

CONCERNS ABOUT THE IMPACT OF PLASTIC ON HEALTH IN ARMENIA

The review is based on a consumer survey

AWHHE conducted a consumer survey (Annex), and the results showed that, in general, the country's residents are concerned about the impact of plastic on health. 83.5% of respondents are aware that plastics contain health-affecting chemicals and have general ideas about the toxic emissions resulting from plastic incineration. Respondents, mainly NGO representatives, university students, and teachers, who recognized the significant negative impacts of plastic products on health and the environment provided the following examples and arguments:

Health Impact:

Burning plastic releases toxic substances such as dioxins, which can lead to headaches, breathing difficulties, and contribute to cancer. Some chemical additives used to enhance plastic's strength and heat resistance can disrupt hormonal balance and trigger allergic reactions.

Environmental Impact:

Plastic products decompose very slowly, leading to long-term contamination of soil and water bodies, which harms ecosystems. Microplastics from the decomposition process enter the food chain, posing risks to the health of both humans and animals. Compliance with the sanitary protection zone for plastic production in Armenia:

In Armenia, there are norms establishing sanitary protection zones and sanitary classification (SanPin) for enterprises, constructions, and other industrial facilities, including plastic and plastic products production, incineration, and waste processing enterprises.

General provisions: The law "On Ensuring Sanitary-Epidemiological Safety of the Population of the Republic of Armenia" of November 16, 1992, is currently in force; additionally, the Unified Sanitary-Epidemiological and Hygienic requirements for products (goods) subject to sanitary-epidemiological supervision (control) of the EAEU are also enforced.¹

According to the information from the Ministry of Health, the requirements for establishing

1 Unified sanitary-epidemiological and hygienic requirements for products (goods) subject to sanitary-epidemiological supervision (control) of the EAEU, available at https://eec.eaeunion.org/comission/department/depsanmer/regulation/P2_299.php.

sanitary protection zones for enterprises, facilities, and other industrial objects and productions are set by the Committee on Urban Planning of the Republic of Armenia According to information from the Urban Planning Committee of the Republic of Armenia (received during an informal discussion within the framework of the Ministry of Environment event), the classification of plastics production is based on the building standards and requirements adopted in the Republic of Armenia in accordance with the principles of sanitary protection.

By Order No. 06-N, dated February 1, 2024, from the Chairman of the Urban Planning Committee of the Republic of Armenia (RAASN 31-04.01-2024 “Sanitary Protection Zones and Sanitary Classification of Buildings and Structures of Industrial and Public Purpose”), approved the building standards of the Republic of Armenia, along with amendments to Order No. 11-N, dated June 14, 2022, from the Chairman of the Urban Planning Committee of the Republic of Armenia.²

The sanitary classification of plastics production is as follows (the above Order: Chapter 12, paragraph 117, classes IV and V).

sanitary classification	Type of production
Grade IV	Fluoroplastics processing plant
Grade IV	Plastics processing (molding, extrusion, pressing, vacuum forming)
Grade IV	Polyurethane production
Grade V	Manufacture of plastic and synthetic resin products (machining)

This SANPiN document defines the classification of industrial and production facilities, including the production of plastic products, by hazard levels and establishes the size of sanitary protection zones based on factors such as air pollution, noise, and other impacts.

The Sanitary Protection Zone (SPZ) for plastic product production is established to minimize the impact of the production activities on nearby communities. The size of the SPZ depends on the nature of the production activity, the materials used, and possible environmental impacts such as noise, air pollution, and waste.

- For Class IV, the SPZ is typically set at 100 meters;
- For Class V, the SPZ may be set at 50 meters or less, depending on the scale of production and the level of exposure.

International practice—such as in the Russian Federation and other CIS countries—also employs similar classifications, where the production of plastics is assigned to the appropriate hazard class based on the level of production hazard. The protection zone may be adjusted according to the nature of the specific production, safety measures, and environmental impact assessment (EIA), which could necessitate an increase or decrease in the SPZ.

² Order of the Chairman of the Committee for Urban Planning of the Republic of Armenia No. 06-N of February 1, 2024 (RAASN 31-04.01-2024 “Sanitary Protection Zones and Sanitary Classification of Buildings and Structures of Industrial and Public Purpose”, available in Armenian: <https://www.irtek.am/views/act.aspx?tid=182635&sc=p164>).

About data harmful emissions during production

Armenian enterprises operate in accordance with Decision N 679 -N of May 25, 2005, of the Government of the Republic of Armenia, “On Approval of Technical Regulations on Plastics and Plastic Products in Contact with Foodstuffs.”³ This document, paragraphs 32 through 36, sets out the requirements for environmental protection in the production and use of plastic products.

The document notes in paragraph 32 that **“when plastic products are manufactured and exposed to high temperatures (150-250 °C), harmful toxic substances may be formed in the air of the working area”**

In this regard, in accordance with TR TS TS 005/2011 4 (Annex 1, Table 1), enterprises that produce plastic and goods made from it must provide laboratory research data. These studies indicate the harmful substances present in various types of plastic, which can release at high temperatures into the working area and subsequently into the environment if no appropriate purification system is in place. Importers provide data from a CU and EU accredited testing laboratory (centre), and ISO International Conformity ISO data can also be supplied.

Furthermore, paragraph 33 addresses the concentration of harmful substances emitted from polymeric materials into the air of the working zone. Standards outlined in Section VIII of this regulation include safety requirements for plastics processing (GOST 12.3.030) among other requirements (GOSTs).

This data is submitted to government agencies; however, it is only partially available on the labeling (e.g., no Bisphenol-A). Consumers receive this information solely in the form of pictograms. Processors obtain confirmation from the certification laboratory. This data is not accessible to neighbouring communities, and there is no Pollutant Release and Transfer Register (PRTR) in Armenia.

Application. Survey of consumers of plastic products

The survey on plastic product consumers was conducted among students, schoolchildren, representatives of non-governmental organizations, Yerevan city departments, and farmers, as well as students and schoolchildren from the Gegharkunik, Armavir, Kotayk, and Ararat provinces. No special methodology was employed; instead, groups of students, farmers, and participants in various events were asked to respond to the questions. In total, 374 respondents were interviewed using a 13-question questionnaire. The purpose of the survey was to gauge the opinions of different population groups regarding plastic pollution issues. Participants were asked to sign a consent form for the survey, including photo and video consent (the form is in Armenian, with a Russian translation provided at the end of the appendix).

3 Decision N 679 -N of May 25, 2005 of the Government of the Republic of Armenia “On Approval of Technical Regulations on Polymeric and Food Contact Plastic Products”, <https://www.arlis.am/documentview.aspx?docid=13822> (in Armenian)

Photo and video consent form

Dear Volunteer/Participant,
Thank you for supporting us.

As part of our project to reduce plastic pollution in Armenia, we create a variety of materials to inform people and organizations about our work. Sometimes, these materials include photographic images—both moving and still—of participants, surrounding areas, plastic waste dumps, and other polluted places and facilities. We use these materials to illustrate our work, making it more engaging and easier to read.

By completing the form below, you consent to our use of these images and any personal information you provide with them (e.g., name, age, occupation, and place of employment) to actively promote the work of this program.

Your photographs and other visual materials may appear in our print publications, audiovisual and electronic materials, media, exhibitions, social media, and any other platforms we may use as part of this program. Images will not be used for any other purposes.

Please indicate in the appropriate field:

Yes, I agree	No, I don't agree.
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If you agree, please fill in your details:

First Name, Last Name:

Address:

Phone:

Email:

Questionnaire for consumers of plastic products

1. How often do you use plastic products (both disposable and otherwise?)

Often	infrequently
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2. What disposable plastic do you use most often?

Dishes	package	Other
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3. Are there alternatives to disposable plastic:

Yes	no	difficult to answer
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4. Would you favor products that are alternatives to plastic?

Yes	No
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5. What single-use plastic items do you consider unnecessary and whose production could be discontinued:

dishes	package	Other
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6. Where do you throw your used plastic items?

with regular trash	Separately
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7. Do you know what chemical elements your plastic items are made of?

	no
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8. Do you incinerate plastic waste? If yes, are you aware of the health risks of toxic emissions of chemicals in plastic?

Yes, I am.	No, I'm not.
Yeah, I know.	No, I don't know.

9. Do you know what damage some plastic objects do to nature and humans?

Yes	no
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10. Do you read labels on plastic goods?

Yes	no
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11. Are you satisfied with the information on plastic product labels?

Yes	no
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12. Does the information on labels help you choose plastic products?

Yes	no
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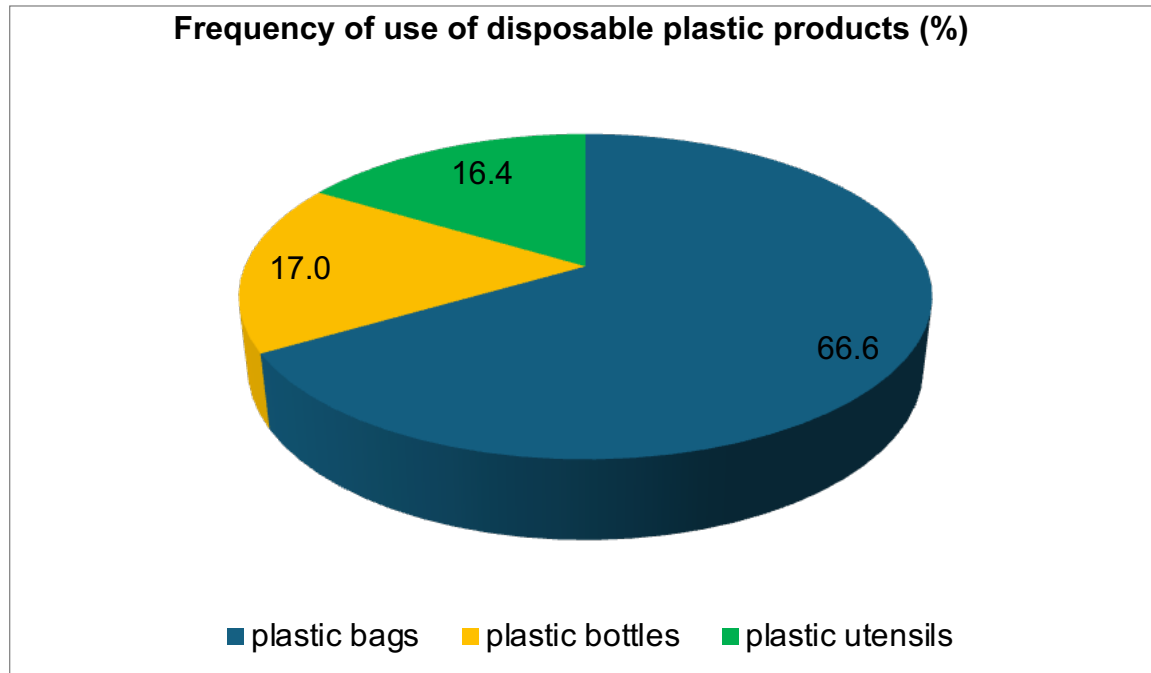
13. When you buy plastic products, would you like to see a QR code on them that shows the chemical composition of the plastic and how to recycle it?

Yes	No
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Survey results

1. Frequency of use of disposable plastic products

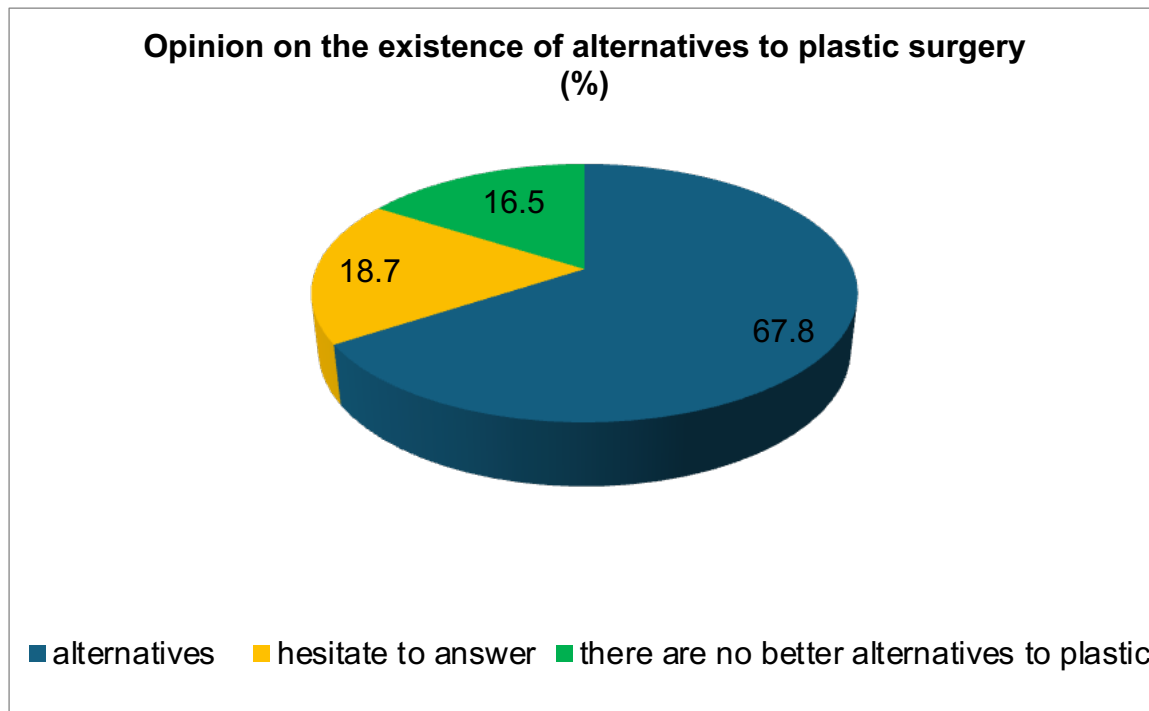
70.3% of respondents noted that they often use disposable plastic products (bags, bottles, utensils)



➤ Among the frequently used products are:

- **Polyethylene bags** account for **66.6%**. Some respondents indicated that cheap polyethylene bags are available at retail outlets for all purchases, especially after work during unplanned shopping. They also noted that they sometimes take alternative bags or previously purchased plastic bags with them when they go shopping.
- 17% of respondents buy soft drinks and water **in plastic bottles** because they are lightweight and convenient for traveling. Mothers also mentioned that they put water in plastic bottles in their children's bags to prevent it from being damaged in case of
- **16.4%** often use **plastic utensils** at seminars or for ordering food to the office. It is noted that it is convenient, easy to transport and does not require washing.

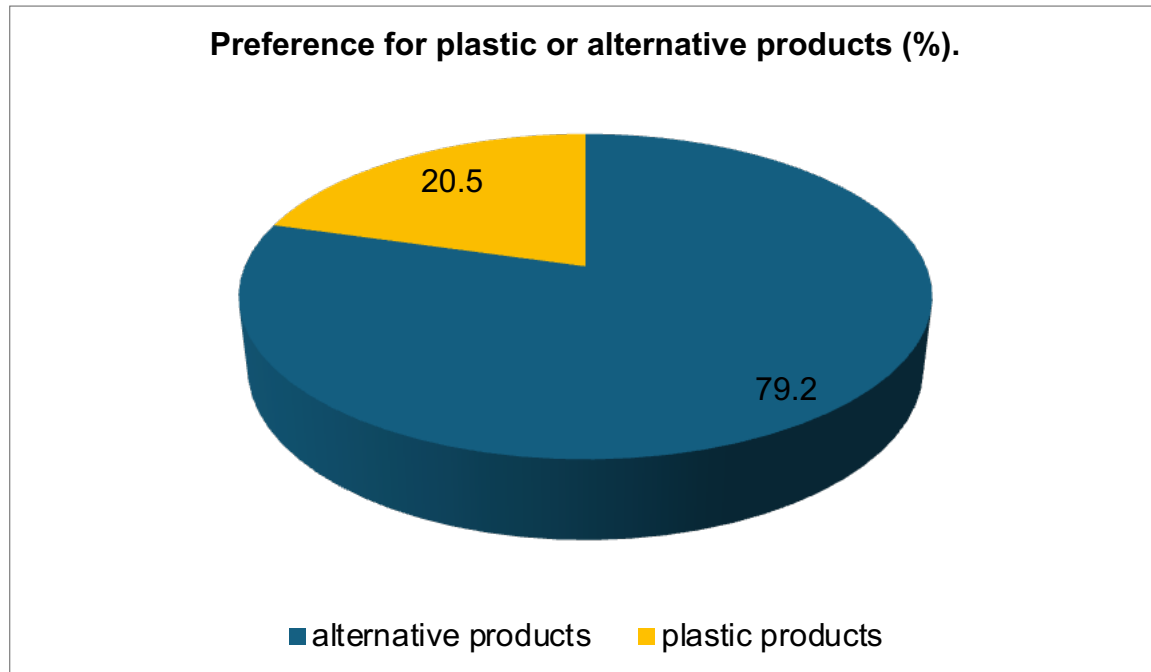
2- Alternatives to plastic surgery



- 67.8% of respondents stated that there are alternatives to plastic products such as glass or porcelain cups, paper cups, etc. The respondents stated that alternatives to plastic products are available. For example, plastic cups can be replaced with glass or porcelain cups in the office or at home, and paper cups can be used at the seminar. Beverages can be purchased in glass bottles, which can sometimes be turned in for a small fee, reducing litter and protecting the environment. Wicker baskets can be used to collect agricultural produce and wooden crates can be used to transport it.
- However, **18.7% of** respondents found it difficult to answer,
- **16.5%** believe that there is no better alternative to plastic products, especially when traveling

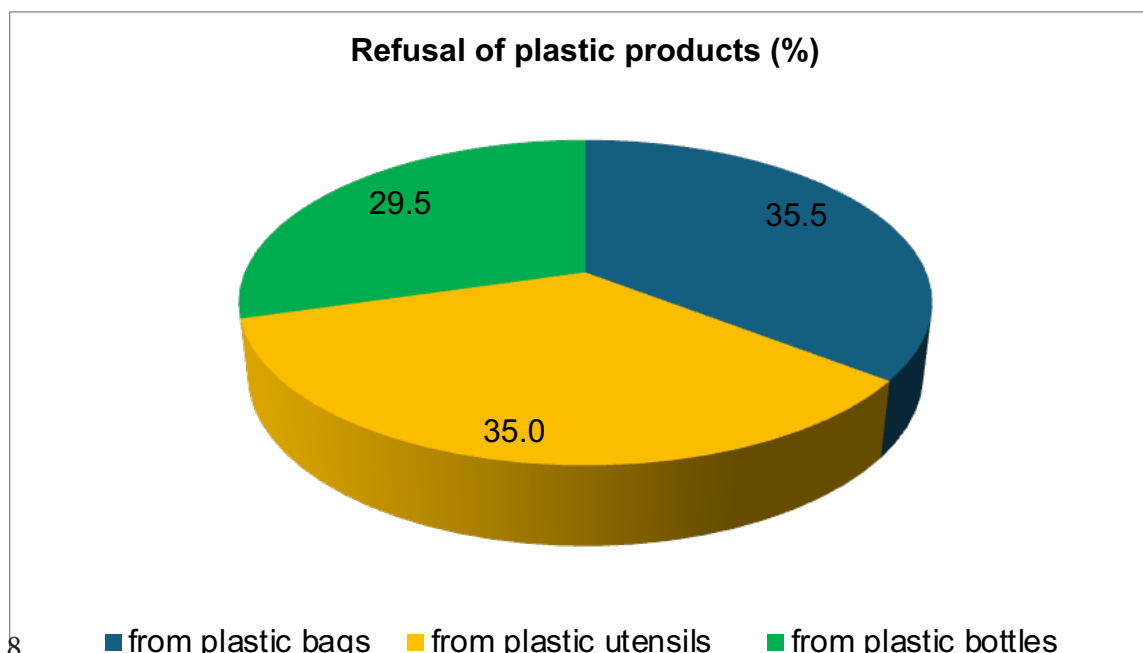
3. Choosing between plastic and alternative

Some respondents mentioned that alternative bags are uncomfortable because of their large volume, and that bags made of thin waterproof fabric tear under the weight of the load or because of poor quality seams. They also noted that paper or cloth bags can get wet and tear in bad weather, making it inconvenient to avoid plastic bags.



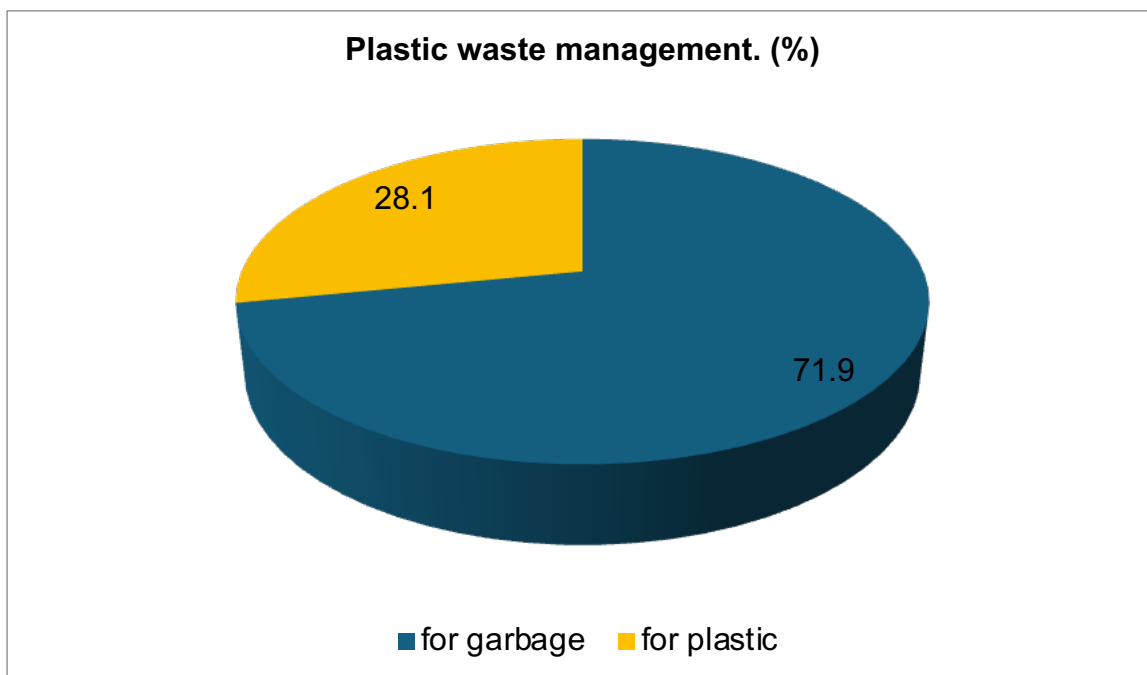
- 79.2% prefer to use alternative products,
- 20.5% prefer to use plastic.
- **0.3%** undecided

4. Rejection of plastic



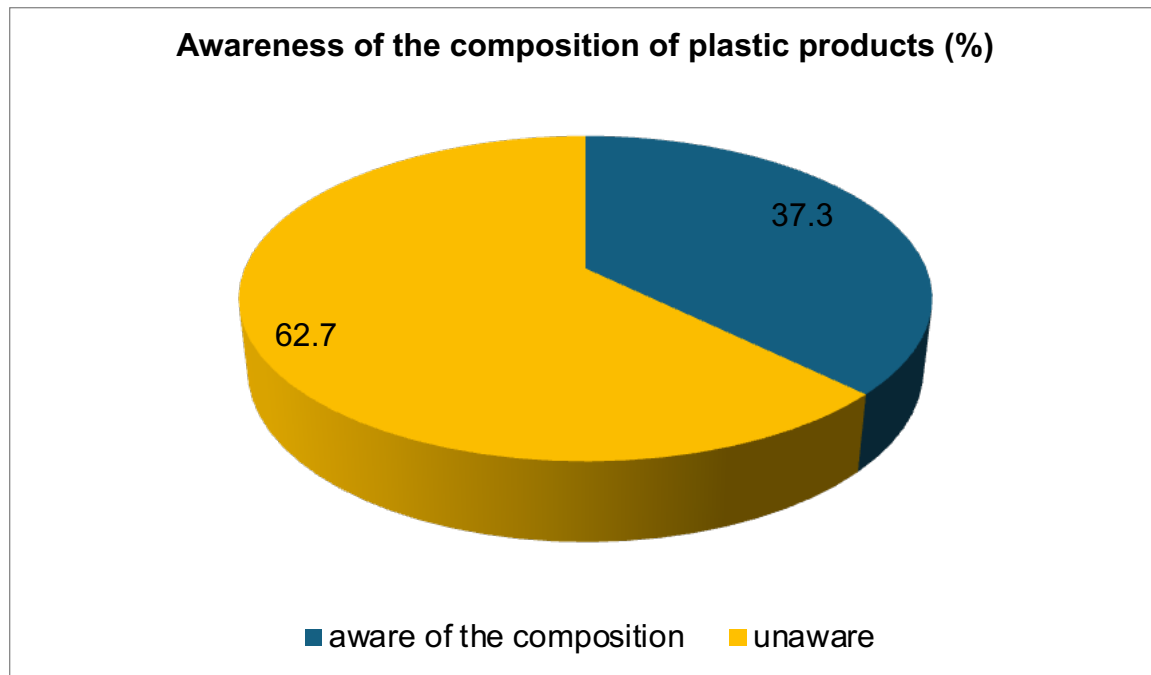
- 35.5% of respondents believe that it is possible to phase out plastic bags,
- 35.0% were from plastic utensils,
- 29.5% are from plastic bottles.

5. Plastic waste management



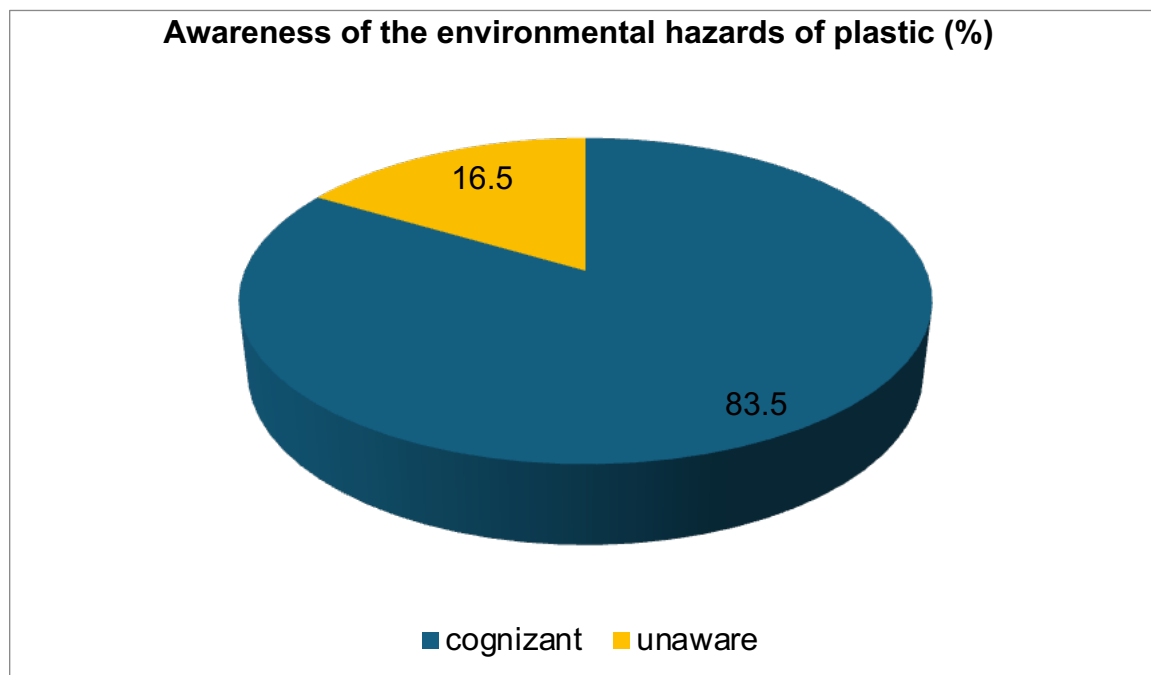
- **71.9% of respondents** throw used plastic items in the garbage. Some noted that due to the lack of marked containers for glass, paper, plastic and aluminum, they have to throw them in the general waste.
- **28.1%** collect plastic bottles separately and give them for recycling. Residents of Yerevan and vacationers on the banks of Sevan throw plastic bottles into plastic collection containers

6. Materials from which plastic products are made



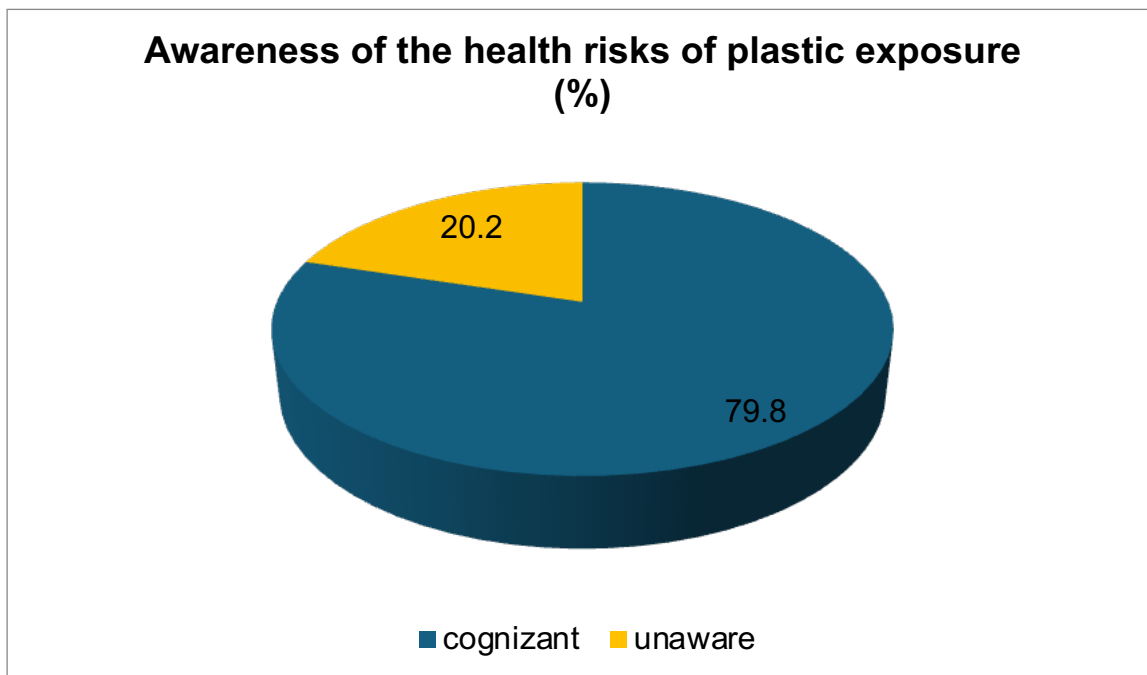
- 62.7% of respondents do not know what materials plastic products are made of.
- Only 37.3% are aware of the materials used (e.g. polyethylene, polypropylene, polystyrene, PVC) and the additives that give plastic different properties (strength, heat resistance, UV resistance).

7. Health and hazards of plastic materials



- 83.5% of respondents are aware of harmful chemical emissions from plastic
- 16.3% - are not aware of harmful chemical emissions from plastic

It is important to note that 79.8% are aware of the harm of plastic products to nature and humans. Some note that burning plastic releases carcinogenic substances, and products in plastic packaging can cause allergic reactions.

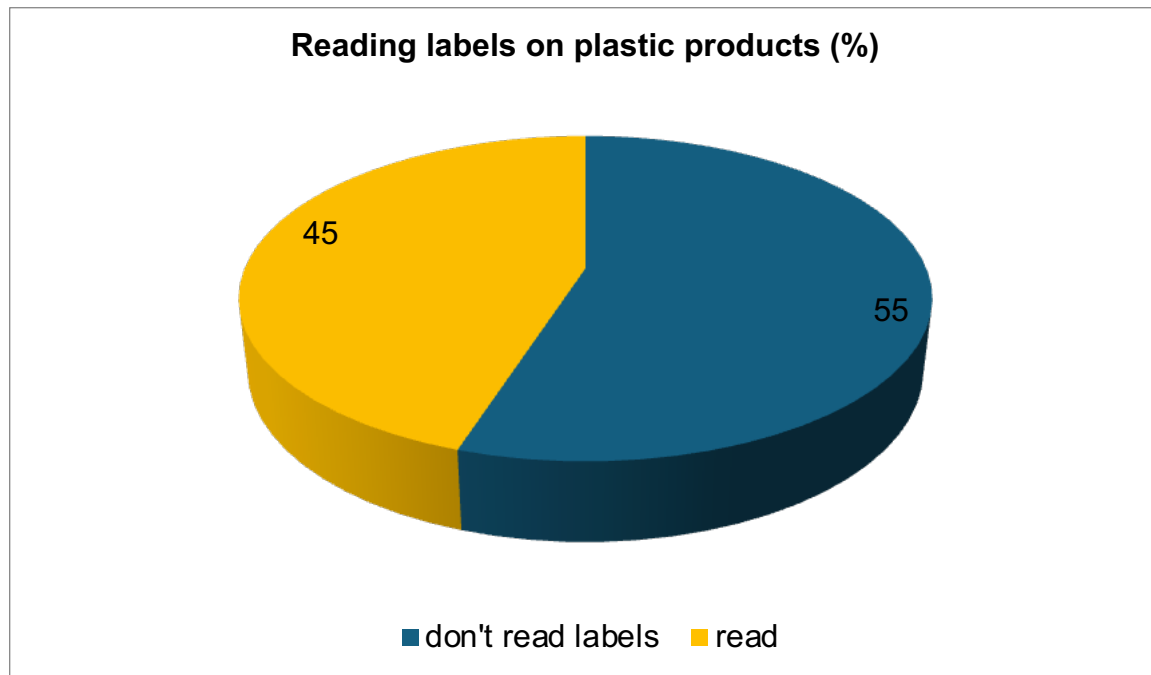


84.7% of respondents do not burn plastic waste, throwing it into garbage bins. **15.3%** burn plastic waste, because in rural areas garbage collection is not always organized.

83.5% of respondents are aware of toxic emissions from burning plastic that cause headaches and suffocation. However, 16.3% are not aware of the harm.

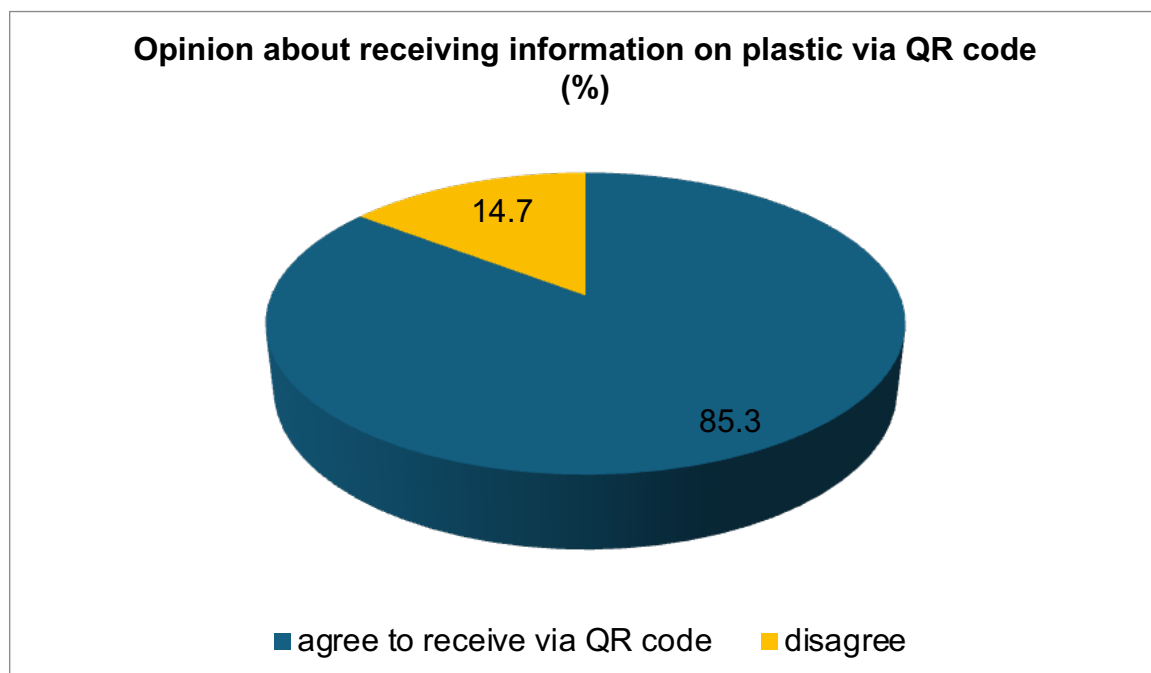
79.8% are aware of the harm caused by plastic to nature and people. Some people note that burning plastic releases carcinogenic substances, and products in plastic packaging can cause allergic reactions.

8. Reading labels on plastic products



- **55.0% of respondents** do not read labels of plastic products, considering the font too small. **45%** read using a magnifying glass or by magnifying the text on a smartphone.
- **61.8% of respondents** are not satisfied with the information on labels. Only **38.2%** are satisfied.
- **53.5%** claim that information on labels does not influence their choice of plastic products. **46.5%** noted that labeling helps them in their choice (they know the properties of different types of plastics).

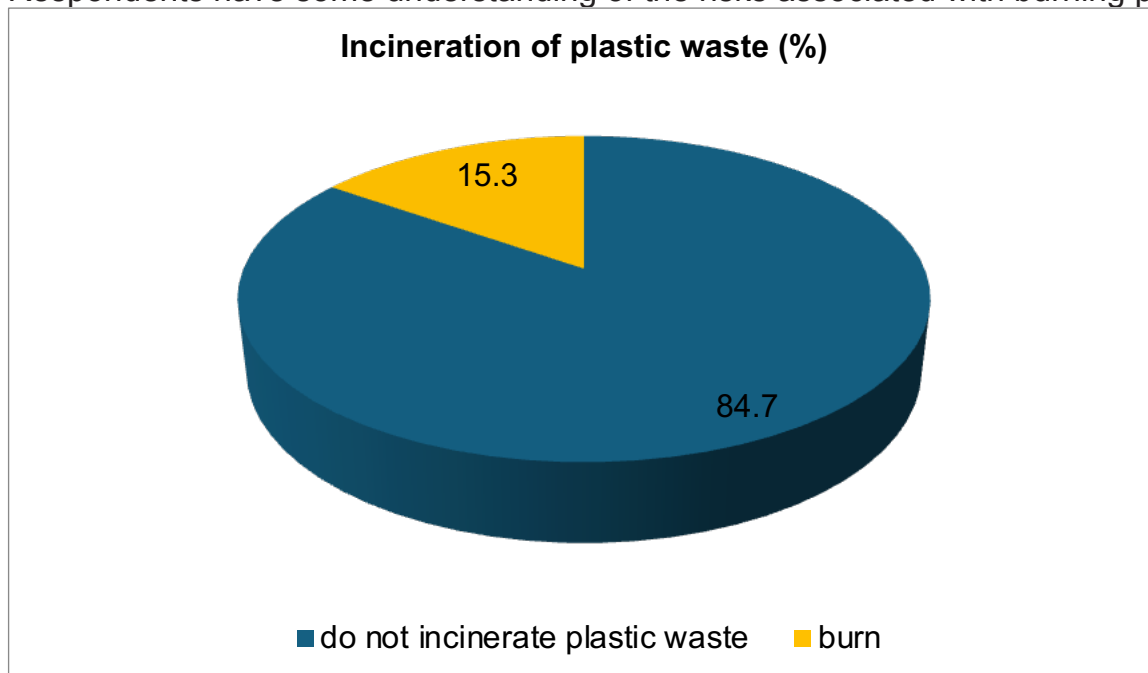
9. Opinion about QR code



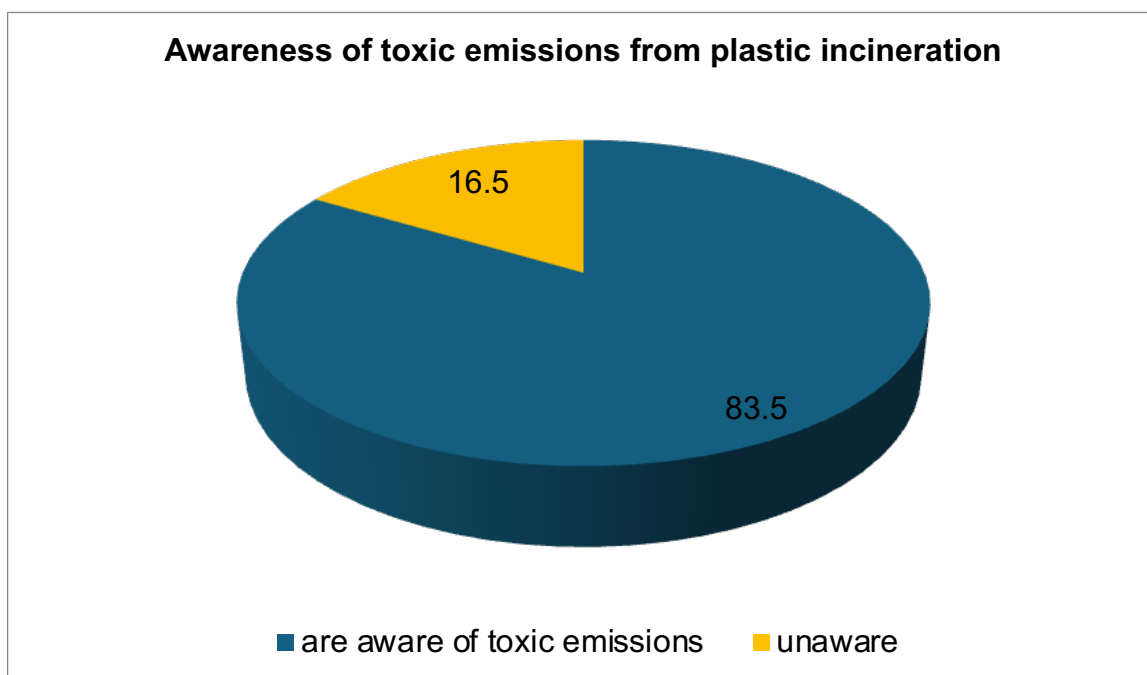
- **85.3% of** respondents agree to receive information about the composition and methods of plastic recycling via QR code. **14.7%** do not want to do it due to the lack of a smartphone or not knowing how to use the site.

10. Plastic waste incineration and awareness of toxic emissions from plastic incineration

Respondents have some understanding of the risks associated with burning plastic waste.



- **84.7% of respondents** do not burn plastic garbage, disposing of it in garbage cans.
- **15.3%** burn plastic waste because waste disposal is not always available in rural areas.



- **83.5%** of respondents are aware of toxic emissions from burning plastic causing headaches and suffocation.
- However, **16.5%** are not aware of the harms.

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HEJSupport Website:
www.hej-support.org

More information about the project:
www.hej-support/ecca-plastic



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