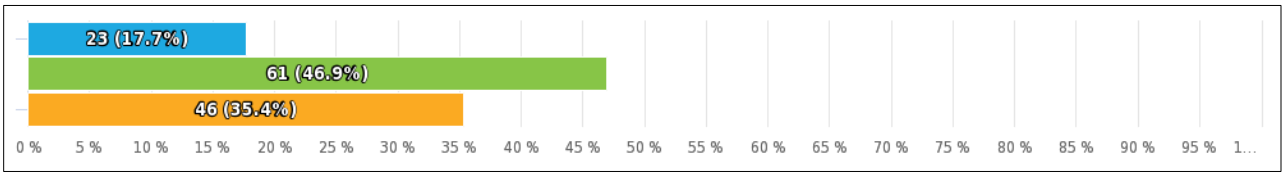
In this block we look at how much respondents know about the environment and the impact of humans on the environment.

In Hungary, the responses indicate that there is no awareness of the UN 2030 Agenda. No, or not sure. A high level of uncertainty indicates that they have heard the term but are not sure of its meaning, or that they do not know its meaning but only the term.
Knowledge is more widespread among graduates.

Table 1: Level of awareness regarding the UN Sustainable Development Agenda 2030

Answer Choices	Responses	Ratio
Yes	23	17.69%
No	61	46.92%
I am not sure	46	35.38%

Figure 2: Level of awareness regarding the UN Sustainable Development Agenda 2030



Further questions were asked about the content of Agenda 2030, which was also answered by those unsure and those who did not know it at all.
As only a small proportion of respondents were familiar with the content of the Agenda 2030, and therefore the goals it contains, the rest only guessed.
Apart from the almost 30% who selected the „I did not know" answer, 84 respondents were able to select the main goals of combating poverty accurately. Since the response options were not separate goals, but contained a set of goals to choose from, the choice was easier. The goals not included in the Agenda (stopping the production of diesel cars, stopping meat production) also received 5 votes. Those who admitted to not being familiar with Agenda 2030 did not know the goals, but among the undecided there were some who could identify the exact goal.

Table 3: Level of awareness regarding the UN Sustainable Development Goals

Answer Choices	Responses	Ratio
Fighting poverty, clean and cheap energy, responsible consumption and production	84	64.62%
Fighting world hunger, having regular public transport, quality education	6	4.62%
Stop production of diesel cars, stop production of meat	5	3.85%
I do not know	36	27.69%

The chart shows that the other real-world choices: fighting world hunger, providing accurate

public transport and quality education, are only marginally selected. In total, 6 people chose these. All but one of the 6 were women, there was no correlation in terms of occupation and highest level of education, but only one was sure of the content of the Agenda 2030, the other 5 were not sure or uncertain. Thus, only one of the 23 people who knew the document also ticked this response option. However, this may be due to the fact that the questionnaire question did not specify that more than one answer was possible to select, so they ticked the answer that was more relevant to them. No firm conclusions can be drawn from this. Respondents all ticked one answer for this question.

The next set of questions concerned the three "Rs".
For the meaning of the term 3R 71.5% of respondents got the answer right, while 22.3% did not know. 6.2% chose another option. Of these, they were already unsure about Agenda 2030.

Table 4: Responses to the question "What do the 3"Rs" mean"

Answer Choices	Responses	Ratio
Reduce, reuse and recycle	93	71.54%
Radiation, resource and restoration	0	0%
Resource, reuse, research	8	6.15%
I do not know	29	22.31%

The most important question for the project is the knowledge of the circular economy. 96.2% of the respondents could correctly select the meaning of circular economy. Only a meagre 3.8%, 5 people, answered that they did not know. No one ticked the incorrect, irrelevant answers.
Those who did not know the concept did not know the other, earlier concepts or the UN Agenda 2030. They are all middle-aged workers, employees.

Table 5: Responses to the question "What is Circular Economy"

Answer Choices	Responses	Ratio
A green and sustainable model of production and consumption	125	96.15%
A type of exchange of objects between neighbours	0	0%
An isolationist kind of economy	0	0%
I do not know	5	3.85%

Although respondents were able to define the meaning of the circular economy well, they were uncertain about its specific meaning, with 59.2% of them saying they had heard of the term but were not clear about the specifics. 1 person is a professional in the field, and 26.2%

do not know the content at all. Only nearly 15% said they had good knowledge in the field.

Table 6: Responses to the question "What is your level of knowledge regarding the concept of circular economy"

Answer Choices	Responses	Ratio
I am a professional in the field	1	0.77%
I have extensive knowledge	0	0%
I have good knowledge in the field	19	14.62%
I've heard the term but I'm not familiar with the specifics	77	59.23%
None	34	26.15%

Looking further into the context of knowledge, those who did not know what a circular economy is, do not know its content. The middle-aged entrepreneur who responded as a specialist is a woman who is familiar with the other concepts interviewed. Those who have a good knowledge of the content of the circular economy are also familiar with the 3Rs concept. There are no other clearly common aspects in the answers.

The majority of respondents are not familiar with the concept of "greenwashing". They either indicated that they did not know the meaning or gave a completely different meaning. More than 60% do not know the exact meaning of "greenwashing".

Only 36.9% of respondents indicated a communication or marketing strategy. As this activity is aimed at misleading consumers, it can be very effective in Hungary, as the majority of people are not aware that the marketing or communication message about a product or business does not reflect reality.

Table 7: Responses to the question "What is "Green Washing"

Answer Choices	Responses	Ratio
A communication or promotion strategy	48	36.92%
A washing technique	56	43.08%
An aquatic plant	1	0.77%
I do not know	26	20%

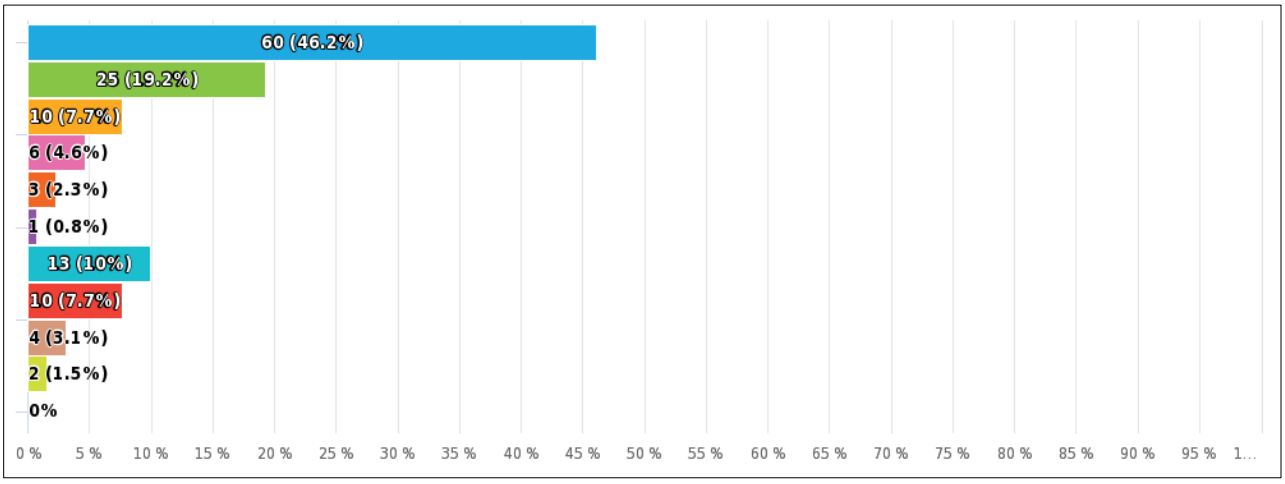
The previous questions all presumed a prior knowledge to be answered accurately, requiring the respondent to have prior learning or knowledge. In what follows, we want to know their views on how they perceive the global environmental challenges facing society today. They were asked to choose the most significant global environmental challenge from a list.
Nearly half of respondents (46.2%) selected Climate change mitigation and adaptation. Pollution problems and their effect on health was the next most important issue, with 19.2% of respondents saying it was a priority.

Almost half of the respondents (46.2%) identified Climate change as a challenge to mitigate and adapt to. Pollution and its impact on health is the next most important issue, with 19.2% of respondents saying it is a priority.
Hydric stress and water scarcity, Energy transition and renewables, Global warming from fossil fuels are in the midfield. Few people chose Sustainable food model, Food waste, Biodiversity loss, Deforestation, Sustainable urban development and mobility as their top priorities. Fast fashion and textile waste were not seen as a major challenge that society should address.

Table 8: Responses to the question regarding the most significant global environmental challenge facing today's society

Answer Choices	Responses	Ratio
Climate change mitigation and adaptation	60	46.15%
Pollution problems and their effects on health	25	19.23%
Energy transition and renewable forms of energy	10	7.69%
A sustainable food system model	6	4.62%
Loss of biodiversity	3	2.31%
Sustainable urban development and mobility	1	0.77%
Water stress and water scarcity	13	10%
Global warming from fossil fuels	10	7.69%
Food waste	4	3.08%
Deforestation	2	1.54%
Fast fashion and textile waste	0	0%

Figure 6: most significant global environmental challenge



As we did not have information on prior knowledge and information platforms, we also asked where information on environmental issues is obtained. This is also an interesting question as the majority of respondents had no knowledge of the UN Agenda 2030 or the 3Rs or

greenwashing. It was clear from the responses that the Internet has the greatest influence on the subject, in terms of the content of websites and blogs and forums available on the Internet. 67.7% of respondents use these sites for information. It is therefore worthwhile to present topics related to the circular economy on these platforms, as this is where most of the knowledge and information is obtained. Social media, which are also Internet-based, are also important. 13.8% of respondents indicated this. TikTok, which is not specifically mentioned in the survey, can also be used to raise awareness of a current issue in a short video. While more readable platforms can be used to disseminate the content of the issues in more depth. A small percentage of respondents get information from television, radio, print media, books, events, family and friends.

Table 9: Responses to the question "Where do you get information about the environment?"

Answer Choices	Responses	Ratio
Newspapers	2	1.54%
Special Events (conferences, fairs, exhibitions, festivals, etc.)	4	3.08%
Television and Radio (films, documentaries and news)	11	8.46%
Books, Magazines and Publications	5	3.85%
The Internet (websites, blogs, forums)	88	67.69%
Social media (Facebook, Twitter, Instagram, etc.)	18	13.85%
Local, national and/or European campaigns	0	0%
Personal contacts (friends, family, school, work, etc.…)	4	3.08%
None of the above	1	0.77%

Overall, the majority of Hungarian respondents do not have a good, comprehensive understanding of environmental impacts and current concerns. It is a major responsibility of the organisations and public bodies dealing with the issue to raise public awareness and sensitisation on the subject. The majority gather information through internet platforms, but even there they are mostly informed about climate change and its risks. Although the concept of a circular economy has been identified as one of the options, they are no longer aware of the actual content of the concept, nor of the fact that they could be the target of a marketing and communication strategy that gives a false impression of reality. If citizens are to be able to take responsible action to protect the environment, it is necessary to ensure that they have access to appropriate information.

6. Perception of citizens' effectiveness

Knowledge is a true reflection of how people act in everyday life. For example, how they deal with household waste, how much they use activities to protect the environment, which also affects their way of life. Citizens' attitudes can be considered effective if they are able to sacrifice amenities in order to help protect the environment. This means not only renunciation, but also awareness, sensitisation of fellow citizens, experience and

knowledge sharing.

We have asked some questions in this block to assess the effectiveness of citizens.
For 12 products, we assessed how they are treated as waste.
The answers were positive, as recycling and selective collection are already the norm for many products. All municipalities have already introduced the separate collection and disposal of PET bottles, soft drink bottles and paper waste, and the possibility of landfilling. In addition, the treatment of batteries as hazardous waste has become part of public awareness. Collection containers for used batteries are now available at many places (educational institutions, grocery stores, offices). The same is true for used oil. Separate collection of care products and medical waste should be improved, as the majority of respondents throw used products in the rubbish. This is also a cause for concern because medicines are classified as hazardous waste among healthcare products. It is possible to drop off expired medicines at pharmacies, but not in all cases and not all pharmacies accept them. For light bulbs, there is already a higher rate of selective collection, but even so, more people than expected are throwing them in the bin.
It is also interesting to note that used electronic equipment (mobile phones, computers, etc.) is also a popular item to store at home.

Table 10: Responses to the question "What is your primary mode of disposal of the following items"

	DUMP	PUT IN GARBAGE	RETURN TO DEALER/ DISTRIBUTER	RECYCLE/ REUSE
Plastic bottle/Soft drink bottle	0	5	2	123
Light bulbs	6	27	17	80
Household batteries	5	5	16	104
Cell phones/computers and other electronics	31	3	18	80
Medical waste	1	54	29	46
Paper	4	8	0	118
Household oil	7	15	5	104
Glass	4	22	5	100
Battery (car battery, moped battery, etc…)	6	3	29	92
Metal can	5	9	3	113
Green waste (grass, branches, etc…)	22	12	1	95
Personal care products	4	77	5	44

The practice of separate waste collection also reflects the willingness, with most people taking the trouble to collect plastic, metal boxes and paper separately. The greatest willingness to do so and to reduce food waste is shown by smarter shopping, storage and littering. Energy saving is also an important consideration for respondents, with several residential programmes in settlements to use energy efficient light bulbs. Respondents are willing to use less lighting, heating and air conditioning.The least willingness is shown in the

purchase of goods, reluctant to spend 5% more on a product that is environmentally friendly. Price is a higher priority than the environmental impact of food production. Respondents are the least willing to change their own diet to more sustainable food. The highest number of refusals is also found in these aspects.

Table 11: Responses to the question "How willing are you to engage in the following activities"

	VERY UNWILLING	UNWILLING	NEITHER WILLING NOR UNWILLING	WILLING	VERY WILLING
Sort your garbage into different recycling bins	0	2	5	20	104
Pay 5% more to buy a product that is environmentally friendly	5	6	25	69	26
Reduce food waste through smarter purchasing, storage, and disposal	1	0	5	42	83
Engage in composting activities	4	7	15	32	72
Conserve energy e.g. by using less heating/air conditioning/less lightening	1	2	9	51	68
Choose a more environmentally - friendly way of travelling/transfer (public transport, electric car, walking…)	1	3	23	49	54
Change your diet to more sustainable food	4	7	26	57	38
Buy second-hand products (e.g. clothes and/or electronic devices)	4	9	14	46	58

This willingness to participate also contributes to the 47.7% (62 persons) of respondents who believe they can play a role in the circular economy as a citizen consumer. They can contribute to this by making informed and conscious purchasing decisions and by public and personal advocacy. Only 2 (1.5%) think they cannot play a role.

Table 15: Responses to the question "Do you think you as "consumer and citizen" can play a role in circular economy"

Answer Choices	Responses	Ratio
Yes, with actions such as purchasing or recycling products	47	36.15%
Yes, we as consumers can drive the transition through conscious and informed purchase choices and public and personal advocacy	62	47.69%
The role of consumers - citizens is limited	17	13.08%
No	2	1.54%

I do not know	3	2.31%

The willingness to pay more has already been demonstrated by the fact that most people do not want to pay more for a product that is environmentally friendly. However, when not expressed as a percentage of the extra cost, more than half of respondents (50.8%) would pay more for a product that is made according to circular economy practices. Interestingly, however, the number of undecided respondents is also high, with 43.1% not sure they would pay more for it. A total of 10 (7.7%) refused to pay more for such a product.

Table 16: Responses to the question "Would you pay more for a product made through circular economy practices"

Answer Choices	Responses	Ratio
Yes	66	50.77%
No	10	7.69%
I am not sure	56	43.08%

We also looked at what, other than price, would make someone buy a circular economy product. Respondents could select three criteria.The main aspects they would consider were the Ecological footprint (51.5%), Information about the quality of the product (48.5%) and Certifications, verified label, validated sustainable claims (40%). Respondents were less interested in information about the supply chain.

Table 12: Responses to the question "What do you care more when buying circular products"

Answer Choices	Responses	Ratio
Ecological footprint	67	51.54%
Working and labour conditions	36	27.69%
Information about the quality of the product	63	48.46%
Certifications, verified label, validated sustainable claims	52	40%
Information about the supply chain	21	16.15%
Information about products caring, repairing and disposal	40	30.77%
I don't care (if you select this option, please do not mark others)	3	2.31%

The selection criteria for choosing products are varied, but in general people are interested in whether the company that produces them uses circular economy processes: 42.3% of

the respondents already sometimes consider it when making a purchase, 48.5% have not yet considered it but would like to. 8 respondents, 6.2% always take into account. Very few, a total of 5 people (3.8%) indicated that they do not consider whether a company applies circular economy processes when buying a product.

Table 13: Responses to the question "When buying a product do you consider whether a company applies circular economy processes"

Answer Choices	Responses	Ratio
Always	8	6.15%
Sometimes	55	42.31%
No, but I would like to	63	48.46%
No, I do not consider it	5	3.85%

Consumer awareness is reflected in the fact that the packaging of the product also influences the propensity to buy. Unsustainable packaging has already caused 40% (52 respondents) to refuse to buy. For the rest, it was not a consideration or they no longer remember.

Table 14: Responses to the question "Have you ever decided not to purchase a product because the packaging was not sustainable"

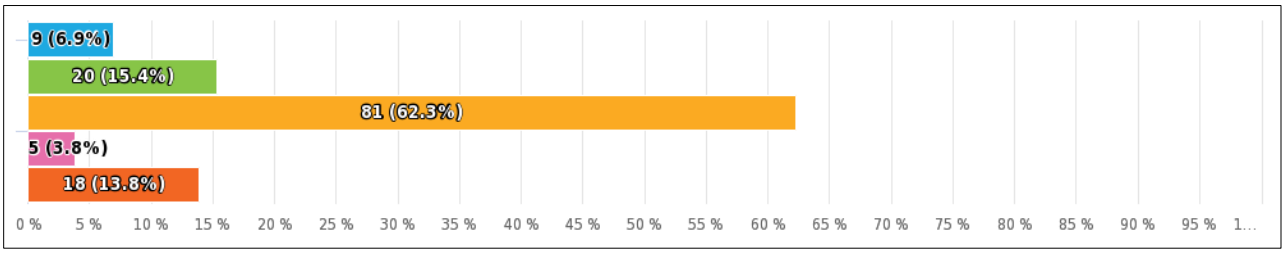
Answer Choices	Responses	Ratio
Yes	52	40%
No	49	37.69%
I can't remember	30	23.08%

Respondents felt that the refill option with packaging brought from home was the most sustainable. 62.3% of respondents agree. Packaging made from other materials, paper, glass, the use of biobased plastic, recycled plastic, or packaging with reduced quantity of virgin are already less sustainable according to the responses.

Table 15: Responses to the question "In your opinion, which of the following option is more sustainable"

Answer Choices	Responses	Ratio
Packaging made of recycled plastic	9	6.92%
Packaging made of other material (paper, glass)	20	15.38%
Refilling service (with packaging brought from home)	81	62.31%
Packaging with reduced quantity of virgin plastic	5	3.85%
Packaging made of bio-based plastic (Plastics produced from renewable resources)	18	13.85%

Figure 7: Packaging options



Conscious purchasing, sustainable and environmentally friendly aspects depend not only on citizens, but also on the approach of manufacturing companies. These brand manufacturers can also reinforce the circular behaviour of consumers. For consumers, it is important to guarantee product durability and access to repair. 26.9% of respondents believe so. 25.4% of them believe that taking responsibility for the product End-Of-Life is a key priority. 19.2% believe that both the use of recycled/recyclable/reduced packaging and the launch circular and sustainable products reinforce their own circular behaviour.

Table 16: Responses to the question "Which actions do you expect from brands to increase your circular behaviour"

Answer Choices	Responses	Ratio
Use recycled/recyclable/reduced packaging	25	19.23%
Take responsibility for the product End-Of-Life, for example, through ready-to-use/accessible take back programs	33	25.38%
Launch circular and sustainable products	25	19.23%
Guarantee product durability and access to repair	35	26.92%
Better information sharing and advertising and more transparency about product's features and supply chain	8	6.15%
Independently verify sustainability and circular claims	7	5.38%

In addition to public awareness and a change of attitude on the part of manufacturers, further regulation is needed in the field of environmental protection. 30% of respondents expect such regulation by the EU and national governments, which could significantly improve environmental protection. Similarly, 29.2% believe that society (citizens) should take more steps to adopt circularity-based behaviour. 22.3% believe that consumers should only buy sustainable packaging and follow recycling rules. Finally, 20.8% think we need more material innovation to eliminate pollution coming from companies and brands.

The diversity of responses also shows that there is no clear distinction between the aspects. The individual measures are equally important, the greatest impact can be reached by a complex actionplan, so to improve green production/consumption. No single measure can be singled out as the only one that will improve the environmental situation.

Table 17: Responses to the question "In your opinion, what of the following actions can significantly make an improvement in the field of environmental protection"

Answer Choices	Responses	Ratio
Society (citizens) should take more steps to adopt circularity-based behaviour	38	29.23%
We need more material innovation to eliminate the pollution (from companies and brands)	27	20.77%
We need more regulation and enforcement (from the EU and national governments)	39	30%
Consumers should buy only sustainable packaging and follow recycling rules	29	22.31%

As already mentioned, the responsibility of decision-makers is also crucial for the dissemination of knowledge about the circular economy and has an impact on its implementation. The majority of respondents are dissatisfied with both local and national decision-makers' actions to protect the environment. 89 respondents believe that the Hungarian government is not doing enough to protect the environment, and 60 respondents believe that their own municipality is not doing enough. Opinions on the European Union are divided, with 47 respondents saying it is doing something, 48 not enough, but 19 saying it is doing much.

Table 18: Responses to the question "Do you think that the following institutions are doing too much, the right amount, or not enough to protect the environment"

	DOING TOO MUCH	DOING SOMETHING	NOT DOING ENOUGH	DO NOT KNOW
Your city, town or village	18	44	60	8
The Hungarian government	7	26	89	8
The European Union	19	47	48	17

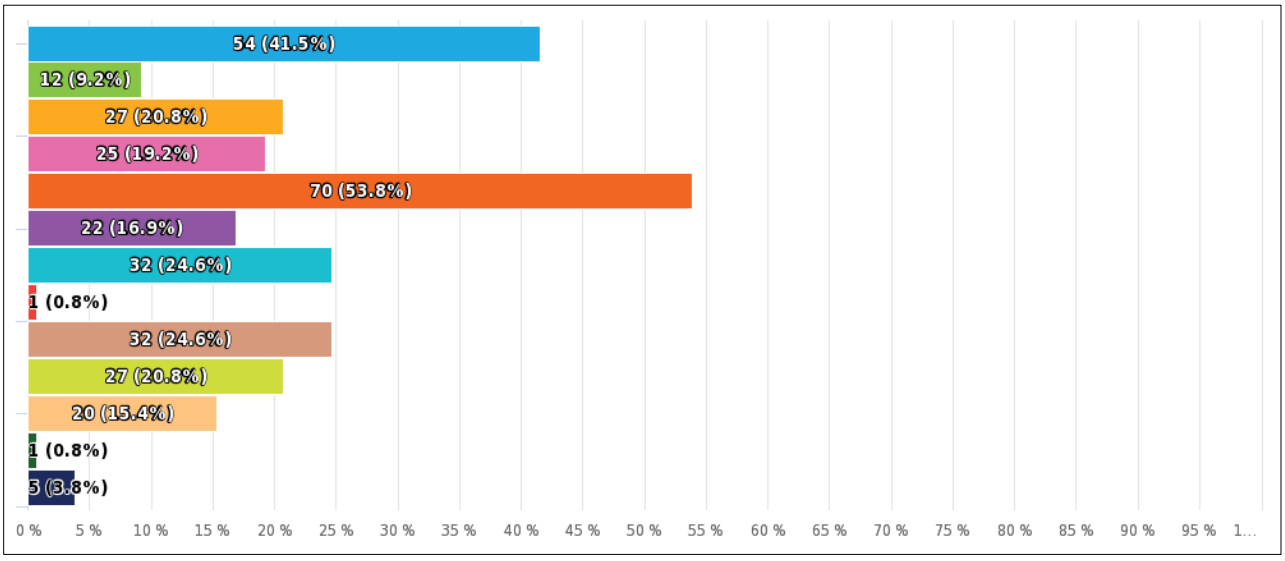
There are other ways to tackle environmental problems beyond relying on these actors. Of the listed practices, respondents were able to select three that they considered to be the most effective, with a wide spread of options. More than half of the respondents (53.8%) think that the most effective way is Introducing or increasing financial incentives to businesses and people taking measures to protect the environment (e.g. tax breaks, subsidies). 41.5% see education and awareness-raising as the solution. The most neglected solution is to make the banking and insurance system more environmentally friendly, with only 1 respondent indicating this as an option.
Interestingly, only 9.2% think that ensuring better enforcement of legislation can be an effective method.

Table 19: Responses to the question of the most effective ways of tackling environmental problems

Answer Choices	Responses	Ratio
Providing more information and education, e.g. on waste separation and energy consumption	54	41.54%

Ensuring better enforcement of legislation	12	9.23%
Introducing heavier fines for breaches of environmental legislation	27	20.77%
Introducing stricter environmental legislation	25	19.23%
Introducing or increasing financial incentives to businesses and people taking measures to protect the environment (e.g. tax breaks, subsidies)	70	53.85%
Introducing or increasing taxation, or removing subsidies, on environmentally harmful activities	22	16.92%
Investing in research and development to find technological solutions	32	24.62%
Making the banking and insurance systems more environmentally friendly	1	0.77%
Making the food system more sustainable from production to consumption	32	24.62%
Encouraging businesses to engage in sustainable activities	27	20.77%
Changing the way we produce and trade	20	15.38%
None	1	0.77%

Figure 8: Most effective ways of tackling environmental problems



Overall, the efficiency of the population in environmentally friendly activities is already present, but needs to be improved. Respondents confirmed that this is not only the responsibility of individuals, but also of producers and policymakers. The majority of the population has the willingness and the will, but this is influenced by financial circumstances. When buying, price and quality are a higher priority than environmentally friendly packaging or circular economy production. However, they consider their own role to be important through conscious purchasing decisions, e.g. by bringing packaging from home. They also expect greater involvement of decision-makers and the introduction of financial incentives for businesses and individuals.

7. Conclusions

The survey was designed to assess the current knowledge and attitudes of the population towards the circular economy. It also looked at how to increase the engagement of residents and how they could participate in the widespread use of environmentally friendly technologies and practices. A brief overview was given of current efforts in Hungary, which unfortunately are not progressing at a sufficient pace, lacking strategic planning and implementation. Entrepreneurs are not motivated and there are no incentives for them. Green energy sources are difficult to access, over-regulated or the national capacity is not built to absorb additional energy sources. The Hungarian economy is currently focused on battery development, production and recycling.

The circular economy and the associated environmentally friendly technologies and methods are not widely known among the general public. The population is stuck with the selective collection of PET bottles and paper waste.
The majority of Hungarian respondents do not have a good, comprehensive understanding of environmental impacts and current concerns. It is a major responsibility of the organisations and public bodies dealing with this issue to raise public awareness and sensitisation on the issue. The majority gather information through internet platforms, but even there they are mostly informed about climate change and its risks. In order to enable citizens to take responsible action to protect the environment, iis necessary to ensure access to appropriate information.

Our proposals at national level to kick-start the circular economy:

- Commitment of policy makers,
- Developing and promoting a precise national economic action plan, involving NGOs, professionals, manufacturers
- raising awareness through public education + internet platforms + social media - using easy to understand language
- mobilising businesses not by punishment but by involvement and incentives,
- introducing financial incentives for businesses and individuals,
- removing barriers (legislation e.g. to install wind farms, lack of demand e.g. economic stability/growth to enable the population to spend more).

The survey shows that in many respects the public is not well-informed and aware of the different aspects of the circular economy. Equally lacking is the political and business will to enable the green transition. Accordingly, the following topics are proposed for open discussion:

- **Awareness raising and education among citizens** on the UN Sustainable Development Agenda 2030 and the Circular Economy
- **Motivation of the business sector** to enter the circular economy
- **Public incentives, the involvement of policymakers**: how to encourage local decision-makers to adopt appropriate regulations and options to encourage the green transition

- **Climate change mitigation and adaptation**: there is a lot of information available online, but still not sufficient on how to prepare for the expected changes, and what action to take to mitigate climate change
- **Waste-management**: information on how to deal with e-waste and other waste (e.g. light bulbs) is still lacking
- **Purchasing circular products**: people have little information about the products they buy, it is worth strengthening conscious consumption at an individual level
- **3 R**: putting the 3 Rs concept into practice
- **Change of circular behaviours of brands**: what can a citizen do to push brands increase their circular behavior

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