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COUNTRY REPORT ROMANIA

Views, Opinions and Ideas of Citizens in Europe on Science

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PUBLISHER

Ecsite - the European network of science centres and museums
89/7, Avenue Louise
B-1050, Brussels
Belgium
info@ecsite.eu

AUTHORS

Kupper, F., Lynch, D., Van der Ham, L. and Broerse, J.E.W. (Athena Institute, VU University Amsterdam)

RESEARCH TEAM

Prof.dr. Jacqueline E.W. Broerse (M.Sc.); Dr. Frank Kupper (M.Sc., M.A.); Dr. Janneke E. Elberse (M.Sc., M.A.); Lia van der Ham (M.Sc.); Barbara M. Tielemans (M.Sc.); Wanda S. Konijn (M.Sc.); Anna van Luijn (M.Sc.); Fiona Budge (M.Sc.); Tirza de Lange (M.Sc.); Durwin H.J. Lynch (M.Sc.); Marzia Mazzonetto (MAS); Willemijn M. den Oudendammer (M.Sc.); Inge Schalkers (M.Sc.); Samuel J.C. Schrevel (M.Sc.); Dr. ir. Rianne Hoopman (M.Sc.); Samuel Ho (M.Sc.); Sarah Cummings (M.Sc.); Rylan Coury (B.Sc.)

EDITORS

Marzia Mazzonetto and Luisa Marino, Ecsite
Francesca Conti, Tatiana Crisafulli and Elisabetta Tola, formicablu Srl
Michael Creek, free-lance

DESIGN/DTP

Teresa Burzigotti, formicablu Srl

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For more information on the report, the results of the VOICES project, please contact Marzia Mazzonetto (mmazzonetto@ecsite.eu).

CONTENTS

1. Introduction

1.1 The VOICES project

VOICES (Views, Opinions and Ideas of Citizens in Europe on Science) is a year-long, Europe-wide citizen consultation exploring the concept of waste as a resource. It represents an innovative method of integrating public opinion into the 'Climate action, resource efficiency, raw materials' dimension of the Horizon 2020 Work Programmes beginning in 2014.

Funded by the European Commission and led by Ecsite, the European network of science centres and museums, the VOICES project is a response to the Science in Society 2013.1.2.1-1 call on citizen participation in science and technology policy. Citizens are invited to give input to the Consolidation Group that will define the priorities for the next work programme on 'Urban Waste' (call SiS.2013.1.2.1-2).

The main aim of VOICES is to yield valuable insight on methods and procedure for engaging citizen participation to help set the research agenda for Europe's Responsible Research and Innovation framework. The knowledge gained through VOICES will be put to use in similar participatory actions across Horizon 2020.

1.2 Citizen participation in social innovation

A national and European capacity-building initiative, VOICES unites science communication practitioners and academics, and, as such, will result in an effective method through which to consult the public on science and technology related issues.

Compared to many other consultation initiatives, VOICES represents a breakthrough because of its scale (covering all of Europe) and because of the methodological approach used on this wide scale: an approach which makes use of a qualitative methodology, which allows a harvesting and deep understanding of citizens' views, fostering real governance processes and social innovation.

VOICES is also very innovative in its commitment to formally include the results of the citizens' consultations in the main policy document that will shape the priorities of European research. Another unique element is that the knowledge gained with this pilot, in terms of methodology, infrastructure and results, can be used to organise similar participatory actions across Horizon 2020.

1.3 The process

One thousand European citizens participated in focus group discussions about 'Waste as a resource' using a structured VOICES methodology which spans training, implementation and analysis. The methods, infrastructure and results of VOICES are fully documented on an open access portal (www.voicesforinnovation.eu) designed for similar participatory actions occurring throughout Horizon 2020.

VOICES engaged citizens in 33 locations covering 27 EU countries. 28 Ecsite network institutions make up the Third Party task force which organised the 100 focus groups, with approximately ten citizens each, in their respective countries.

Ecsite Project Managers and researchers from the Athena Institute, VU University Amsterdam, were responsible for conducting the focus groups, analyzing public consultations, writing the country and synthesis reports and disseminating their outcomes at public events.

1.4 Structure of the report

In this country report on the VOICES outcomes from Romania, the VOICES research methodology is further detailed in the following chapter. In Chapter 3, some specific data is provided on the country's population, on national urban waste figures and on specificities of the participants of the focus groups. Chapter 4 presents the results of the citizens' consultation on waste management at household level, barriers and concerns experienced in prevention and management of waste, and ideas for research and innovation, policy, management and communication. The report ends with a summary and discussion of the findings.

2. Methodology

This section provides general information about the focus group method, and in particular about the VOICES approach. It also describes the structure of the VOICES focus groups and the process of data analysis.

As a qualitative research method, the focus group is increasingly used in political and social sciences, and can be defined as "a carefully planned discussion designed to obtain perceptions on a defined area of interest in a permissive, non-threatening environment".[1] An important advantage of focus groups in comparison to other research methods is that participants can respond to and build on the views expressed by the other participants. Because of this interaction, focus groups generate a large variety of opinions and ideas which provide insightful information, while maintaining a specific focus during the discussion. The method provides the opportunity to gain in-depth insight into ideas, values, wishes and concerns of participants and stimulates shared creative thinking. A specific characteristic of the focus group method is that it seeks understanding of a research topic from a particular perspective; in the case of the VOICES project, the perspective of European citizens.

2.1 The VOICES focus group approach

In the VOICES project, a total of 100 focus groups were held, each of them with approximately 10 citizens. Participants were selected by local recruitment agencies, according to predefined selection criteria. The selection criteria were applied in order to obtain diversity in focus group participants, and to represent society at large. General selection criteria with respect to demographic information included: sex (50% men and 50% women), education (low, medium and high levels of education)[2] and employment (employed, unemployed, retired and student). The focus groups were stratified by age using the following categories: 18 to 35 years of age, 36 to 50 years of age and 50+. Other criteria addressed elements relevant to the VOICES project's specific topic, including: participants from urban and non-urban areas[3], diversity of types of municipality (at least five different municipalities, including bigger towns and smaller villages), and diversity of housing situation (flat or house). These selection criteria were applied in all EU member states. Because of the local context and the availability of participants there are minor differences between member states in the resulting composition of focus groups.

In most EU member states, three focus groups were conducted, all in one location. However, all member states with a population of above 25 million (Germany, France, Spain, Poland, Italy and the UK) had two sets of three focus groups each in two different locations, resulting in six focus groups in total in these countries.

The focus groups lasted 3 hours and followed a semi-structured script consisting of an introduction, four main exercises and an evaluation part (see box 2.1). During the focus groups, specific attention was paid to keeping the environment noise-free and providing enough space to relax, walk around and engage in the conversation. Each focus group was led by a moderator, who was in charge of stimulating and guiding the discussion. The moderator's role was also to maintain the focus of the discussion by ensuring that key themes were covered, while managing group dynamics.

Moderators facilitated the discussion by following the focus group script, which was provided to them in advance and contained questions and exercises to guide their work and ensure equal individual input as well as group discussion. Because of their crucial role in the focus groups, all moderators involved in the VOICES project followed a specific 2.5 day training course. The training focused on specificities of the VOICES focus group script as well as on refining important competencies of the moderators' role, including interpersonal communication, process management and understanding of the topic addressed.

In order to capture the data generated during the process, audio and/or video recordings were made of all focus groups. A note taker was also required to be present for the entire duration of the focus groups, in order to record additional data and to assist the moderator. All visual data generated by the participants, for example, individual drawings or collective mind maps, were collected at the end of each focus group and photographed.

BOX 2.1 SUMMARY OF VOICES FOCUS GROUP SCRIPT

INTRODUCTION

The moderator introduces himself/herself, the note taker and any observers and asks the participants to introduce themselves. The moderator then explains the aims and topic of the focus group using a PowerPoint presentation.

EXERCISE 1

The goal of Exercise 1 is to raise the focus group participants' awareness of household waste and related waste management systems. It also identifies what people know and do with respect to their household waste. Participants are asked to draw on an A3 sheet of white paper how they think the waste streams are managed around their house. When they have finished, the papers are collected and taped to the wall. The moderator then asks the participants to explain their drawings and encourages them to elaborate.

EXERCISE 2
Exercise 2 aims to identify barriers and concerns of the participants with respect to current urban waste pathways (including prevention) and to go into more depth on the causes and underlying reasons for the reported barriers and concerns. The moderator shows the participants PowerPoint slides about the four most common pathways of waste and prevention. After this, participants are asked to think about barriers and concerns they experience regarding waste, waste management and prevention of waste and to write two examples of these barriers or concerns down on Post-Its. The Post-Its are collected and for each, the moderator asks the participants to explain what they wrote down and why.

EXERCISE 3
The objective of Exercise 3 is to stimulate creative ideas for improvement and solutions for problems and possibly to translate ideas and solutions into research topics or questions. The moderator introduces the concept of a 'zero waste society' to the participants using PowerPoint slides. The participants are then asked to work in groups and brainstorm about ideas for achieving the aims of a 'zero waste society', focusing especially on what research and innovation would be needed for this. Participants are then asked to present their ideas to the entire group, while the moderator uses a flip chart to list all concrete ideas for research and innovation suggested by the participants. The moderator then asks the participants to reflect further on possible futuristic technical solutions and 'wild' ideas regarding waste management and prevention.

EXERCISE 4
The aim of Exercise 4 is to attribute a level of priority to the research topics formulated in Exercise 3.
Participants are given three stickers, which represent money (1 million each) that they can spend on ideas written down during Exercise 3. They are asked to assign one or more stickers to the ideas that they feel should be prioritised because of the importance of the problem it addresses and/or the quality of the solution it provides. Once the participants have assigned their stickers, a plenary discussion is held to talk about which ideas got the most stickers and why.

EVALUATION
The moderator ends the sessions and asks the participants to share feedback on their experience taking part in the VOICES focus group. Participants are also asked to fill in an evaluation questionnaire.

2.2 The VOICES approach to urban waste

In the focus groups, citizens of Europe were consulted on the topic 'Waste as a resource'. Urban waste is defined as solid waste collected by or on behalf of municipal authorities and disposed of through the waste management system. Most of this waste is produced by households, although similar waste from sources such as commerce, offices and public institutions are included. Consumer products disposed of by citizens, like clothes, electronics and furniture etcetera, are also considered urban waste. Industrial waste is not considered urban waste and is outside the scope of this project. On average, each of the 500 million people living in the EU throws away around half a tonne of household rubbish every year.[4] This amounts to 70 million truckloads of household rubbish for the EU as a whole every year (one truckload is considered to be 3500 kg, the maximum weight for a truck). All this waste has a huge impact on the environment, resulting in pollution and greenhouse gas emissions that contribute to climate change, as well as significant loss of materials - a particular problem for the EU, which is highly dependent on imported raw materials. Current EU policy aims to reduce both the environmental impact of waste and the use of raw materials needed for production processes. Nowadays, the challenge of urban waste is approached from two perspectives; the waste hierarchy and the life-cycle approach. These combined approaches are the building blocks of the current thematic strategy on waste.[5]

In order for the results of the focus groups to be translated into outcomes which are relevant and beneficial for European research, the VOICES focus group design explicitly uses these same two approaches in presenting the topic of urban waste and in structuring the exercises. The vision of a 'zero waste society' is used as a

focus for the participants while thinking about possible innovations and the techniques and knowledge necessary to develop them.

The waste hierarchy is initially depicted as a pyramid with a wide base representing disposal in a landfill, a second layer representing recovery of energy through incineration, a third layer representing recycling, a fourth representing reuse and the top (and smallest one) representing prevention. This reflects the current situation of waste management in Europe. In order to achieve a 'zero waste society', this pyramid should be turned around and its top, prevention, should become very wide while its base, landfill, very narrow.

The five-step waste hierarchy can be used as a rule of thumb when choosing between options of waste management, with prevention as the most preferred and disposal in landfill as a last resort. However, all products and services have environmental impacts in various stages of their existence. To avoid shifting negative impact from one stage to another, the life-cycle approach is also considered. Life-cycle thinking involves looking at all stages of a product's life - from the extraction of raw materials for their production to their manufacture, distribution, use and disposal - to find out where improvements can be made to reduce environmental impacts and use of resources.

2.3 Analysis of the focus groups

After each focus group, a summary report was written by the moderators based on the note taker's notes and the information on the flip charts. A draft of this summary report was sent to the focus group participants who were asked to comment on it. Moderators collected any feedback and included it in the final version of the summary report as an annex. The audio recording of each focus group was transcribed word-for-word and translated into English for analysis. The translated transcripts were coded and analysed using MaxQDA, a programme for qualitative data analysis. For the analysis of the data, both structured analysis as well as open coding were used. Structured analysis was carried out by using a predesigned coding sheet based on preliminary research. This type of analysis allows for all relevant outcomes to be extracted from the raw data. Open coding runs parallel to the structured analysis and allows for insights unforeseen by preliminary research to emerge. The summary reports of the individual focus groups have been used to validate and complement the analysis.

2.4 Ethical issues

At the beginning of the focus groups, all participants were asked to sign an informed consent form providing information on the topic and aims of the focus group. It was explained that participation was voluntary and participants were free to withdraw at any time, without giving reason. The form obtained participants' approval for audio and video-recording of the focus group, for the use of the resulting data for research purposes, including the use of anonymous quotes, and for data storage for five years. All data were processed anonymously.

[1] Krueger R.A. (1994). Focus Groups: A Practical Guide for Applied Research. Sage: Thousand Oaks, California

[2] The typology of low, medium and high education level is based on the International Standard Classification of Education (http://en.wikipedia.org/wiki/International_Standard_Classification_of_Education)

[3] The urban-rural typology is based on the new urban/rural typology developed by the European Commission (http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/Urban-rural_typology)

[4] Questions and Answers, Thematic Strategy on the prevention and recycling of waste and the proposal for the revision of the Waste Framework Directive (Available at: http://ec.europa.eu/environment/waste/pdf/faq.pdf)

[5] Report from the Commission to the European Parliament, the Council, the European Economic and Social Committee of the Regions on the Thematic Strategy on the Prevention and Recycling of Waste, Brussels, 19.1.2011, COM (2011) 13 final; EU Waste Policy - The Story behind the strategy, 2006

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3. Country relevant data - Romania

This chapter of the report presents relevant data about the country and local focus groups. This includes demographic data, data related specifically to local waste management and information concerning the setting of the local focus groups.

3.1 Demographic country data

In terms of population, Romania has over 21 million inhabitants. Most live in rural areas (56%) or intermediate areas (44%), while others live in urban areas (11%).

Table. 3.1 Population Data[6,7,8]

		2011	
Population at 1 January		21 413 815	
Population as percentage of EU27		4.3%	
Gross Domestic Product (PPP)		11 400 Euro	
Population urban-rural typology	Urban	2 267 000	11%
	Intermediate	9 387 000	44%
	Rural	9 759 000	56%

3.2 Factsheet on waste

The amount of municipal waste generated and treated in Romania is considerably lower than the average amount of waste treated in the EU27. Romania ranks 26th on the EU27 ranking list on Municipal Solid Waste Recycling (MSW). In Romania, an exceptional effort will be required to meet the EU Waste Framework Directive's target to recycle 50% of MSW by 2020.[9]

Table 3.2 Municipal Waste[10,11]

		Romania		EU27 average	
Municipal waste generated (kg per person)		365 kg		502 kg	
Municipal waste treated (kg per person)		294 kg		486 kg	
	Landfilled	291 kg	99%	185 kg	38%
	Incinerated	0 kg	0%	107 kg	22%
	Recycled (material recycling)	3 kg	1%	122 kg	25%
	Composted (organic recycling)	0 kg	0%	73 kg	15%

3.3 Composition of the focus groups

In Romania, three focus groups (FGs) took place in the weekend of 30th March 2013. They were held in Bucharest, moderated by Ofelia Tîrcob, Qualitative Research Director, IMAS Marketing and Polls.

In total, 30 people (15 male and 15 female) participated in the three FGs. The age of the participants ranged from 19 to 72: 10 participants were aged between 18 and 35; 10 between 36 and 50; and 10 were aged 51 or over. Half of the participants (n = 15) had a high level of education, while others had a medium (n = 11) or low level (n = 4). 11 participants were working, while 10 were unemployed, 2 were students and 7 were retired. 18 participants live in a house and 12 in a flat. Details of the composition of these focus groups are presented in the table below.

Table 3.3 Composition of the Focus Groups

		FG1	FG2	FG3	TOTAL
Participants	Total	10	10	10	30
Gender	Male	5	5	5	15
	Female	5	5	5	15
Age	18 - 35	0	10	0	10
	36 - 50	10	0	0	10
	50+	0	0	10	10
Education	High	6	4	5	15
	Medium	3	4	4	11
	Low	1	2	1	4
Employment	Unemployed	5	2	3	10
	Employed	5	6	0	11
	Retired	0	0	7	7
	Student	0	2	0	2
Housing	Flat	4	5	3	12
	House	6	5	7	18

[6] Eurostat Statistics Database Online (http://epp.eurostat.ec.europa.eu/portal/page/portal/statistics/search_database)
[7] Eurostat Newsrelease (http://europa.eu/rapid/press-release_STAT-12-51_en.pdf)
[8] The urban-rural typology is based on the new urban/rural typology developed by the European Commission (http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/Urban-rural_typology)
[9] European Environment Agency (2013). "Managing municipal solid waste - a review of achievements in 32 European countries" EEA Report No 2/2013 (http://www.eea.europa.eu/publications/managing-municipal-solid-waste)
[10] Eurostat Newsrelease (http://europa.eu/rapid/press-release_STAT-12-48_en.pdf)
[11] The reported quantities of waste *generated* and *treated* do not always match exactly due to one (or more) of the following reasons: Estimates for the population not covered by collection schemes; Weight losses due to dehydration; Double counts of waste undergoing two or more treatment steps; Exports and imports of waste; Time lags between generation and treatment (temporary storage)

4. Results

This chapter describes the overall results of all focus groups held in Romania. The chapter includes three sections, which are structured according to the exercises of the focus groups. The first section provides insight into what people think and do with respect to waste management at the household level. The second section provides an overview of barriers and concerns of the participants about current urban waste prevention and management, and identifies underlying reasons for the reported barriers and concerns. The third section presents participants' ideas for research and innovation needed in order to achieve a 'zero waste society' including concrete information on the research category, the aim of the research, the proposed target group and the perceived priority of the research idea. Participants' ideas for policy, management and communication are included as well. Throughout the results, quotes of focus group participants are provided for illustrative purposes.[12]

4.1 How is waste managed at household level?

This section describes what people know and do with respect to household waste. It includes four parts. First, an overview is given of the types of waste that are generally collected separately and those that go in the general bin. The second part provides insight into how the waste is collected, while the third part describes what participants think happens to the waste after it is collected. The fourth part describes whether people deal with waste as they are supposed to and to what extent they think waste management is conveniently organised.

4.1.1 Waste separation

The majority of the participants said they do not separate waste, as this is not very common in Romania. Furthermore, they stated that there is not a clear and cohesive waste management system that encourages waste separation. Some participants did state they separate certain types of waste into five or six streams: plastic bottles, glass, metals, paper and organic waste. In most cases, when participants do separate waste they have a particular reason for this. Glass and plastic (PET bottles) are either collected by the waste management company or brought to a waste collection centre. Most participants said they give PET bottles and metal scraps to poor people, as these people can earn some money by disposing of them at special recycling centres.

In the focus groups, it also became clear that there is a difference in the way participants from rural areas separate waste compared to participants from urban areas. With respect to clothing, the participants said clothes that can be reused are separated and given to people in need. If the clothes cannot be reused, participants from rural areas say they are incinerated, while participants from urban areas dispose of the clothes by putting them in the general waste bin. In rural areas, sorted waste, such as paper, wood, clothing and cardboard, are incinerated. In urban areas however, these types of waste are thrown away with other types of waste. There is also a difference in the way organic waste is disposed of. In rural areas, organic waste serves as either food for animals, or it is mixed with animal waste and used as fertiliser. In urban areas, organic waste is thrown into a general waste bin.

[12] Abbreviations used in quotes: FG# = number of focus group, P# = number of specific focus group participant, PX = number of focus group participant unknown, M = Moderator.

4.1.2 Waste collection

Waste containers for unsorted waste are placed close to homes. Most participants stated that they throw their rubbish bag containing unsorted waste into containers placed either at the entrance of their flat or at the end of their street. Most of the participants mentioned that waste management companies collect waste regularly. According to some participants, waste management companies have a fixed time schedule for when they pick up certain types of waste. Once a week, they collect glass and plastic, and once every two weeks they collect electrical appliances. Other participants mentioned that when the garbage truck comes to collect their waste, they dump all waste from the containers together in the truck. A few participants mentioned that waste collection does not occur frequently or at all in their neighbourhood, and they are forced to bring their own waste to landfill.

In general, participants who separate waste (paper, plastic or glass) bring it themselves to a special waste collection centre or give it to their children who are able to dispose of it at school. Some participants, however, mentioned that in their area, the waste management company has a special day, once a week, for collecting glass and plastic bottles. When it comes to building material, electronic appliances and old furniture, the participants said these can be brought to special collection centres or landfill sites. However, a fee has to be paid upon disposal. A few participants leave these kinds of waste right next to the waste collection containers in their neighbourhood, as these items usually get picked up by gypsies or other people.

4.1.3 Knowledge about waste pathways

In general, participants from the focus group discussions did not have a clear idea of what happens to their waste after it is collected. Most participants thought most of the waste goes to landfill, but were unable to say what happens to the waste there. Some speculated that some waste gets sorted and recycled at the landfill sites. Other participants talked about a big ecological landfill in Albota (Arges) where there is specialised equipment which sorts waste. Some participants mentioned that glass or plastic are collected separately, once a week, from their houses. These participants believe that this waste goes directly to a factory where the waste gets processed and recycled.

4.1.4 Waste management behaviour and convenience

Even if the waste management companies have a fixed time schedule indicating when they pick up certain types of waste, most participants said that people rarely adhere to the official system in their area. Several participants also argued that even though there are collection containers where plastic, glass, paper and residual waste can be separated, when the garbage truck arrives to collect the waste, all streams of waste are dumped together in the truck. This does not motivate participants to separate waste.

Furthermore, some participants mentioned that hardly anyone uses the waste collection containers properly; people throw all types of unsorted waste in any container. They also mentioned that in many areas, the facilities for separate waste collection are not available, and that it is not clearly indicated what type of waste should go in which container. According to the participants, these things might explain the behaviour of people in Romania, where most people do not make an effort to separate waste, or at least not any longer.

4.2 Barriers and concerns regarding urban waste

This section provides an overview of the participants' barriers and concerns with respect to current urban waste and identifies underlying reasons for the reported barriers and concerns. The section consists of three

parts. The first part, 'Waste prevention and production', focuses on barriers and concerns related to goods in the phase before they enter the household including both waste prevention and production. The second part, 'Waste management in the household', addresses goods and waste in the phase while they are in the household. The third part, 'Waste disposal and pathways', describes barriers and concerns related to the phase in which waste is disposed.

4.2.1 Waste prevention and production

With respect to waste prevention and production, a couple of barriers and concerns were mentioned by the participants. One of the first was that there is too much packaging around products. They argued that nowadays, producers are using a lot of packaging for their products.

"Almost all products which can be bought nowadays are excessively packaged, and then all this packaging becomes rubbish." (Romania FG2, P5)

Two participants debated whether the amount of packaging nowadays is excessive, or whether this is necessary to protect the product and make sure it sells.

"[P9] Yes, there is so much packaging. For example, when I buy a bar of chocolate which comes in a cardboard box, I have to open the box, then remove two types of foil and then I have the chocolate. That is too much.
[P1] That is to preserve the product, and for the design so it can sell.
[P9] Yes, but there should be a minimum amount of packaging around the products." (Romania FG2)

A few participants also said producers keep using packaging material which is not reusable or biodegradable.

"In the past, bottles used to be made of glass and you could reuse them. Now they are made of plastic, which makes it difficult to reuse then for hot liquids for example. Plastic is also bad for the environment." (Romania FG2, P5)

Some participants also argued that too much packaging is used by consumers, as opposed to producers. They stated that for certain products, like fruit, it is not necessary to use a special plastic bag:

"For certain products, no packaging is necessary. Like when you buy fruits, why should you put it in a plastic bag? It is not necessary. I know that it is easy to weigh, but if you buy one apple, some bananas and two pears, why waste three plastic bags?" (Romania FG 1, P9)

Finally, the participants stated that nowadays people have a very consumerist attitude, and buy much more than they actually need:

"We have the drive to consume more products than is necessary, more than we really need... and the rotten food is often thrown away. We buy it, but don't use it." (Romania FG 1, P 1)

4.2.2 Waste management in the household

The participants mentioned some barriers and concerns regarding waste management in the household. Most of these barriers and concerns were related to society in general, and not necessarily to the participants' own households.

First, some of the participants talked about people's attitudes towards separating waste in their households. They mentioned that sorting waste takes too much time and effort. A few participants also said people nowadays are easy-going and lazy, and therefore throw all their waste away together, unsorted. Some participants also stated that people in general are lacking in awareness and do not have the common sense to separate waste.

"What stops me putting PET bottles in the PET containers is comfort... and a lack of common sense." (Romania FG 1, P6)

"Furthermore, people lack education and awareness." (Romania FG3, P 10)

In addition, various participants indicated that there is no proper regulation with regard to sorting waste. They mentioned that there is no legal framework ensuring consumers manage waste separation properly.

"Here is the problem. When you get caught mixing waste up, nobody does anything to you. Nothing happens. No fines, no penalty. So, people don't care. There should be some laws to encourage people to separate waste." (Romania FG3, P 1)

4.2.3 Waste disposal and pathways

The participants expressed various barriers and concerns regarding waste disposal and pathways. Most participants were negative about Romania's waste management system. They mentioned that the government makes little effort to encourage separate waste collection and recycling. They said that since most waste goes to landfill, it does not make sense to separate waste in the home.

"It is bad organisation at the top of the municipal government. It is useless for me to take the trouble if everything is messy at the landfill." (Romania FG 1, P5)

Furthermore, some participants indicated that there is a lack of containers for separate collection.

"For us at the private level, for the block of flats, there is only one big container. And everybody throws everything in there, or around it. There are no special containers for plastic, paper etc." (Romania FG 1, P 7)

The participants also mentioned that there are not enough recycling centres where waste can be brought. They argued that this has an effect on the behaviour of consumers.

"Since there is a lack of these recycling centres, we throw things away like we do now... unsorted. That's the result of not having special places arranged for sorted waste collection." (Romania FG3, P 10)

Finally, some participants were worried that bad waste management can lead to pollution:

"The problem is that since there is no separate collection, many people incinerate their waste, and that is my concern. Incineration pollutes the environment... and waste does not get recycled." (Romania FG 1, P 10)

"I have concerns about the increase in pollution due to the fact that many people are not complying with the regulations on the protection of the environment." (Romania FG2, P 10)

4.3 Citizens' ideas on how to realise a 'zero waste society'

This section presents participants' ideas for achieving a 'zero waste society'. A distinction is made between ideas related to environmental sciences and technology, and ideas related to policy, management and communication. Below, these ideas are described separately in tables. For each idea in the table, the research category is mentioned as well as the aim of the research and the proposed target group. In addition, the priority of the research idea as perceived by the participants is indicated in the tables, using stars to indicate the number of stickers assigned to a specific idea by the participants. Only ideas that were prioritised by the participants are described in this section. Ideas that were not prioritised are included in the full list of research ideas which is provided in Annex 1.

4.3.1 Environmental sciences and technology

TECHNICAL, PHYSICAL, CHEMICAL, ENGINEERING

When it comes to the domain 'environmental sciences and technology', the participants mostly discussed ideas which would relate to technical, physics, chemical or engineering research. Generally these ideas involve the conversion of waste into something useful, such as energy or building material.

Three ideas that were ranked as high priority by the participants concern the conversion of waste into some type of energy. First, the participants came up with the idea to convert all types of waste into some kind of substance which can be used to produce kinetic energy. This kinetic energy can then be used in car engines, for example. This idea targets both waste management companies and producers. The participants felt it is important to look for alternative sources of energy, and that it would be a great idea if waste can be used effectively. The participants also mentioned that certain types of waste, such as plastic, could be directly converted in fuel.

"We know that today's society is a society based on consumption, but in addition to the fact that we consume a lot, we also need energy, so nowadays we spent a lot of time looking for petrol and natural resources which produce energy... If they are able to produce some substance out of waste and produce energy, that could be excellent." (Romania FG2, P8)

A second idea related to the conversion of waste into energy, which was also assigned priority stickers by some participants, is to convert household waste bins into generators that are able to convert waste into electrical energy. These generators would then be able to provide electricity for the entire household. Since these generators would be placed in households, the targets for this idea would be consumers.

"In our homes, instead of the rubbish bin where we throw waste, we could have a special machine which converts waste into electrical energy. So we do not need to connect to an energy plan." (Romania FG2, P5)

A third idea that was assigned priority was to use waste as a resource for bio-gas power plants. The participants stated that bio-gas power plants currently use mainly organic matter as a resource and that it would be a good idea to use household waste as a resource for these bio-gas power plants. The target groups for this idea are both producers and waste management companies.

"[...] It would be a good idea to have a bio-gas power plan using household waste and not just vegetable matter..." (Romania FG3, P2)

Furthermore, the participants came up with specific ideas to convert certain types of waste into other products. The main target groups for most of these ideas are producers and waste management companies. One of these ideas, ranked as high priority, was to convert waste into building material. The participants mentioned that old furniture, wood and construction waste can be made into new building material. The aim of this idea is to effectively make use of waste.

"Waste can become building material... For example, furniture we throw away can be used to make boards. Also waste from building material, like broken glass, cement, sand etc. should be converted back to building material..." (Romania FG 1, P2)

The participants also proposed a concrete idea to build walls, houses and furniture made out of PET bottles and paper. This idea, targeted at consumers and producers, aims to make more effective use of waste. The participants did not elaborate much on this idea.

"[P 1] I want them to use PET material to make walls and build houses.
[P6] I want to make furniture from PET and paper." (Romania FG2)

The participants also said products should be made of better quality and have a longer lifespan. This idea targets producers and aims to reduce use of resources. It was mentioned that producers are responsible for the quality of the products they deliver and enough research has to be done to ensure that these products are long lasting.

"[...] Products should have a longer product life. Producers should make televisions that don't break down easily, for example. They should investigate how to manufacture longer lasting products." (*Romania FG3, P4)*

Some participants suggested making asphalt out of waste, especially from used tyres. The participants mentioned that this would have quite a number of benefits:

"Why not make use of old tyres and grind them into powder for asphalt? The asphalt would last longer, there would be a shorter braking distance, a better resistance to ice and better grip." (Romania FG3, P4)

Furthermore the participants suggested making medical prostheses from metal or cardboard waste. However,

the participants did not elaborate on this idea.

Another idea was to establish special factories where organic waste from households could be converted into fertiliser. The target group for this idea is producers. Some participants argued that factories producing fertiliser already exist, but they were not sure if these factories already made use of organic waste from households.

"[P 1] One idea is to produce fertiliser from waste.
[M] Don't they do that already?
[P 1] They do... but from household waste? We will provide all food and organic waste for them..." (Romania FG3)

Lastly, the participants talked about machines or robots that can help with waste separation and other activities in homes and factories. This idea is targeted at both consumers and producers. The participants mentioned that the machines and robots themselves could also be made of recycled waste. The aims of these ideas are to make more effective use of waste and to increase convenience in homes and factories.

"Electrical appliances can be recycled and transformed into robots for industrial use..." (Romania FG2, P 7)
"This machine can separate your household waste in different categories like food, plastic, glass..." (Romania FG 1, P9)

Table 4.3.1 Ideas within the category 'technical, physics, chemical, engineering' that received priority, ranked accordingly

Category	Idea	Aim	Target Group	Priority
Technical/ Physics/ Chemical/ Engineering	Convert waste into kinetic energy	Effective use of waste	Waste management companies/ Producers	☆☆☆☆☆ ☆☆☆
	Convert waste into building material, e.g. construct walls of houses out of PET bottles	Effective use of waste	Producers	☆☆☆☆☆ ☆☆☆
	Convert household bins into generators that convert waste into electricity for the household	Effective use of waste	Consumers	☆☆☆☆☆ ☆
	Use waste as a source for power plants	Effective use of waste	Waste management companies/ Producers	☆☆☆☆☆
	Products should have a longer life span, thus increasing the quality of products	Less use of resources	Producers	☆☆☆☆☆
	Establish factories that convert organic waste from households into fertiliser	Effective use of waste	Producers	☆☆
	Use metal waste and cardboard to make medical prostheses	Effective use of waste	Producers	☆☆
	Make asphalt out of used tyres	Effective use of waste	Waste management companies/ Producers	☆☆
	Design robots made out of waste that can help in households and factories	Effective use of waste/ Convenience	Consumers/ Producers	☆
	Create machines that can separate waste in households	Improve recycling/ Convenience in the home	Consumers	☆

MATERIALS

A second category related to the domain of 'environmental sciences and technology' contains ideas that focus on the 'material' dimension. In this category, only one idea was mentioned. However, this idea came out of all three focus groups, and it was ranked as high priority. This idea involves the production of good quality biodegradable packaging. The aims of this idea are to use less plastic and have a positive effect on the planet.

"The idea is to improve the quality of packaging... but it should be biodegradable too..." (Romania FG2, P5)

The participants also mentioned that if packaging is biodegradable, it can perhaps also serve as food for animals.

"Packaging should be made as organic as possible. So that it will decompose easily after I dispose of it. They can also add vitamins and calcium to the packaging. This allows me to use the packaging as food for my goats." (Romania FG3, P4)

Table 4.3.2 Ideas within the category 'material' that received priority, ranked accordingly

Category	Idea	Aim	Target Group	Priority
Material	Introduce biodegradable but good quality packaging to replace plastic	Less plastic/ Effect on planet	Producers	☆☆☆☆☆

BIO(TECHNO)LOGY

A third category related to the domain of 'environmental sciences and technology' groups ideas that focus on the 'bio(techno)logical' dimension. In this category, two ideas were suggested, of which only one was assigned priority. This idea concerned the development of medicines from household waste. The target group of this idea would be consumers. The participants did not elaborate much on this idea.

"I was thinking about our health and perhaps there could be something made out of waste that could benefit our health. Maybe there is a company that can process waste into medication." (Romania FG2, P4)

Table 4.3.3 Ideas within the category 'bio(techno)logical' that received priority, ranked accordingly

Category	Idea	Aim	Target Group	Priority
Bio(techno)-logical	Develop medication out of waste	Effective use of waste	Producers	☆☆

4.3.2 Policy, management and communication

POLICY

Ideas related to regulations and incentives are grouped in the category 'policy'. In general, these ideas aim to improve recycling or trigger a change in behaviour. Only one out of the two ideas in this category received priority stickers from the participants. The participants said more incentives should be created to encourage recycling.

"The local councils should introduce a reward system for citizens who recycle. I am not saying that they should give money on the spot, they can also introduce a law that says that those who recycle pay less tax at the end of the year, or they can receive vouchers that they can exchange for other goods. A financial reward system... that would be great!" (Romania FG 1, P 7)

Table 4.3.4 Ideas within the category 'policy' that received priority, ranked accordingly

Category	Idea	Aim	Target Group	Priority
Policy	Create incentives to improve recycling such as tax reduction, vouchers	Improve recycling/ Behaviour change	Consumers	☆☆

MANAGEMENT AND LOGISTICS

'Management and logistics' is another category in the domain of 'policy, management and communication'. Several ideas were mentioned that would require a certain amount of managerial or logistical change. The aims of these ideas are either to improve recycling, use fewer resources or trigger a change in behaviour. Most of these ideas target producers, consumers and waste management companies, or a combination of these.

The first idea that was assigned priority was to create a better infrastructure for recycling. This idea was put forward in two focus groups. The participants mentioned that there should be more waste collection points for separate collection, more waste collecting centres and more recycling plants. They said having more collection points for separate collection would encourage more consumers to recycle. Furthermore they stated that the local government is responsible for arranging more waste collection points.

"The local council should arrange more spaces for separate collection." (Romania FG2, P1)

The participants also said that more waste should be brought to waste collection centres instead of to landfill, as this would increase the amount of waste being recycled.

"Instead of bringing waste to the landfill, there should be more centres where waste can be taken and used for other purposes." (Romania FG2, P7)

Furthermore, the participants explained that it is important to have more recycling plants that actually produce new products out of recycled material. The participants argued that a recycling plant is different from a waste collection centre.

"A waste collection centre is one thing, a factory is another thing. The collecting centre carries it to the factory, and the factory processes it into a new product." (Romania FG1, P1)

Another idea that was well received among the participants was to open more small-scale repair shops. The participants argued that nowadays people are quick to throw away broken products, without making an effort to repair them. However, the participants also said there are few repair shops where consumers can easily bring products for repair. A few participants stated that people nowadays would sooner buy new products than repair broken products. If there are more shops where people can have their broken household appliances repaired, this will reduce the amount of new products sold, thereby using fewer resources.

"People hardly ever repair or reuse their stuff when they are broken. In my case for example, when something breaks, I throw it away immediately because I don't know where I can repair it fast and easily." (Romania FG3, P7)

Furthermore, participants introduced the idea of using more recycled materials in manufacturing and packaging. The main aim of this idea is to make less use of resources. The participants said producers should design a system in which the packaging of their products eventually gets returned to them. This way they can reuse or recycle it.

"For example, the Axion washing powder box can go back to the washing powder factory. Maybe not for direct repacking, but they can recycle the box and make a new box out of it." (Romania FG1, P6)

The participants also added that governments can encourage this idea by providing incentives, in the form of tax reductions, for producers.

"If a producer can prove that he doesn't use raw materials, freshly extracted, but only recycled materials [...] he should have a discount on the taxes he pays to the state." (Romania FG1, P6)

Another idea was to introduce machines in supermarkets where consumers can dispose of their waste and receive a financial reward in return. The main aim for this idea was to improve recycling among consumers. The participants argued that the waste collected from such a machine could go directly to a recycling point.

"In supermarkets, they should have machines for cans, PET bottles, paper bags and other packaging. The machine can then scan the barcode, and issue a voucher which can be used to buy other products in the same shop." (Romania FG1, P1)

The participants also assigned priority to the idea of separate waste collection in schools. The idea is to let

children collect paper, plastic, glass, etcetera at home, and provide them with the possibility to return it at school. The main aims of this idea are to improve recycling and to trigger a change in behaviour. The participants mentioned that the children could receive some kind of financial reward for doing this.

"[P2] Children should be encouraged at school to separate waste.
[P6] You bring many kilos of paper, and PETs, cans and so on…
[P9] They should get money for this… from the government." (Romania FG 1)

A final idea ranked as priority is that waste management companies should employ more people with the aim of sorting as much recyclable waste as possible. The aim of this idea is to improve recycling. The participants indicated that landfills, in particular, are full of unsorted waste. However, the participants did not elaborate further on this idea.

Table 4.3.5 Ideas within the category 'management and logistics' that received priority, ranked accordingly

Category	Idea	Aim	Target Group	Priority
Management/ Logistics	A better infrastructure for recycling: more collection points and more factories to treat recycled waste	Improve recycling	Consumers/ Waste management companies	☆☆☆☆☆ ☆☆
	Encourage the existence of small-scale repair shops to repair household appliances	Less use of resources	Producers/ Consumers	☆☆☆☆☆ ☆☆
	Producers should use more recycled materials to make their products/packaging	Less use of resources	Producers	☆☆☆
	Introduce machines to dispose of waste in supermarkets that give a voucher in return	Improve recycling	Consumers	☆☆☆
	Set-up a separate collection system via schools. A money rewarding system	Improve recycling/ Behaviour change	Consumers	☆☆☆
	Employ more people to sort waste	Improve recycling	Waste management companies	☆☆

COMMUNICATION AND EDUCATION

In total, there were three ideas that focused on the third category in the domain 'policy, management and communication': 'communication and education'. Two of these ideas received priority stickers from the participants. Both of them target consumers.

The first idea is to organise media campaigns to educate people on waste management and encourage them to recycle more. The aims of this idea are to raise awareness, improve recycling and trigger a change in people's behaviour. According to the participants, people nowadays are unaware of what and how to recycle. These educational campaigns should target the general public, but children in particular.

"We should educate the whole population, but we should focus more on the young than on the old." (Romania FG3, P4)

Second, the participants argued that special educators should be appointed in schools to teach about ecology and waste management. The main aim for this idea is to raise awareness. The participants did not elaborate further on this idea.

"[P1] It's all about education… and with specialised teachers.
[M] What do you mean? A normal biology teacher, is that OK?
[P1] No… people who specialise in ecology…" (Romania FG2)

Table 4.3.6 Ideas within the category 'communication and education' that received priority, ranked accordingly

Category	Idea	Aim	Target Group	Priority
Communication and education	Organise media campaigns that educate people about waste management and encourage recycling	Awareness/ Behaviour change/ Improve recycling	Consumers	☆☆☆☆☆ ☆☆☆☆☆
	Special appointed educators should teach in schools	Awareness	Consumers	☆☆☆☆

OTHER

There were also some ideas that were not directly related to waste management, but concerned sustainable or alternative energy, or sustainability in general. These ideas are listed in table 4.3.7.

Table 4.3.7 Ideas within the category 'other' that received priority, ranked accordingly

Category	Idea	Aim	Target Group	Priority
Other	Generate electromagnetic fields from cars on the road	Less use of resources/ Effect on planet	Producers	☆☆
	Use the heat coming from light bulbs as a source of energy in homes	Effect on planet	Consumers	☆
	Solar panels to store energy for street lighting	Less use of resources/ Effect on planet	Producers	☆

5. Conclusion, discussion and evaluation

This country report presents country-specific findings from citizen focus groups in Romania. It is part of a wider consultation process called VOICES, which involves almost one thousand European citizens across 27 EU member states in discussing the European research priorities for the theme 'Waste as a resource'. In most member states, three focus groups were conducted. The bigger member states had six focus groups in two different locations. In Romania three focus groups were held.

The overall aim of the VOICES project is to identify citizens' preferences, values, needs and expectations with respect to research priorities for the theme 'Waste as a resource'. This provides input for the Consolidation Group that will define the actual priorities for the next work programme on 'Urban Waste' (call SiS.2013.1.2.1-2). In addition, it provides the methodology, the tools, the know-how and recommendations that can be adapted and used in coming years for similar initiatives.

Below, we present the main findings of the focus groups in Romania. First, we focus on waste management, barriers and concerns. Next, we go into the ideas identified and prioritised by the focus group participants. We close with a short reflection on the methodology of the study.

5.1 Waste management, barriers and concerns

Romania ranks 26th on the EU27 ranking list on Municipal Solid Waste (MSW) Recycling. A couple of years ago, the EU set a target for all EU27 countries to reduce their amount of MSW treated at landfills and bring it to 50% by 2013 and 35% in 2020. Furthermore, the EU has set a target specifying that by 2020, around 50% of MSW should be recycled. Data from 2010 suggests that in the last 10 years, Romania has not managed to significantly reduce the amount of MSW sent to landfill. Results from 2010 show that around 99% of MSW still goes to landfill, while merely 1% is recycled. Considering the trends in the amounts of MSW sent to landfill, Romania will need to make exceptional efforts to meet the requirement of 35% MSW treated at landfill and 50% MSW recycled by 2020.[13]

The results from the focus groups show that, in line with the low recycling figures mentioned above, most participants do not separate their waste at household level. Furthermore, not all participants have access to facilities for separating waste. Still, many participants stated that they separate certain types of waste for various reasons, ranging from feeding their animals to helping people in need. Most participants stated that they are not motivated to separate waste if the waste management companies do not collect it separately, as is usually the case. These results are partly supported by the findings from the Flash Eurobarometer survey 'Attitudes of Europeans towards resource efficiency'[14] in which 62% of Romanian respondents indicated that they separate at least some waste for recycling or composting. The results from the survey also indicated that 92% of the respondents would make more efforts to separate waste if the waste collection service were better. Furthermore, 84% of the respondents stated that stronger law enforcement on waste management would improve waste management in the general community.

The focus groups identified several large clusters of barriers and concerns regarding waste management. When it comes to waste prevention and production, the participants expressed concern about over-packaging. The participants also felt nowadays many people have an over-consumerist attitude.
Concerning waste management in the home, participants mentioned that some people do not know how to separate waste or recycle correctly. The participants also stated that sorting waste is not always convenient and takes extra effort. People are unenthusiastic about sorting waste, partly because of the poor functioning of the waste management system.
Furthermore, some challenges emerged regarding waste disposal and pathways. The participants mentioned that there are not enough containers to collect separate waste. This is in line with the Flash Eurobarometer Survey, in which 89% of respondents mentioned that more and better drop-off points for recyclable and compostable waste would convince them to separate waste more.

5.2 Ideas for achieving a 'zero waste society'

The results are divided into two main research domains, 'environmental sciences and technology' and 'policy, management and communication'. Both domains are further divided into more categories.

Ideas from the first domain focus mainly on new technologies (machines) that facilitate effective use of waste or encourage less use of resources. These ideas come under the category of ideas related to technical, physics, chemical and engineering research. Waste management companies are most frequently targeted, followed by consumers and producers. The ideas in this category range from developing innovative machines which are able to convert all kind of waste into energy, building material, compost or other raw materials, to robots

[13] European Environment Agency (2013). "Managing municipal solid waste - a review of achievements in 32 European countries" EEA Report No 2/2013
[14] Flash Eurobarometer No. 316 - The Gallup Organisation (2011)

that separate waste in households and factories. The second category focuses on producing biodegradable packaging materials to replace plastic. This idea targets producers. The third category focuses on biological and biotechnical ideas, mostly aiming to make more effective use of waste. The main target group is producers. In this category, the idea to develop medication out of waste was ranked as priority.

The second domain includes ideas focusing on policy, management, logistics and communication to improve recycling, change behaviour and raise awareness. Consumers and producers are seen as the most prominent target group, followed by waste management companies. One idea in the category 'policy' that was ranked as high priority was to create incentives for consumers to separate waste. In the category 'management and logistics', ideas that received relatively high priority included better infrastructure for recycling and waste management, small-scale repair shops and the reduction of packaging. In the category 'communication and education', participants enthused about ideas focusing on educating people (particularly children) and changing people's consumerist attitudes.

When looking at the highest prioritised ideas, the first priority is to organise media campaigns that educate people about waste management and stimulate recycling (ten stickers). The second priority is shared between two ideas that received the same number of priority stickers: convert waste into kinetic energy; convert waste into building material, e.g. construct walls of houses out of PET bottles (eight stickers).

5.3 Reflection

Overall, the participants were positive, appreciative and excited about the focus groups. Most participants took interest in the topics, and all tried to take an active role in the discussions. It was noted that participants created an open environment for discussion and an atmosphere of cooperation.

Annex

Annex 1: Full list of ideas for research and innovation, policy, management and communication

This table includes all ideas for research and innovation, policy, management and communication that emerged from the focus groups. For each research idea the research category is mentioned, as well as the aim of the research and the proposed target group. In addition, the priority of the research idea as perceived by the participants is indicated in the tables, using stars to indicate the number of stickers assigned to a specific idea by the participants.

ENVIRONMENTAL SCIENCES AND TECHNOLOGY

Category	Idea	Aim	Target Group	Priority
Technical/ Physics/ Chemical/ Engineering	Convert waste into kinetic energy	Effective use of waste	Waste management companies/ Producers	☆☆☆☆☆ ☆☆☆
	Convert waste into building material, e.g. construct walls of houses out of PET bottles	Effective use of waste	Producers	☆☆☆☆☆ ☆☆☆
	Convert household bins into generators that convert waste into electricity for the household	Effective use of waste	Consumers	☆☆☆☆☆ ☆
	Use waste as a source for power plants	Effective use of waste	Waste management companies/ Producers	☆☆☆☆☆
	Products should have a longer life span, thus increasing the quality of products	Less use of resources	Producers	☆☆☆☆☆
	Establish factories that convert organic waste from households into fertiliser	Effective use of waste	Producers	☆☆
	Use metal waste and cardboard to make medical prostheses	Effective use of waste	Producers	☆☆
	Make asphalt out of used tyres	Effective use of waste	Waste management companies/ Producers	☆☆
	Design robots made out of waste that can help in households and factories	Effective use of waste/ Convenience	Consumers/ Producers	☆
	Create machines that can separate waste in households	Improve recycling/ Convenience in the home	Consumers	☆
Material	Introduce biodegradable but good quality packaging to replace plastic	Less plastic/ Effect on planet	Producers	☆☆☆☆☆
Bio(techno)-logical	Develop medication out of waste	Effective use of waste	Producers	☆☆
	Introduce food in the form of pills	Less packaging/ Less waste production	Producers/ Consumers	

POLICY, MANAGEMENT AND COMMUNICATION

Category	Idea	Aim	Target Group	Priority
Policy	Create incentives to improve recycling such as tax reduction, vouchers	Improve recycling/ Behaviour change	Consumers	☆☆
	Introduce a general colour code scheme on containers for separate waste collection	Improve recycling	Consumers/ Waste management companies	
Management/ Logistics	A better infrastructure for recycling: more collection points and more factories to treat recycled waste	Improve recycling	Consumers/ Waste management companies	☆☆☆☆☆ ☆☆
	Encourage the existence of small-scale repair shops to repair household appliances	Less use of resources	Producers/ Consumers	☆☆☆☆☆ ☆☆
	Producers should use more recycled materials to make their products/packaging	Less use of resources	Producers	☆☆☆
	Introduce machines to dispose of waste in supermarkets and give a voucher in return	Improve recycling	Consumers	☆☆☆
	Set-up a separate collection system via schools. A money rewarding system	Improve recycling/ Behaviour change	Consumers	☆☆☆
	Employ more people to sort waste	Improve recycling	Waste management companies	☆☆
	More funding is necessary for waste management companies for them to organise and structure a better waste collection service	Improve recycling	Waste management companies	
Communication and education	Organise media campaigns that educate people about waste management and encourage recycling	Awareness/ Behavior change/ Improve recycling	Consumers	☆☆☆☆☆ ☆☆☆☆☆
	Special appointed educators should teach in schools	Awareness	Consumers	☆☆☆☆
	Encourage people to consume from their own products using media campaigns	Behaviour change/ Local production	Consumers	
Local initiatives	Organise activities where children and volunteers help clean certain areas	Other	Consumers	
Other	Generate electromagnetic fields from cars on the road	Less use of resources/ Effect on planet	Producers	☆☆
	Use the heat coming from light bulbs as a source of energy in homes	Effect on planet	Consumers	☆
	Solar panels to store energy for street lighting	Less use of resources/ Effect on planet	Producers	☆

Annex 2: Attitudes of citizens from Romania towards resource efficiency

The data in this annex is based on the Flash Eurobarometer No. 316 - The Gallup Organisation (2011). The primary objective of the Flash Eurobarometer survey 'Attitudes of Europeans towards resource efficiency' (Flash No. 316) was to gauge EU citizens' perceptions, attitudes and practices concerning resource efficiency, waste management and recycling. In detail, the survey examined:

- citizens' perceptions of Europe's efficiency in its use of natural resources
- the amount of waste EU households produce and whether they separate that waste for recycling or composting
- preferred actions to improve EU households' and communities' waste management
- citizens' views on how to pay for waste management
- EU households' food waste production and preferred ways of decreasing that waste
- citizens' perceptions of the importance of a product's environmental impact when making purchasing decisions
- citizens' willingness to buy second-hand products and products that are made of recycled materials.

The survey obtained interviews - fixed-line, mobile phone and face-to-face - with nationally representative samples of EU citizens (aged 15 and older) living in 27 Member States. The target sample size in all countries was 1,000 interviews. Below we give the results from Romania.

Question	Answer	%	EU27 Average
Do you think Europe could be more efficient in its use of natural resources?	Yes	86%	87%
	No	7%	5%
	DK/NA*	7%	8%
Do you think that your household is producing too much waste or not?	Yes	24%	41%
	No	75%	58%
	DK/NA*	1%	1%
Do you separate at least some of your waste for recycling or composting?	Yes	62%	89%
	No	38%	11%
	DK/NA*	0%	0%
What initiatives would convince you to separate (more) waste?	More and better drop-off points for recyclable and compostable waste	89%	76%
	Improve separate waste collection at your home	82%	67%
	More information on how and where to separate waste	78%	65%
	Legal obligation to separate waste	77%	59%
	Taxes for waste management	54%	39%
What initiatives would improve waste management in your community?	Better waste collection services	92%	70%
	Stronger law enforcement on waste management	84%	65%
	Make producers pay for collection and recycling of waste	76%	63%
	Make households pay for the waste they produce	61%	38%
Which one would you prefer: to pay taxes for waste management or to pay an amount related to the quantity of waste your household generates?	To pay taxes for waste management	14%	14%
	To pay proportionally to the quantity of waste you generate	73%	75%
	DK/NA*	13%	11%

Which one would you prefer: to pay taxes for waste management or to include the cost of waste management in the price of the products you buy?	To pay taxes for waste management	22%	25%
	Include the cost of waste management in the price of the products you buy	61%	59%
	DK/NA*	17%	16%
Can you estimate what percentage of the food you buy goes to waste?	None	22%	11%
	15% or less	58%	71%
	16% to 30%	13%	13%
	More than 30%	6%	4%
	DK/NA*	1%	1%
What would help you to waste less food?	Better estimate portion sizes (how much food you cook) to avoid excess food	70%	62%
	Better information on food product labels, e.g. how to interpret "best before" dates, information on storage and preparation	79%	61%
	Better shopping planning by my household	80%	58%
	Smaller portion sizes available in shops	55%	58%
How important for you is a product's environmental impact - e.g. whether the product is reusable or recyclable - when making a decision on what products to buy?	Very important	44%	39%
	Rather important	36%	41%
	Rather not important	9%	12%
	Not at all important	6%	6%
	DK/NA*	5%	2%
Are you willing to buy second-hand products?	Yes	48%	68%
Base: all respondents, % of yes			
Would you buy the following products second hand?	Furniture	29%	56%
Base: all respondents, % of yes	Electronic equipment	28%	45%
	Textiles (clothing, bedding, curtains, etc)	28%	36%
What reasons prevent you from buying second-hand products?	Quality/usability of the product	52%	58%
	Health and safety concerns	57%	50%
	Less appealing look of the product	20%	25%
	Afraid of what others might think	4%	5%
Would you buy products made of recycled materials?	Yes	55%	86%
	No	36%	11%
	DK/NA*	9%	3%
What would be the most important factors in your decision to buy products made of recycled materials?	Quality/usability of the product	58%	51%
	Environmental impact of the product	25%	26%
	Price of the product	11%	18%
	Brand/brand name of the product	4%	2%
	DK/NA*	2%	3%
What prevents you from buying recycled products or products containing recycled materials?	Health and safety concerns	37%	44%
	Quality/usability of the product	39%	42%
	No clear consumer information on the recycled product	32%	32%
	Less appealing look of the product	13%	17%
	Afraid of what others might think	3%	5%

*Abbreviation DK/NA = Don't know / No Answer

NOTES

IMAS MARKETING & SONDAJE

Str. Sfintii Apostoli nr. 44
Bucureþti
Romania

VOICES, CITIZEN PARTICIPATION IN SOCIAL INNOVATION

VOICES is a Europe-wide citizen consultation process, led by Ecsite, the European network of science centres and museums, which helps set the agenda for the environmental research dimension of Horizon 2020 - the European Union's strategy to advance research and innovation.

VOICES represents a valuable insight on methods and procedure for engaging citizen participation to inform Europe's Responsible Research and Innovation framework. Focus groups, academic analyses of public consultations and dissemination of results will lead to an effective method through which to consult the public on science and technology related issues.

VOICES is engaging citizens in 27 EU countries through science centres and museums - all of which are expert, impartial and powerful partners in public engagement with science as members of Ecsite.

One thousand European citizens have joined VOICES focus group discussions on innovative uses and solutions for urban waste. The outcomes of this European consultation process are presented in the VOICES Reports Collection.

VOICES for innovation

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