



РЕГИОНАЛНО ПАРТНЕРСТВО
ЗА ЗЕЛЕНА АГЕНДА



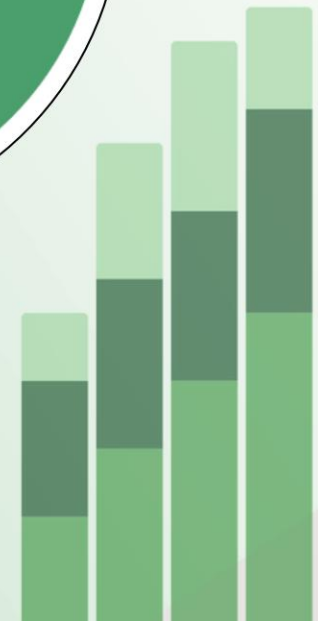
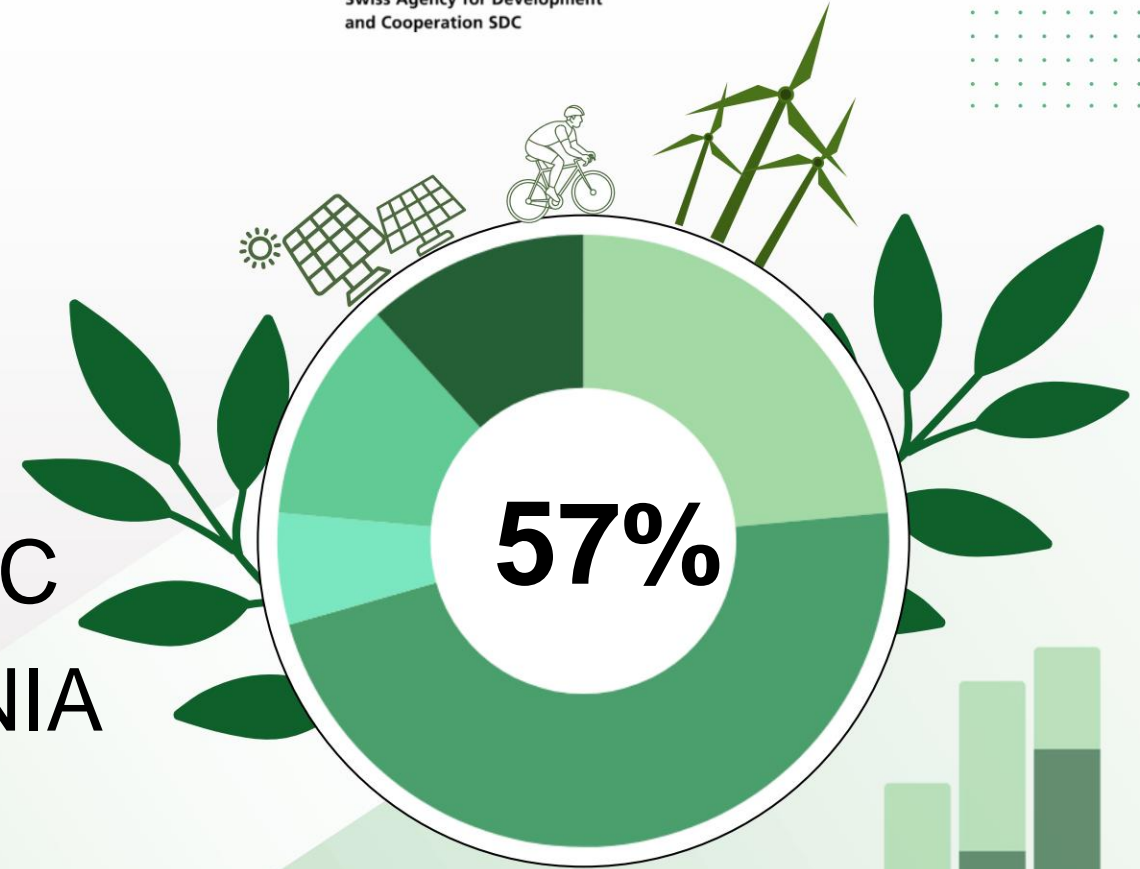
Citizens for change!



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GREEN AGENDA FOR THE WESTERN BALKANS GENERAL PUBLIC PERCEPTION IN MACEDONIA





Disclaimer

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Use of data

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1. General information

This analysis was developed within the framework of the project **"Regional Partnership for Better Implementation of the Green Agenda for the Western Balkans at Local Level"** implemented by the Center for Climate Change in cooperation with the partners Eco Green Movement from Berovo, Geosphere from Bitola, Ecotourism 2016 from Ohrid, Kreaktiv from Kavadarci, Foundation for Local Development and Information Technology Development (FLORIT) from Gevgelija, National Roma Center from Kumanovo and Eco Action from Tetovo. The project is funded by the Swiss Government through the Civica Mobilitas program and will be implemented until September 2027.

The aim of the project is to enable Macedonia's transition towards the EU's carbon neutral society goals, through an inclusive and transparent implementation of the Green Agenda for the Western Balkans in the RSM. Following the country's ambitious policies to achieve the requirements of the European Union and the targets set in the national contributions to the Paris Agreement, we considered it necessary to analyze citizens' perception of the Green Agenda and their priorities in relation to the requirements of the Green Agenda. The basis for this research is the strategic policy framework or Green Agenda for the Western Balkans (GAA), adopted by the leaders of the Western Balkan countries in November 2020 in Sofia, one year after the adoption of the European Green Deal*, which adopted policies relating to:

- continuous work to achieve a carbon-neutral continent by 2050 together with the EU, by integrating a strict climate policy and reforming the energy and transport sectors in all Western Balkan countries,
- transition from a linear to a circular economy, with full awareness of the necessity of research and innovation that will support this transition, are aimed at further contributing to environmental protection and minimizing the amount of waste generated in the region,
- reducing air, water and soil pollution in all Western Balkan countries as a common interest arising from the concern for the health of citizens,
- transformation of the agricultural sector, minimizing its negative impact on the environment and climate, while providing affordable and healthy food for the citizens of the Western Balkans, • defining the post-2020 biodiversity framework and developing a long-term strategy to halt biodiversity loss, protect and restoration of ecosystems and rich biodiversity.

To achieve this, it is necessary to work on developing programs and undertaking the necessary activities to increase the administrative capacities for the implementation of the Green Agenda for the Western Balkans, in order to monitor, promote and ensure compliance with environmental obligations, as well as to ensure effective mechanisms for public participation, access to information, access to justice in environmental matters and environmental reporting. At the same time, it is necessary to work on a plan of activities to raise awareness at the economic and regional level in all five pillars, including the integration of the Green Agenda for the Western Balkans in the reforms of the education systems. In this regard, this research analyzes the attitudes of citizens regarding the current situation and the main threats to the environment, priorities and knowledge about the Green Agenda, climate change and the reasons for its emergence, the change in the forest fund and natural resources, energy and heating sources, sustainable food production, the state of surface waters and the quality of drinking water.

* (https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal_en)

2. Short summary

The document analyzes the views of respondents from across the country, and in addition to the total percentage, an overview is also provided by region, and for some questions, an analysis is also made by age, monthly income, education, gender, and the environment in which the respondent lives (urban-rural).

In terms of sectors, they follow the priorities of the Green Agenda, i.e. respondents answer questions about climate change, who is responsible for climate change, whether natural disasters will be more frequent in the future, etc. Respondents also answer questions about the current state of the environment, energy and pollution, drinking water quality, the state of forests and biodiversity,

The survey questionnaire begins with questions related to the prioritization of the environment in relation to economic development, and **what is significant is that 93% of respondents believe that it is possible to invest in the economy without neglecting environmental care.** Regarding the question of whether **air pollution is not an important problem if people do not have basic necessities for life, 85% agree** with this statement. On the other hand, **there is a high percentage of respondents (over 90%) who believe that economic development should be sustainable and not cause damage to the environment.** Only a smaller percentage of respondents who agree with this statement are in the Northeast and Polje region (below 70%). Of particular importance is the fact that **80% of all respondents believe that ecology and economy should be an equal priority.** Such results clearly indicate that the majority recognize the need for a healthy environment and that it should be ensured in parallel with economic development. It is understandable that basic foodstuffs are more important than clean air, but on the other hand, economic growth and development are an equal priority with a healthy environment.

When asked **what the Green Agenda is, 44% answered that they know and 35% that they know but are not completely sure.** Interestingly, understanding of the Green Agenda increases with age, so respondents aged 50-64 and those over 65 answered Yes, i.e. that they know what the Green Agenda is, in the highest percentage.

In terms of environmental problems that concern citizens, in the Vardar region the biggest problem that worries people is water pollution, and in the East it is air pollution. In the other regions, **air pollution is the biggest problem, followed by water pollution in second place, while illegal landfills are in third place among respondents from all regions.** The destruction of green areas and illegal logging stand out with a combined 24% in the East region, while **climate change is a concern for about 10% of respondents in all regions.**

The majority of respondents in all planning regions responded that **"the state does nothing" or "does very little" to solve the previously mentioned problems.** There are almost no responses that claim that the state "does everything to prevent environmental problems". In order to prevent environmental damage, **it is necessary to increase fines for factories, companies, mines, but also to prevent deforestation.** A high percentage of respondents believe that fines for citizens should also be increased. However, when asked **whether they are willing to pay more for a healthy environment, the largest percentage answered that they are not willing because they are not sure that the money will be invested in environmental protection.**

Climate change is a problem for humanity for 77%, but it is significant that in the Polog region 57% of respondents believe that it is a problem, but that it is being talked about excessively (28%). In all regions, **the largest percentage believes that man and his activities are the main culprit for climate change.** The majority of respondents from all planning regions believe that the aforementioned extreme weather events will occur more often in the future, and the state and its institutions are most responsible for the consequences. In order to reduce the negative consequences, it is necessary to increase the forest area, believe a large % of respondents in all regions.

The respondents from the Pelagonia region are most aware of the harmful impact of electricity production in the country (66%), and 25% are aware, but believe that there is no better solution. In the remaining regions, the prevailing opinion is that the method of production is somewhat harmful, but there is no better solution. **The high percentage of respondents who are not willing to pay a higher price for the production of "clean" electricity is disappointing.**

Regarding forests and natural resources, **the majority of respondents in all planning regions believe that today in the place where they grew up, the area covered by forests is significantly smaller. The largest number of respondents who claim this are from the Eastern region (84%).** Among the biggest culprits for this situation are citizens with their actions, the state with its institutions, and the industry and commercial sector. The functions of forests are clear to almost all respondents, but the largest percentage believe that their primary function is to provide oxygen.

In terms of the method of heating, **the wood stove prevails among respondents from the Eastern region, while in the rest, with the exception of the Skopje region, air conditioners are the main heating devices.** In the Skopje region, central heating as a method of heating prevails among a larger percentage of respondents. **Most citizens are not ready for new investments, primarily because they do not need it, but also because they do not have sufficient financial resources. However, if the state provides subsidies for the purchase of a new heating element or a change in the method of heating, the largest percentage of respondents are willing to invest.** In terms of investments in thermal insulation in almost all regions, the majority of respondents cannot invest because there is not enough money for such an investment. Here too, if subsidies are provided, **the willingness to install thermal insulation will change among the largest percentage of respondents.** In the Vardar region, the most favorable method of heating for the majority of respondents is electricity. In the other regions, the percentage for electricity is high, but also for natural gas. For the largest percentage of respondents from the Eastern region, firewood is the most economical way of heating.

Air quality information is monitored frequently, i.e. several times a week, by the majority of respondents from the Skopje, Pelagonia and South-West regions. The remaining regions monitor this information occasionally or once a week. 33% of respondents from the Vardar region monitor air quality information every day. **The percentage of respondents who monitor this information frequently varies significantly among the older age groups (40-49, 50-64 and over 65 years old).** What is significant is that the largest percentage of respondents are somewhat satisfied or dissatisfied with the information they receive about air quality. Also interesting is the fact that a large percentage of respondents sometimes cancel outdoor activities due to polluted air. A significant portion **of respondents, over 50%, in all planning regions believe that the air is the same as before or worse. In the Skopje region, half of the respondents believe that the air is much worse than ten years ago,** which is the highest percentage among respondents from all planning regions. The state and the economy, industry and enterprises are among the most responsible for air pollution. To improve air quality, the largest percentage of respondents would change the method of heating, but there is also a significant percentage of respondents who would join the reforestation actions. Less than 10% of those surveyed in all planning regions are determined to buy an electric car and pay more expensive energy from renewable sources.

Only (34%) of the respondents know what a circular economy is, but there are also citizens who are not completely sure (28%). With a higher level of education, knowledge about the circular economy increases, which indicates the need for its introduction in educational programs at lower levels. The highest level of awareness, with 48% who fully know what a circular economy is, is among the group with postgraduate studies. **The percentage of citizens who do not select waste is significant (50%),** and there is a significant percentage who leave selected waste or valuables next to the containers. **42% of the respondents stated that they would select waste if they had special bins for selection in their household,** and to further encourage selection, it is necessary to reduce the prices of utility services for those who will select. Packaging is not important to the largest percentage of citizens, except for those in the Northeast region where they prefer glass packaging. The results are similar regarding products made from recycled materials, where the majority stated that they do not pay attention.

One third of the respondents in all planning regions believe that drinking water is safe. Citizens, the state, municipalities, industry and businesses are also responsible for this situation. The lack of wastewater treatment, pollution of soils and rivers are the reason for the decline in the quality of drinking water, according to the majority of respondents, not only from all regions, but also from different habitats, i.e. urban and rural areas. It is significant that the majority of respondents in all regions are willing to pay a little more than they pay now to ensure clean drinking water. In terms of the hydrological situation, 49% believe that the levels of rivers and streams near their habitats have a lower water level than before. The Vardar region has the highest share of respondents who share

this opinion.

The majority of respondents believe **that the number of wild animal species has decreased due to the destruction of natural habitats and the impact of agriculture**, and that humans and their activities are most responsible for this.

Macedonian agricultural products are of higher quality than imported ones by 48% of respondents. Most of the respondents shop both at the market and in supermarkets. However, a larger percentage of residents in urban areas prefer to shop at markets compared to those in rural areas. **The majority of respondents believe that Macedonian producers do not care about the quality of food,** but that they would pay a little more for a product that they know is healthier. **In terms of willingness to pay a higher price for organic food, a large percentage believe that there is no big difference from traditional food.** Surface water and tap water are most often used for irrigation. Rainwater is an option for a very small percentage of respondents.

3. Methodology for conducting the Green Agenda research

The survey was conducted by **the Center for Climate Change** in cooperation with partner organizations in each of the regions of North Macedonia in the period **April - September 2024**. The main goal was to obtain relevant data on the attitudes, perceptions and awareness of citizens regarding the Green Agenda and its impact on local development. **1. Sample design** The survey was conducted on a **representative sample of 1200 respondents**, over the age of **18**. The sample was selected **randomly**, but with **an even representation of respondents according to the planning regions**.

To ensure the representativeness of

the data, **stratified random selection was applied**, taking into account **the demographic, geographical and economic characteristics of the population**. **2. Method of survey** The survey was carried out using a **combined methodology**: • **Electronic route (online questionnaire)** - The survey was conducted via digital platforms, with respondents receiving a link to the questionnaire. • **Direct**

surveying with trained interviewers – For groups that had difficulty accessing online tools,

The research was conducted through direct field interviews.

3. Questionnaire Structure A standardized

questionnaire consisting of **76 questions** was used to collect data . The questionnaire included: • **General questions** (demographic characteristics of respondents) • **Questions about awareness of the Green Agenda** • **Attitudes and opinions on climate change and sustainable practices** Most of the questions were with **options offered (closed-ended**

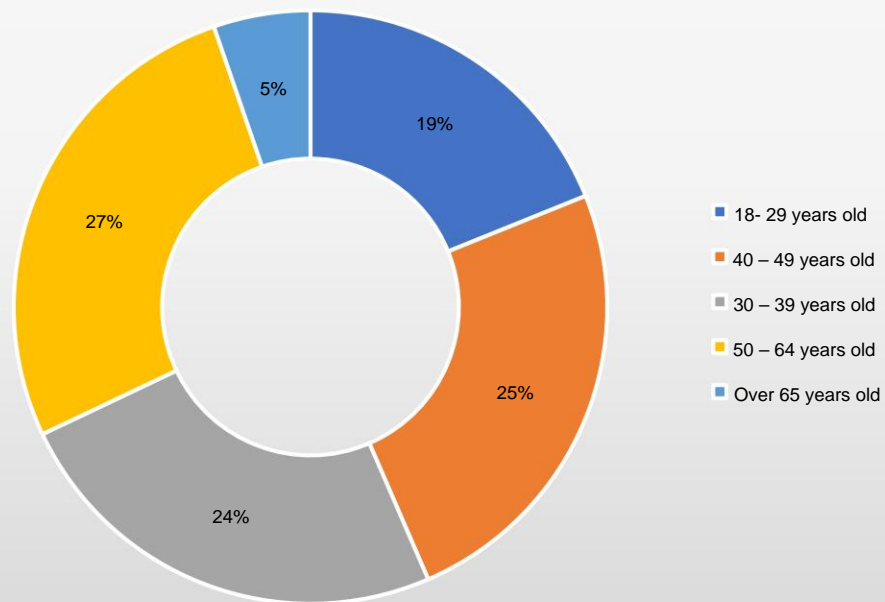
questions), in order to **facilitate data processing**, but some sections also included **open-ended questions** for

collecting qualitative information. **4. Analysis of the results** After completing the survey, **the Center for Climate Change** processed and analyzed the data, using **statistical methods for public opinion research**. The analysis was conducted by the Center's **expert team** , which has the necessary human resources and expertise for data processing and interpretation.

4. Overview of respondent demographics

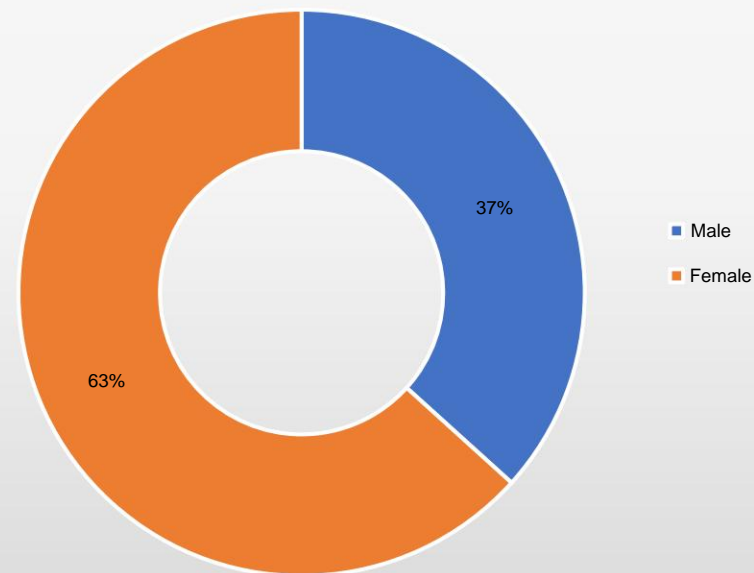
The following provides general information about the structure of the respondents, in terms of their age, gender, municipality of residence and region, level of education, as well as their status in terms of employment or other engagement. The respondents are also categorized in terms of whether they live in an urban or rural area.

4.1. Age



The most represented age category is the 50-64 age group (27%), while the least represented is the over 65 age group (5%). Young people, i.e. the 18-29 age group, are represented by a solid 19%.

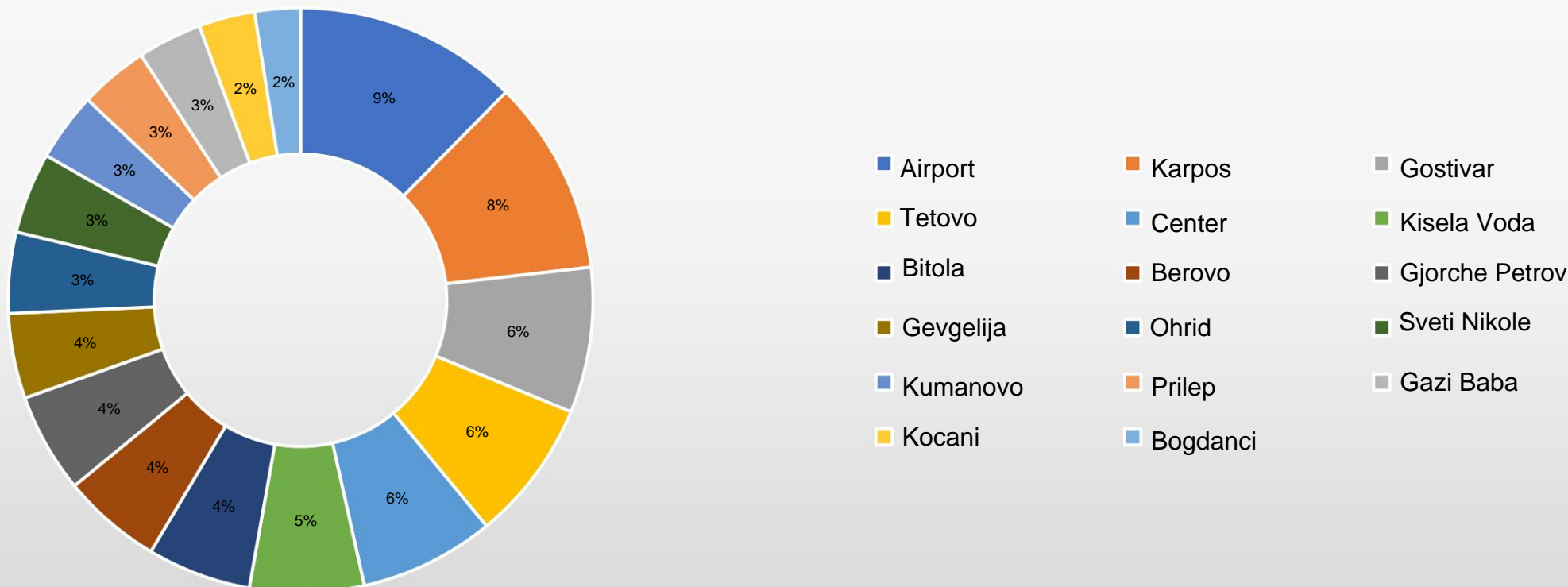
4.2. Gender



Females were significantly more represented among the respondents, at 63%.

4.3. Municipality of residence

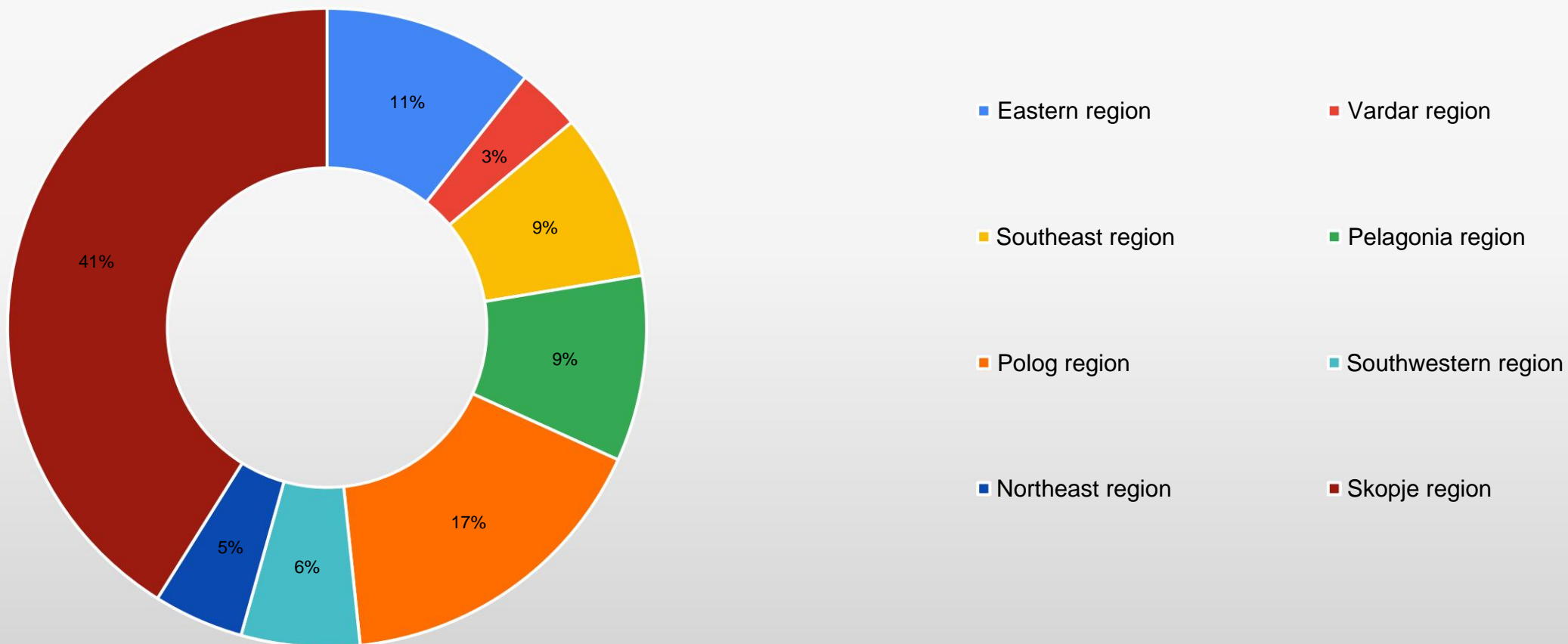
The situation regarding the municipality of residence of the respondents is rather uniform, with only a few municipalities being highlighted by a negligible number of respondents. These are Aerodrom (9%) and Karposh (8%). Then follow 3 municipalities with 6% each. participation – Gostivar, Tetovo and Centar. The smallest number of respondents come from the municipalities of Kocani and Bogdanci – 2% each.





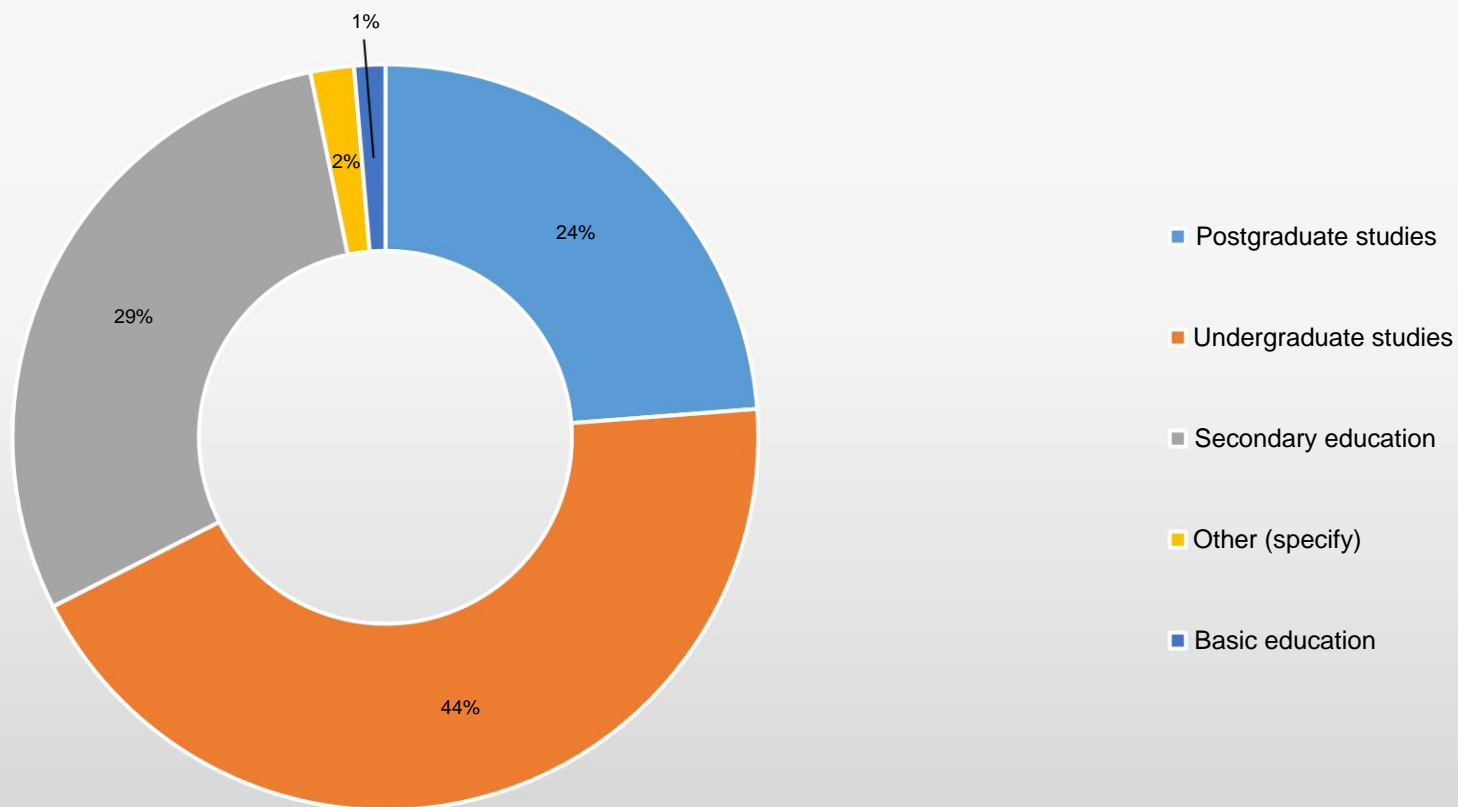
4.4. Region of residence

The distribution of respondents by planning regions shows a significantly high share of the Skopje region (41%), followed by Polog (17%). The Vardar region had the lowest participation of respondents with 3%.



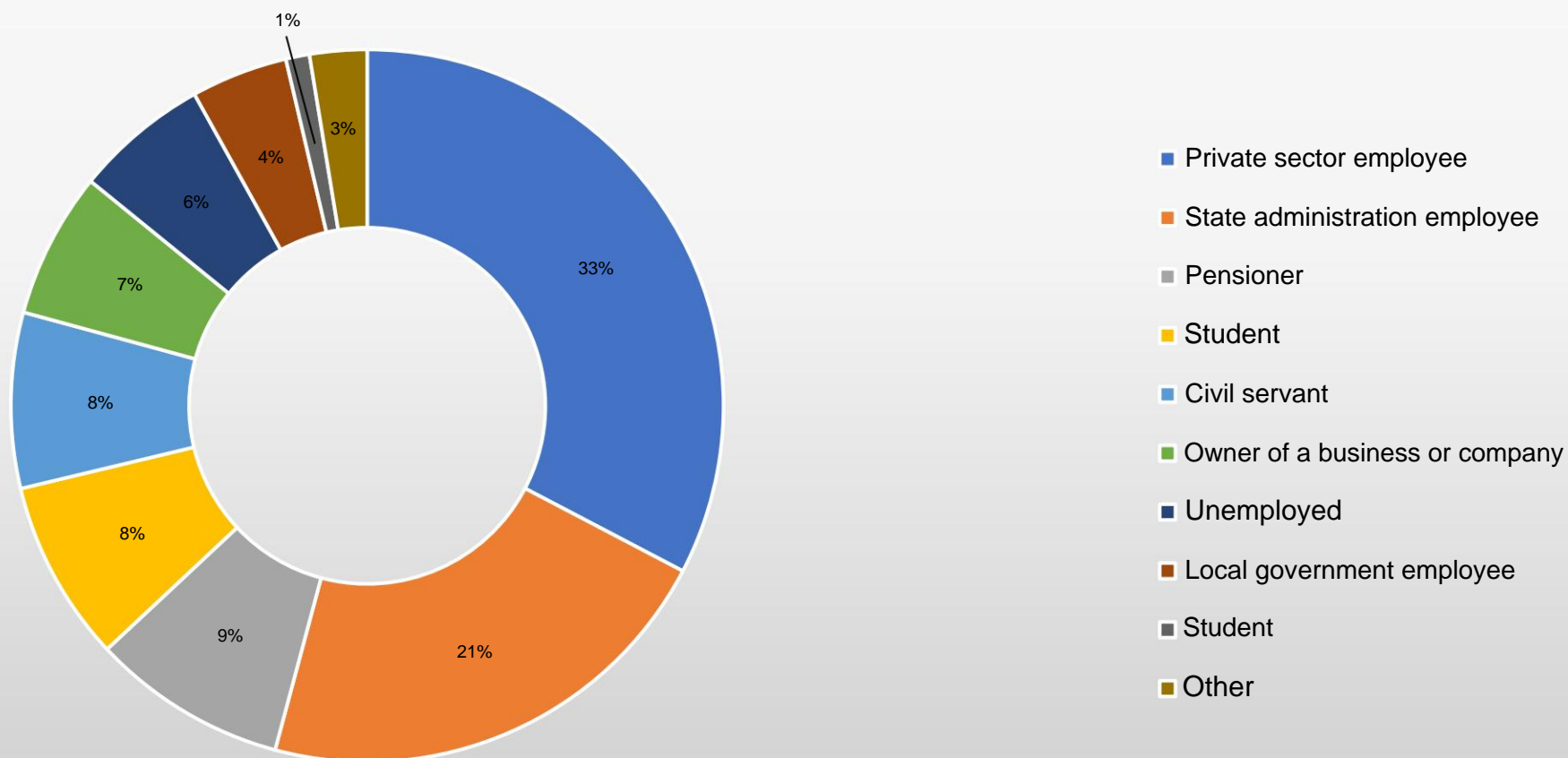
4.5. Level of education acquired

More than half of the respondents have at least a higher education (44% undergraduate and 24% postgraduate studies), while only 1% of the respondents had primary education.



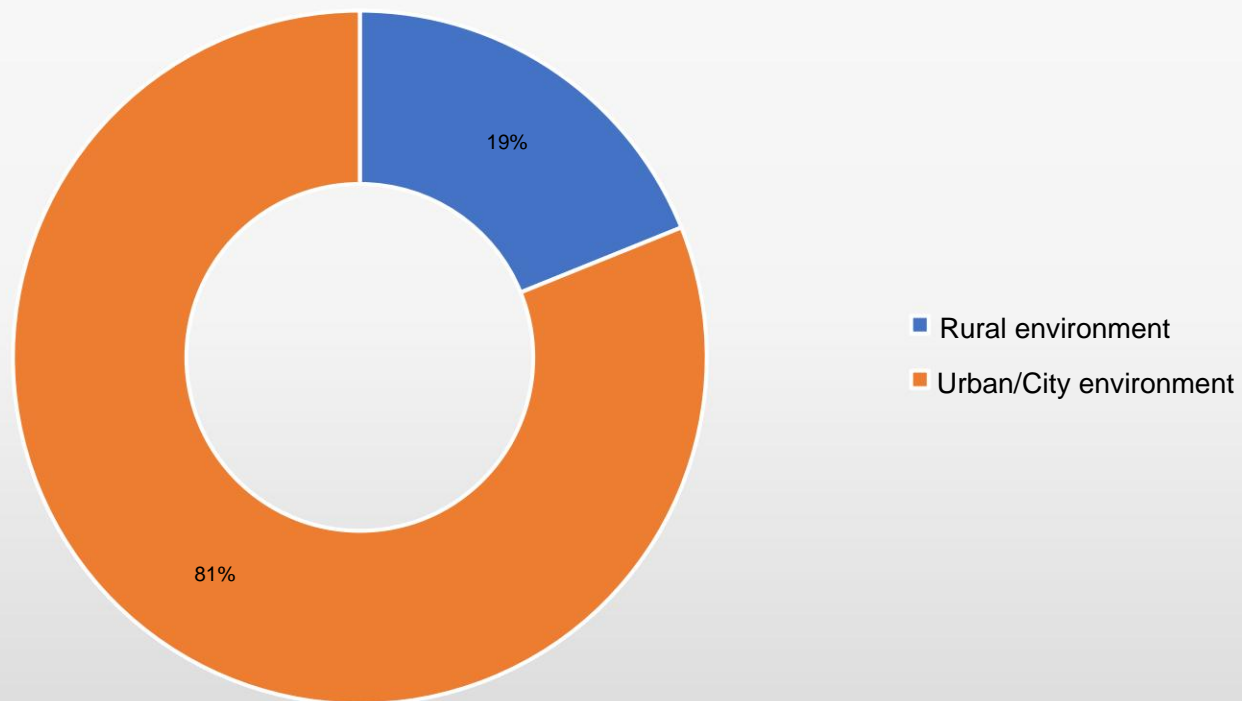
4.6. Current status regarding the activity of the respondents

In terms of the activity of the respondents and the type of their engagement, the largest share, or 33%, are employed in the private sector, followed by employees in the state administration with 21%. The least represented are respondents employed in local government (4%) and students with 2%.



4.7. Do you live in a rural or urban area?

A significant majority of respondents live in an urban/city environment, while the share of respondents from rural areas is 19%.





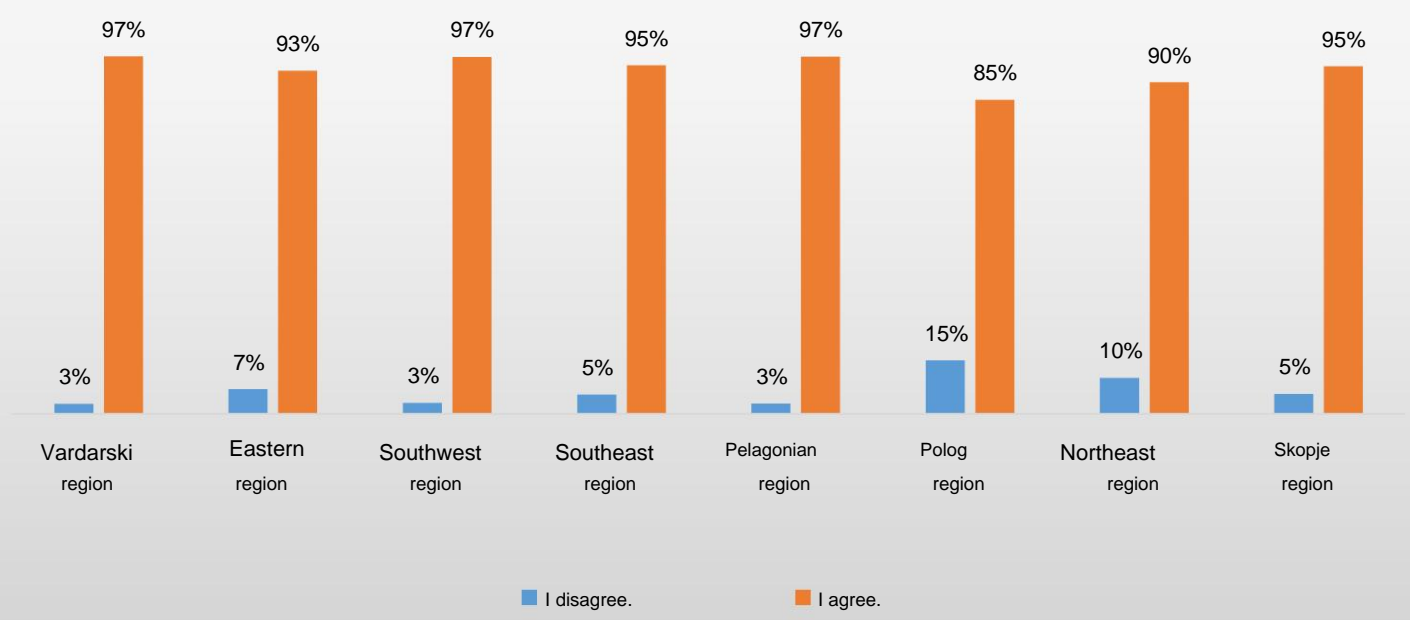
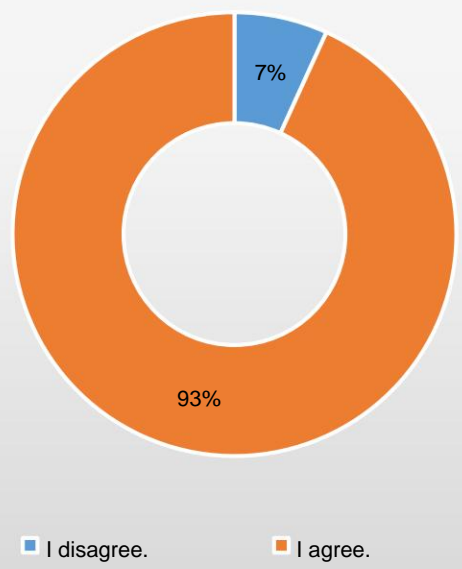
5. Citizens' perception of the main threats and the state of the environment

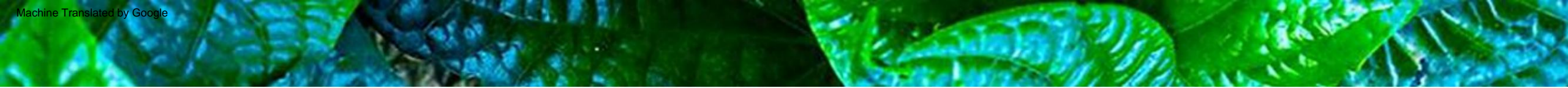
- 93% of respondents believe that economic development and environmental protection can go hand in hand.
- Top environmental concerns: Air quality (25%) and water (17%) top concerns nationally.
- Over 80% of citizens believe that the state is not doing enough to address environmental problems, which reveals the need for stronger and more concrete actions.
- The largest number of respondents suggest increasing fines for companies (30%) and greater protection of forests (26%) to prevent environmental degradation.

5.1. What is the priority for citizens? The economy or the environment? (total and by region)

When asked whether it is possible to invest in the economy and to achieve moderate growth while protecting the environment 93% of respondents answered that they agree with this statement.

The results show that in all regions, a large percentage of citizens believe that It is possible to invest in a moderately growing economy without harming the environment. The highest agreement with this statement was observed in Vardar, Southwest and Pelagonia regions (97%), and the lowest in Polog region (85%). The highest percentage of disagreement was recorded in the Polog region. (15%), while in other regions the disagreement ranges from 3% to 10%.

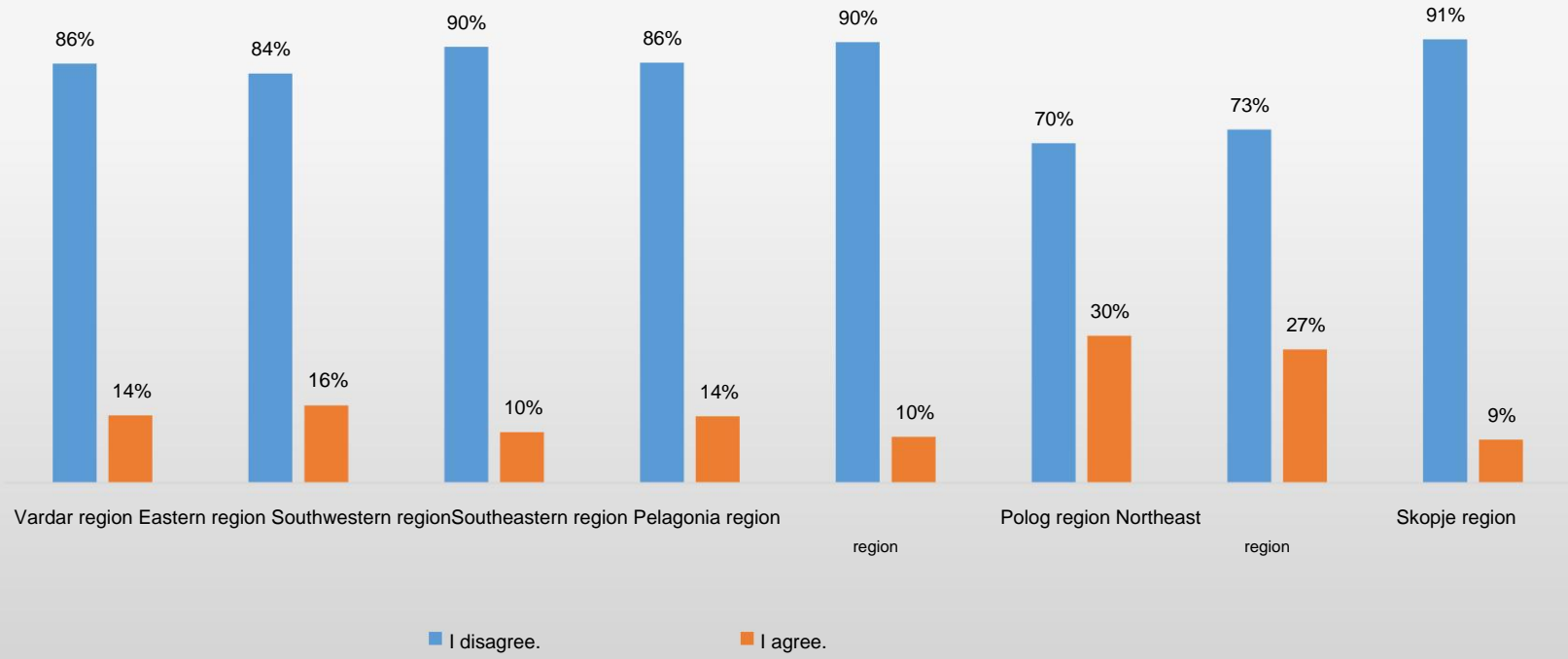
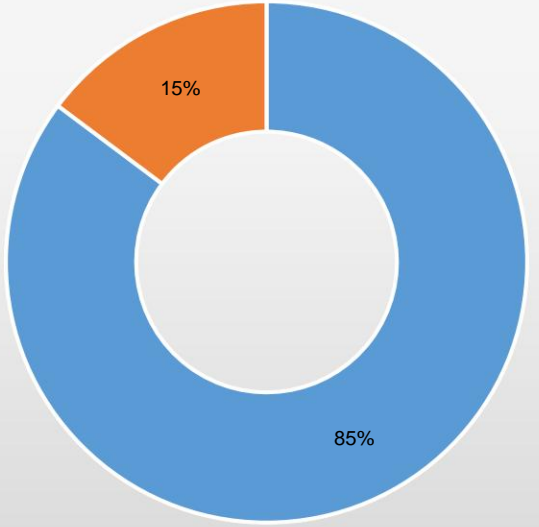




5.2. What is the priority for citizens? The economy or the environment (overall and by region)

When asked whether air quality it is not an important problem, if the citizens they don't have enough money for food and basic necessities groceries 85% of respondents are agree with this statement.

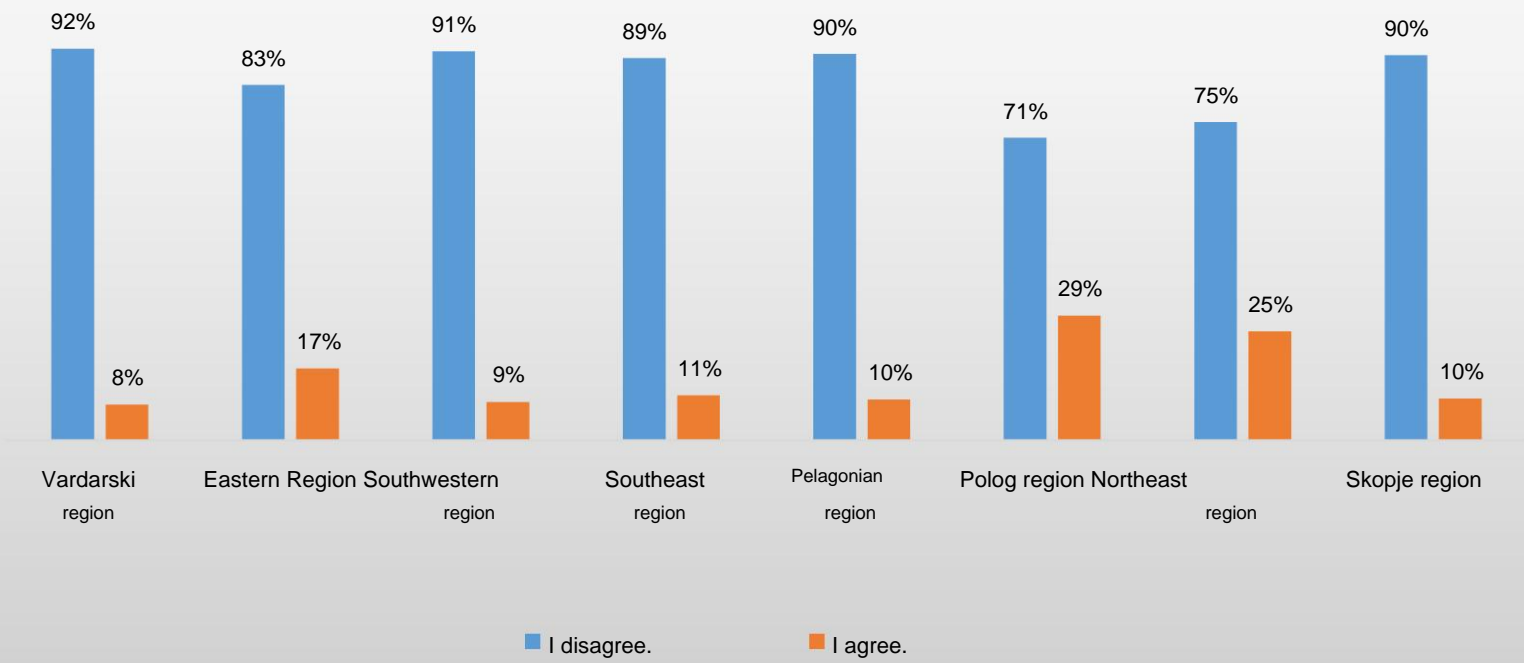
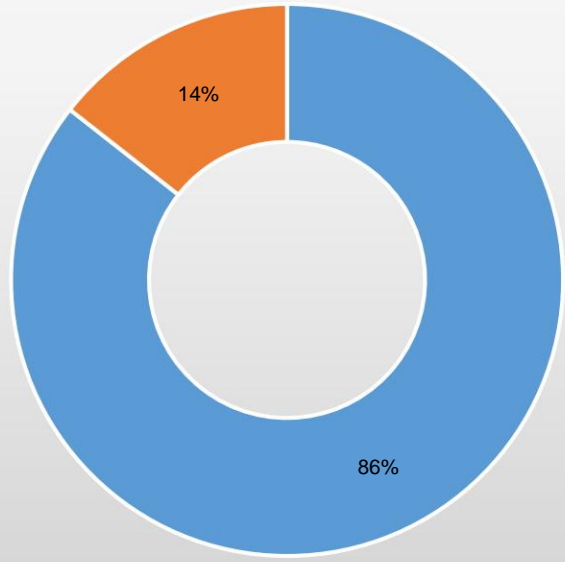
The issue of air quality is more important for respondents from the Skopje region from having enough money for food and basic necessities (91%). On the other hand, 30% of respondents in the Polog region believe that the basic Life's necessities are more important than air quality.



5.3. What is the priority for citizens? The economy or the environment (by region and in total)

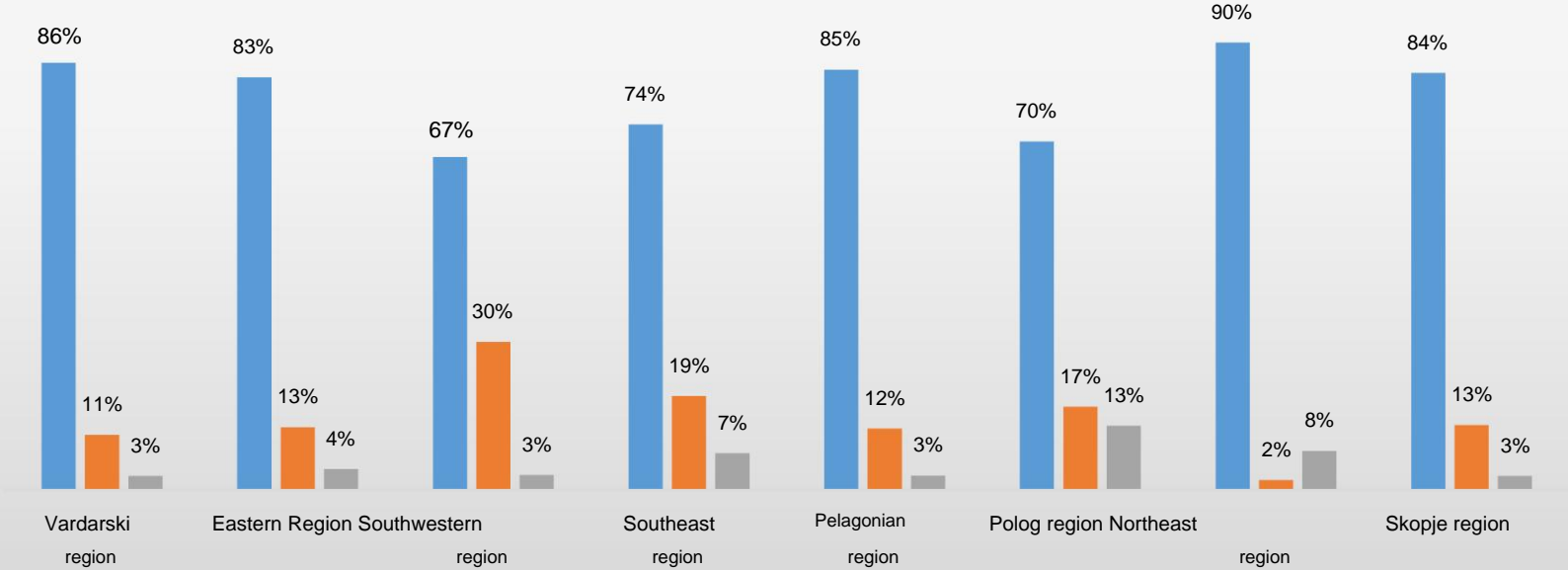
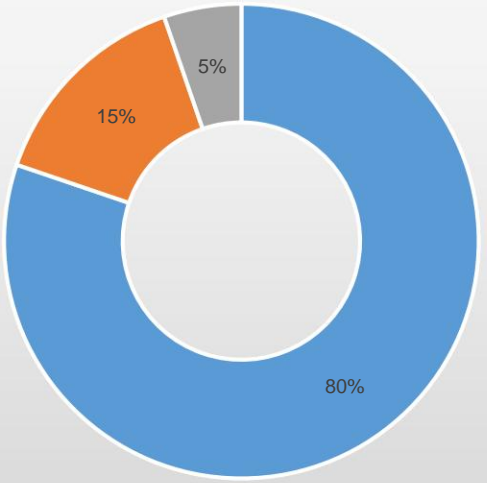
When asked whether Macedonia should be focuses exclusively on economic development, although this means that the state of the environment it won't be very good 86% disagree, that is, they believe that economic development does not should be a priority over life environment.

A vast majority of respondents from all planning regions disagree. with economic development that will not be sustainable, i.e. it will cause damage to environment. The Vardar region is the biggest advocate for sustainable economic development (92%), while the Polog region has the highest prefers economic development regardless of environmental consequences (29%).

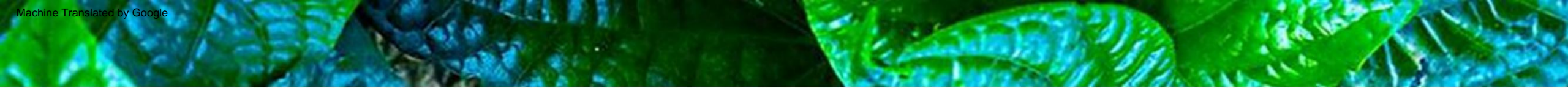


5.4. What is the priority for citizens? The economy or the environment (by region and in total)

When asked what should be the priority, the environment or the economy, the majority of respondents in all planning regions prioritize environmental protection over the economy, and this is most pronounced in the Northeast (90%), and least pronounced in the Southwest region (67%). On the other hand, the Polog region has the highest percentage of respondents who believe that the economy should have a higher priority than environmental protection (13%).

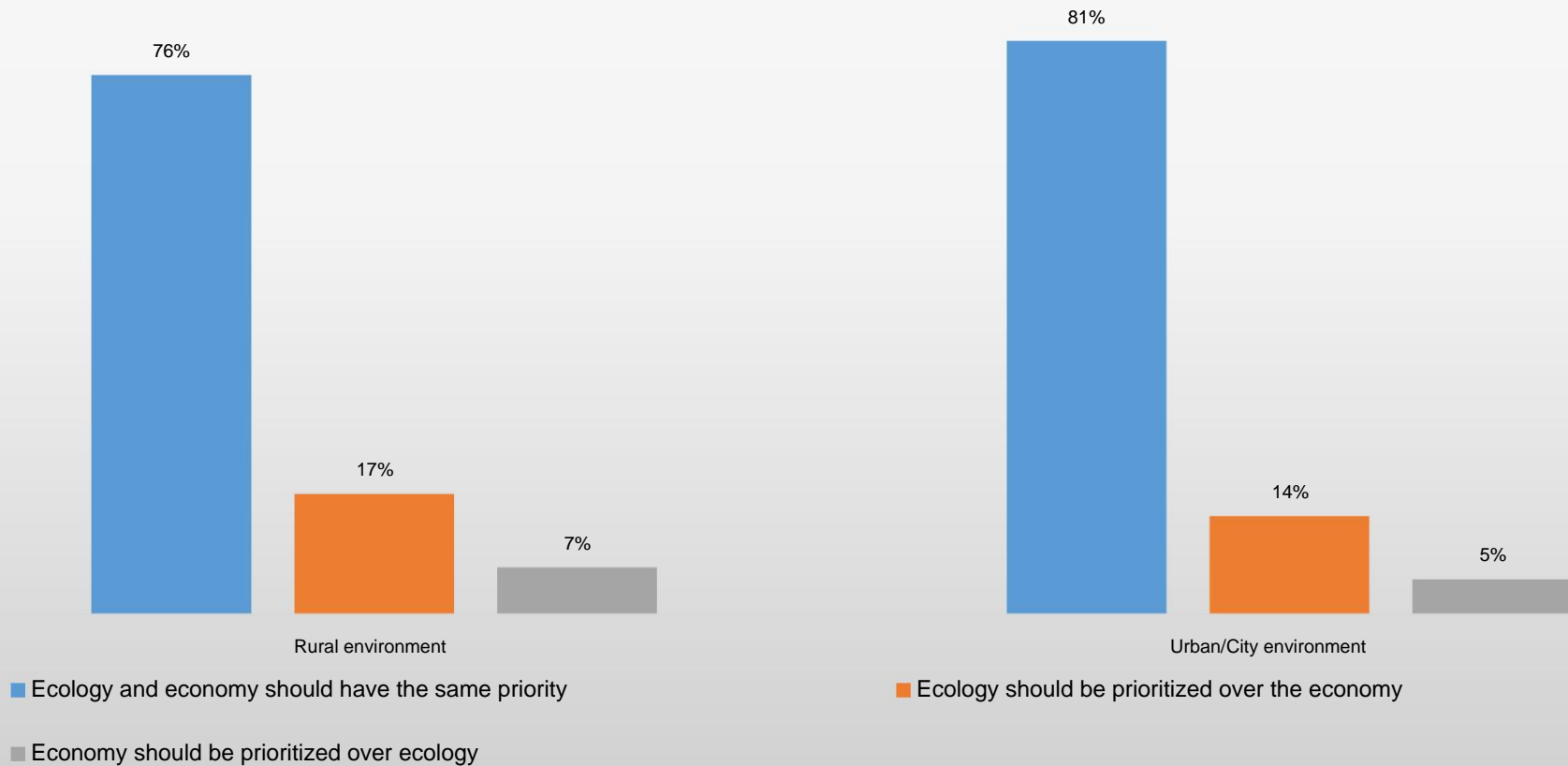


- Ecology and economy should have the same priority
- Ecology should be prioritized over the economy
- Economy should be prioritized over ecology



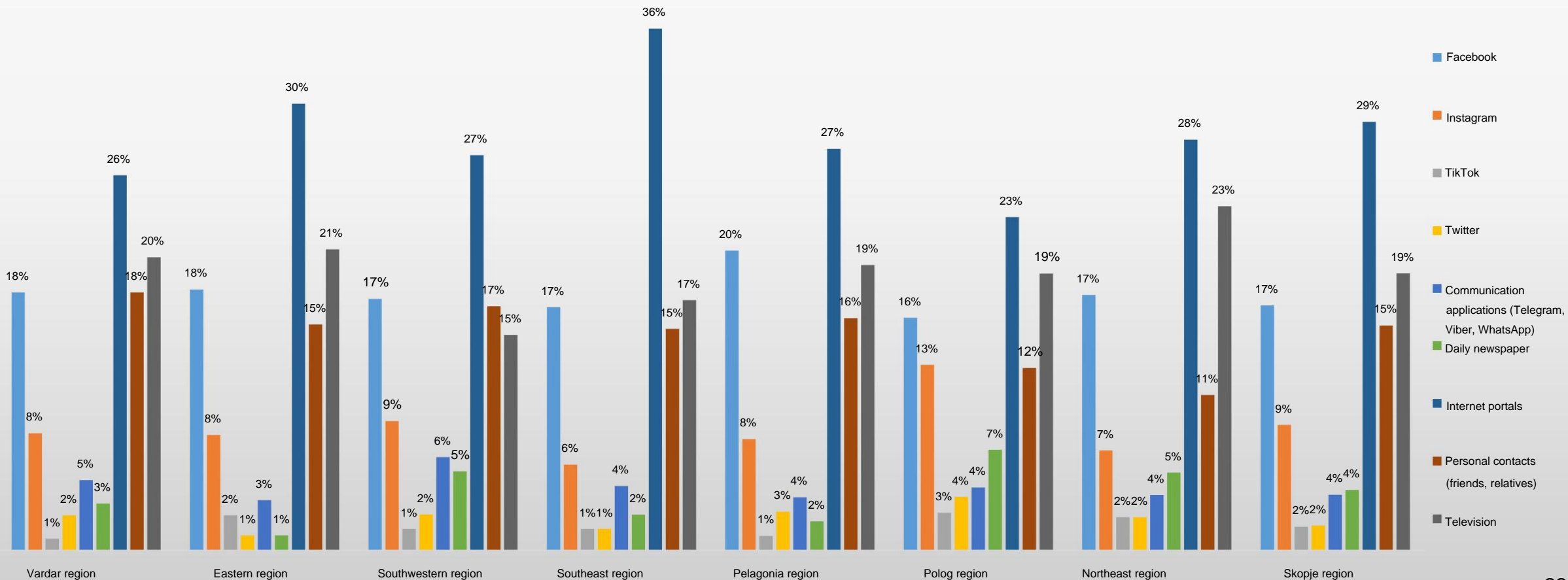
5.5. What is the priority for citizens? The economy or the environment (by living environment)

Citizens in both urban and rural areas believe that ecology and economy should have equal priority, while urban areas are slightly more consistent in their stance on equal priority (81% vs. 76%). While in rural areas there is a greater willingness to prioritize ecology (17% vs. 14%).



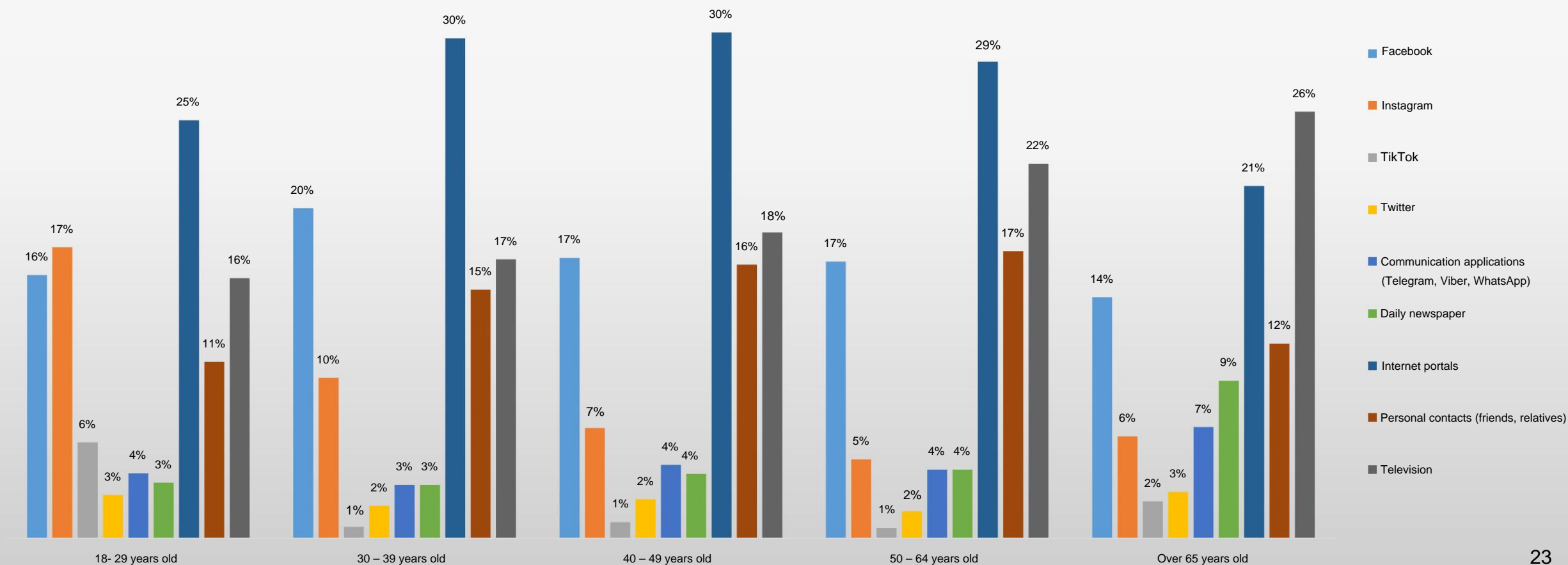
5.6. Way of informing about environmental issues (by region)

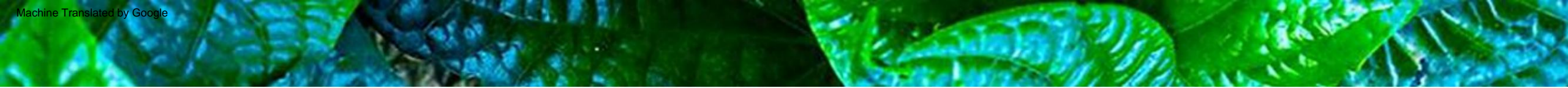
The results on the method of obtaining information on environmental issues show that citizens most often use the internet portals and television, while social networks, personal contacts and communication applications are moderately popular, and Traditional media such as daily newspapers have the lowest presence. Internet portals are the most frequently used source in all regions, with the highest representation in the Southeast region (36%) and the lowest in the Polog region (23%).



5.7. Way of getting information about environmental issues (by age)

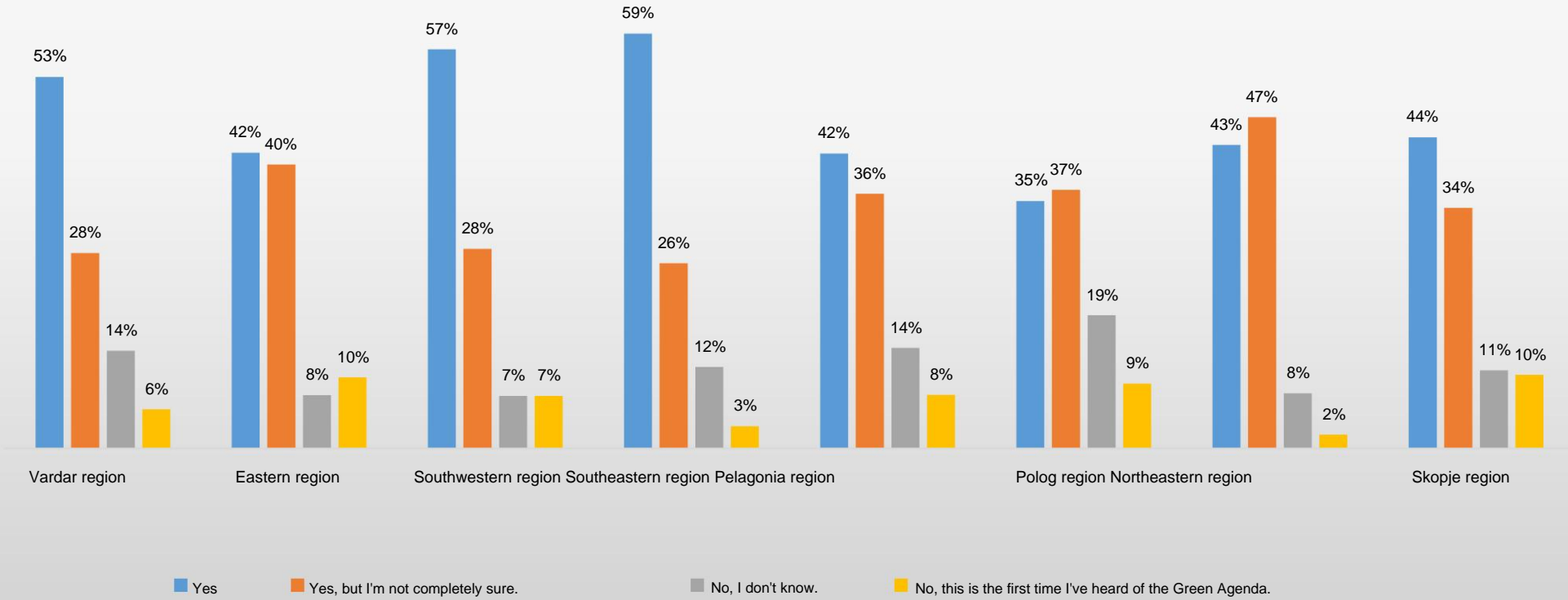
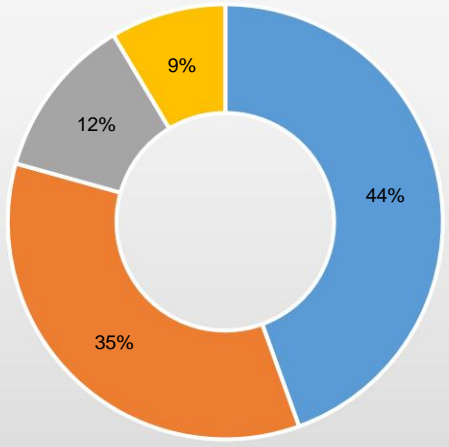
Young people (18–29 years old) mostly get their information through social networks, with Instagram (17%) and Facebook (16%) as the leading ones. In the 30–39 age group, internet portals dominate with 30%, while Facebook (20%) is the most popular social network. Television, on the other hand, is particularly important for the elderly, with the highest usage among those over 65 (26%). It is also notable that in this group, daily newspapers (9%) have the highest representation.

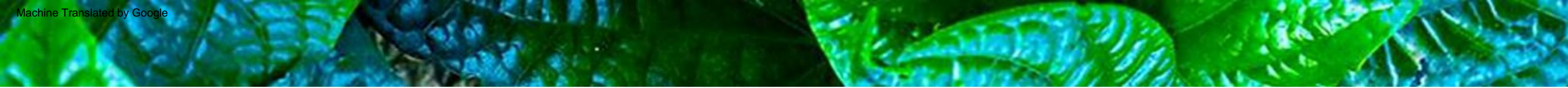




5.8. What is GREEN AGENDA? (total and by region)

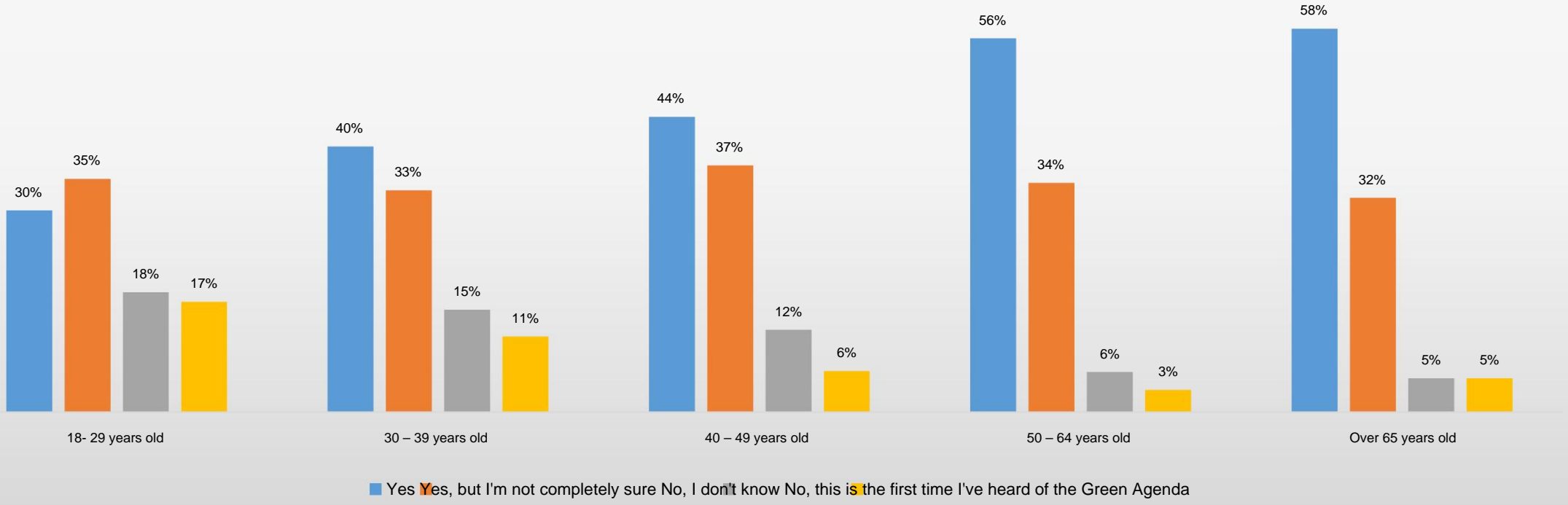
More than half of the respondents in the South-West and South-East regions know what the Green Agenda for the Western Balkans is, while 42% of respondents from the Pelagonia region claim the same. The percentage of respondents in almost all planning regions is high. who stated that they are familiar with, but are not sure enough about, what exactly the ZAZB is. 10% of respondents in the Eastern region and The Skopje region has never heard of the Green Agenda. In the other regions, the percentage of those who have never heard is below 10%.

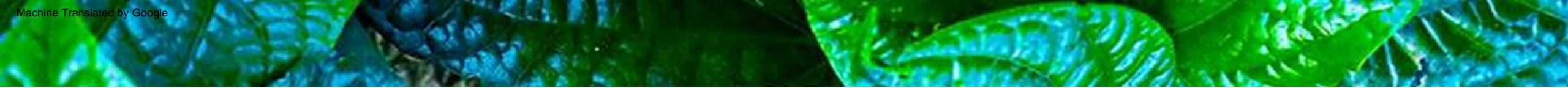




5.9 What is GREEN AGENDA? (by age)

Knowledge of the Green Agenda also increases with age, with the highest level of awareness being observed among respondents over 50 years of age. (56–58%). Young people, on the other hand, are less informed, i.e. 30% of the 18-29 age group is fully familiar with the term.

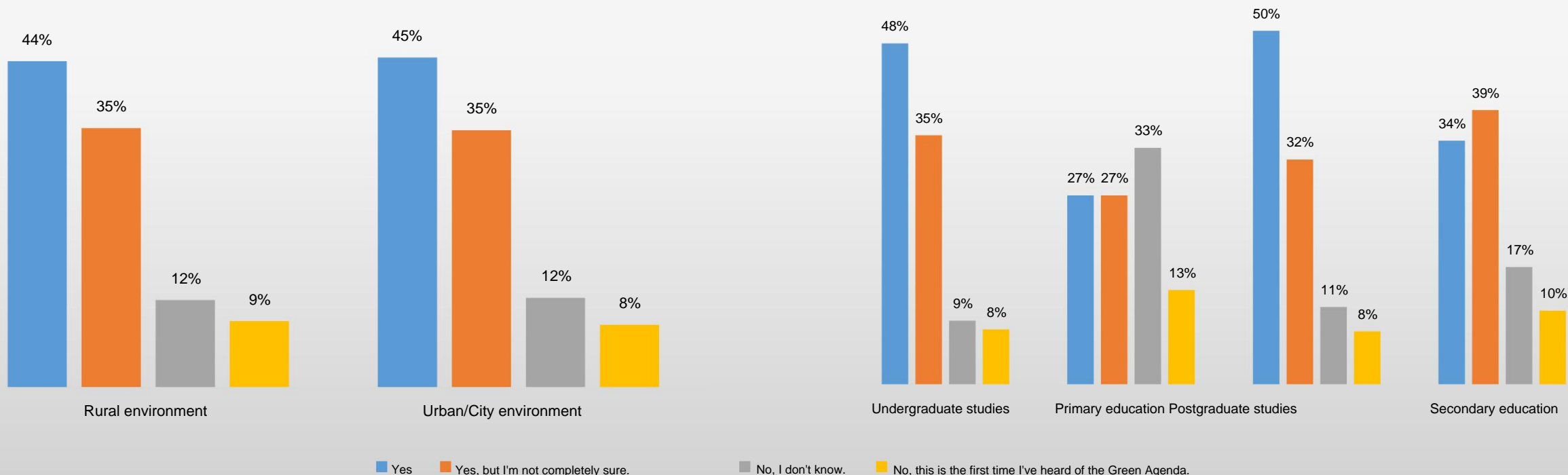




5.10. What is a GREEN AGENDA? (type of environment in which they live and education)

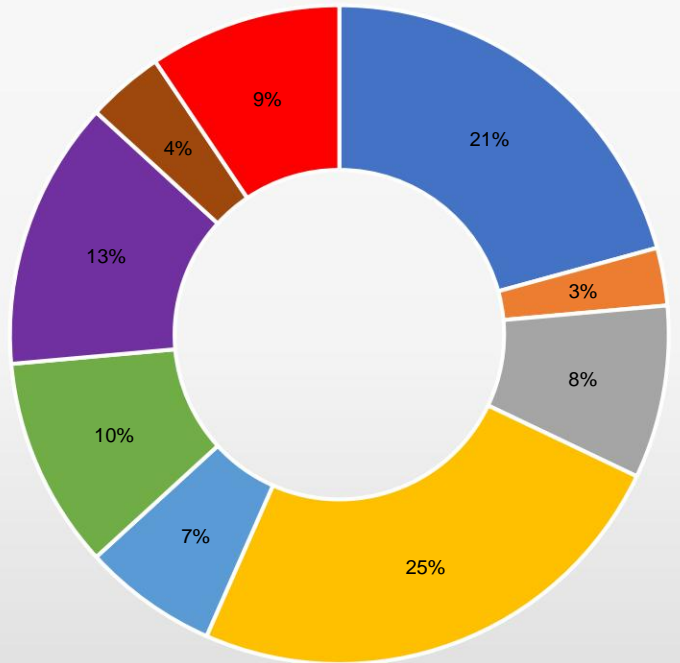
The type of environment in which the respondents live does not contribute to familiarity with the term Green Agenda. The percentage of those who live in urban and rural areas (about 40%) and are familiar with this concept, and also to those who are not fully sure (about 35%, and even those respondents who don't know (12%) or hearing about the Green Agenda for the first time (about 9%).

Education significantly influences awareness of Green Agenda. Persons with higher education (undergraduate and postgraduate studies) have the highest level of knowledge (48–50%), while among respondents with primary education Awareness is the lowest (27% fully informed).



5.11. Environmental problems that concern citizens?

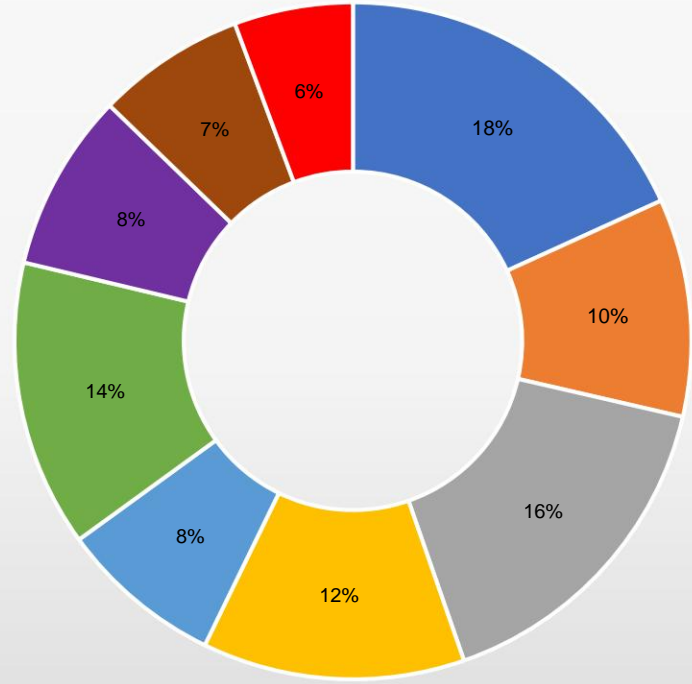
Vardar region



In the Vardar region, water quality is also the biggest concern among respondents (25%). Next, air pollution is also highly ranked as a problem (21%), which can be linked to industrial activities or transport emissions, which significantly affect health and the environment.

- Pollution/Air Quality
- Illegal logging
- Contaminated food/pesticides/GMOs
- Pollution/Water quality (rivers, lakes, drinking water)
- Pollution/Soil Quality
- Destruction of green areas
- Illegal landfills
- Sewage treatment
- Climate change/Global warming

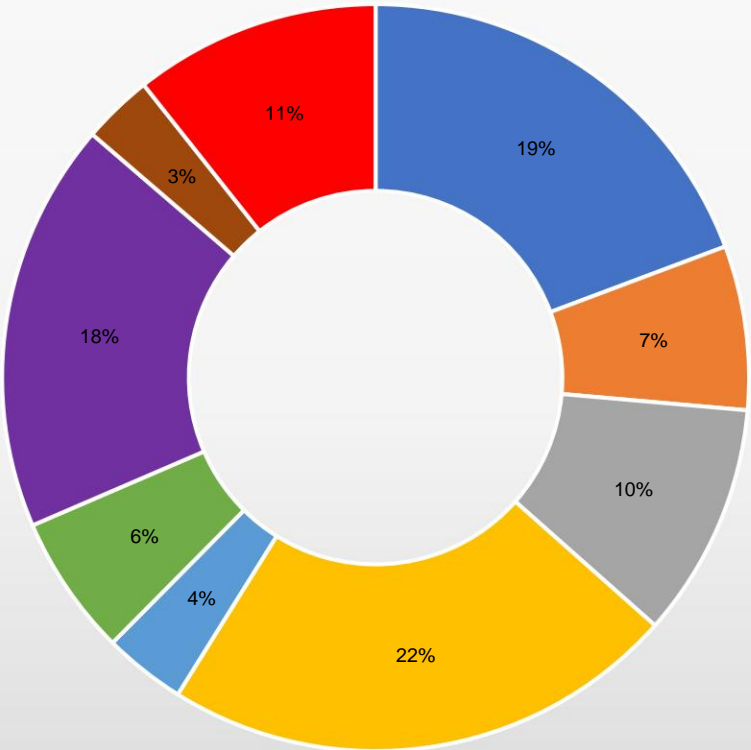
Eastern region



In the East region, air pollution (18%) is the most common source of concern, highlighting similar problems as in the Vardar region. Next in line is contaminated food, including pesticides and GMOs (16%), which is the most significant concern among citizens in the East planning region.

5.11. Environmental problems that concern citizens?

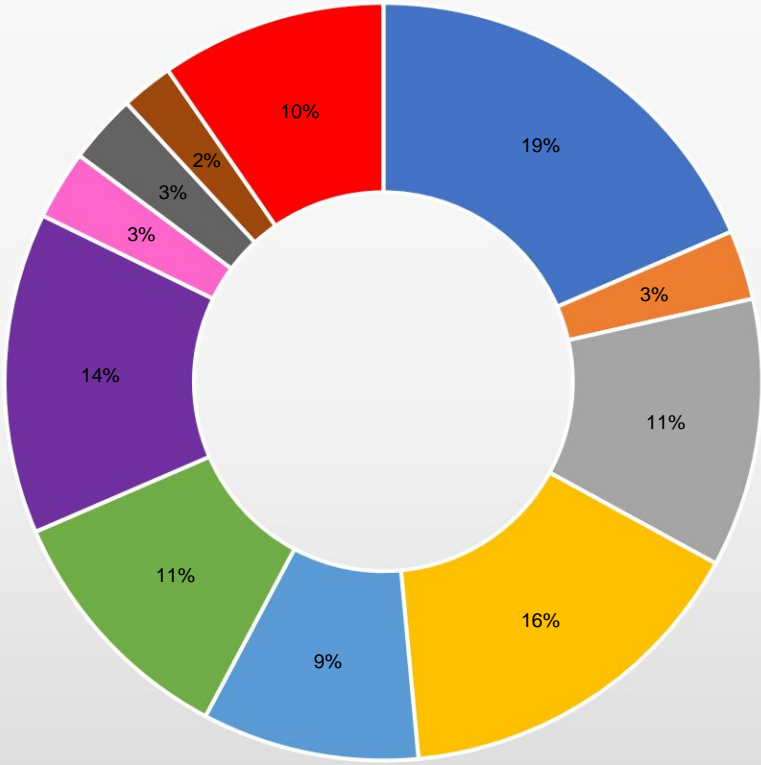
Southwestern region



In the Southwest region, the most prominent problem according to respondents is water pollution and quality (22%). Air pollution is right behind it (19%).

- Pollution/Air Quality
- Illegal logging
- Contaminated food/pesticides/GMOs
- Pollution/Water quality (rivers, lakes, drinking water)
- Pollution/Soil Quality
- Destruction of green areas
- Illegal landfills
- Work of the mines
- Opening of new mines
- Sewage treatment
- Climate Change/Global warming

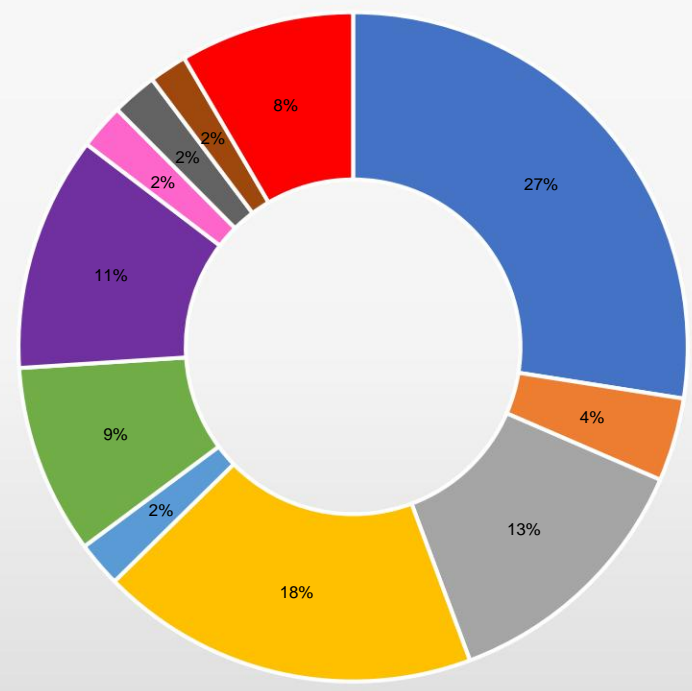
Southeast region



In the Southeast region, citizens are most concerned about air quality (19%). The second biggest problem is water pollution (16%).

5.11. Environmental problems that concern citizens?

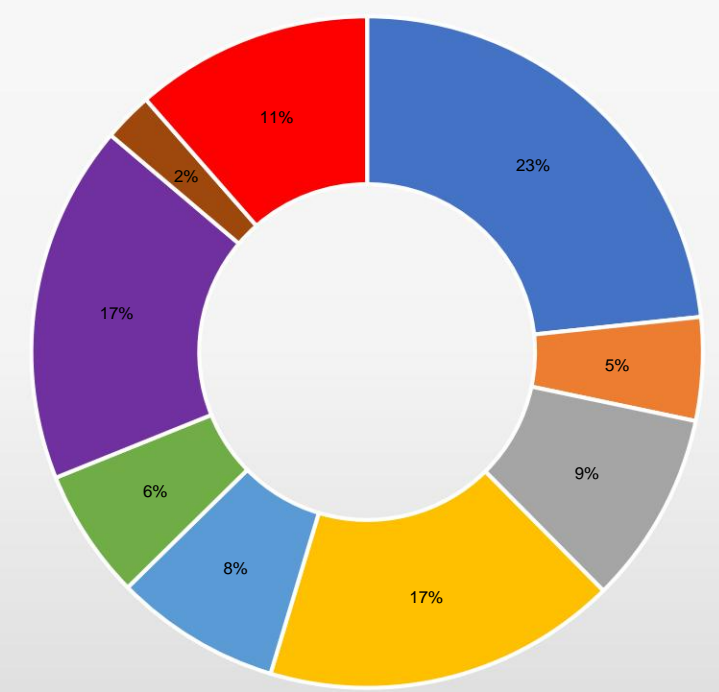
Pelagonia region



In the Pelagonia region, air pollution (27%) stands out as the biggest concern among respondents. Immediately after that, water pollution and quality (18%) is the second most significant problem.

- Pollution/Air Quality
- Illegal logging
- Contaminated food/pesticides/GMOs
- Pollution/Water quality (rivers, lakes, drinking water)
- Pollution/Soil Quality
- Destruction of green areas
- Illegal landfills
- Work of the mines
- Opening of new mines
- Sewage treatment
- Climate change/Global warming

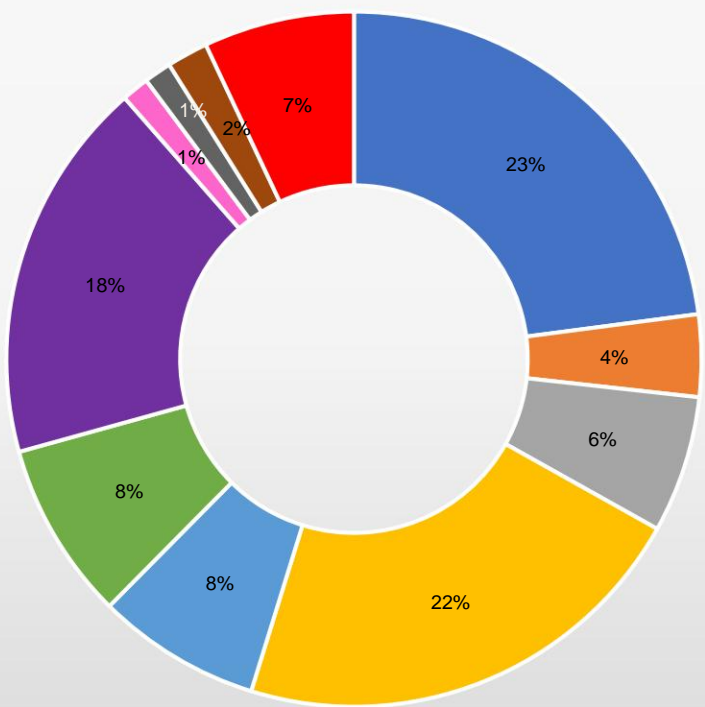
Polog region



In the Polog region, air quality (23%) remains the primary source of concern. Illegal landfills and water pollution (17% each) also rank highly.

5.11. Environmental problems that concern citizens?

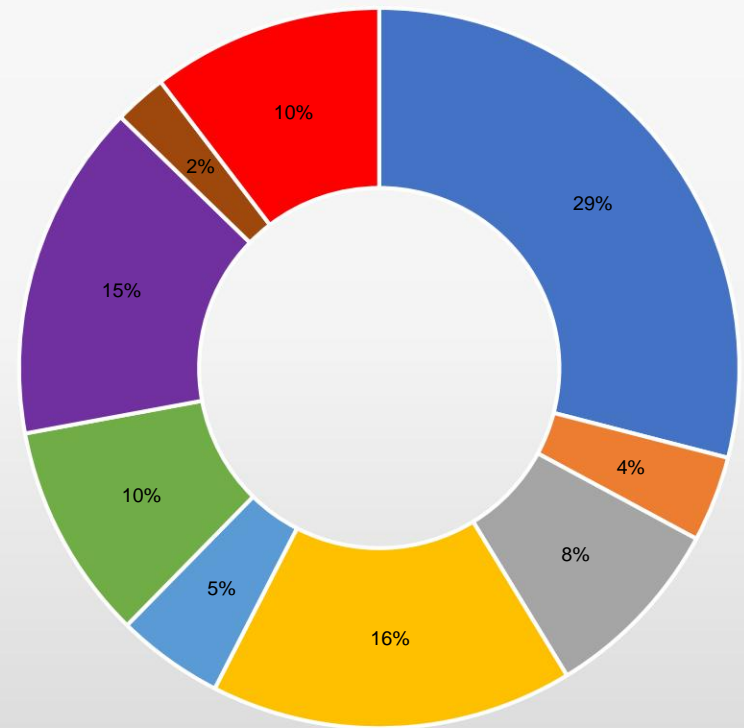
Northeast region



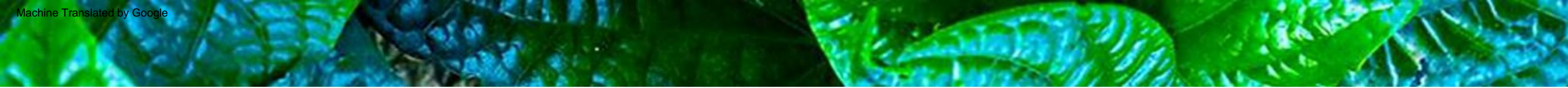
In the Northeast region, air pollution (23%) and water pollution (22%) are the biggest sources of concern.

- Pollution/Air Quality
- Illegal logging
- Contaminated food/pesticides/GMOs
- Pollution/Water quality (rivers, lakes, potable drinking water)
- Soil quality
- Destruction of green areas
- Illegal landfills
- Work of the mines
- Opening of new mines
- Sewage treatment
- Climate change/Global warming

Skopje region

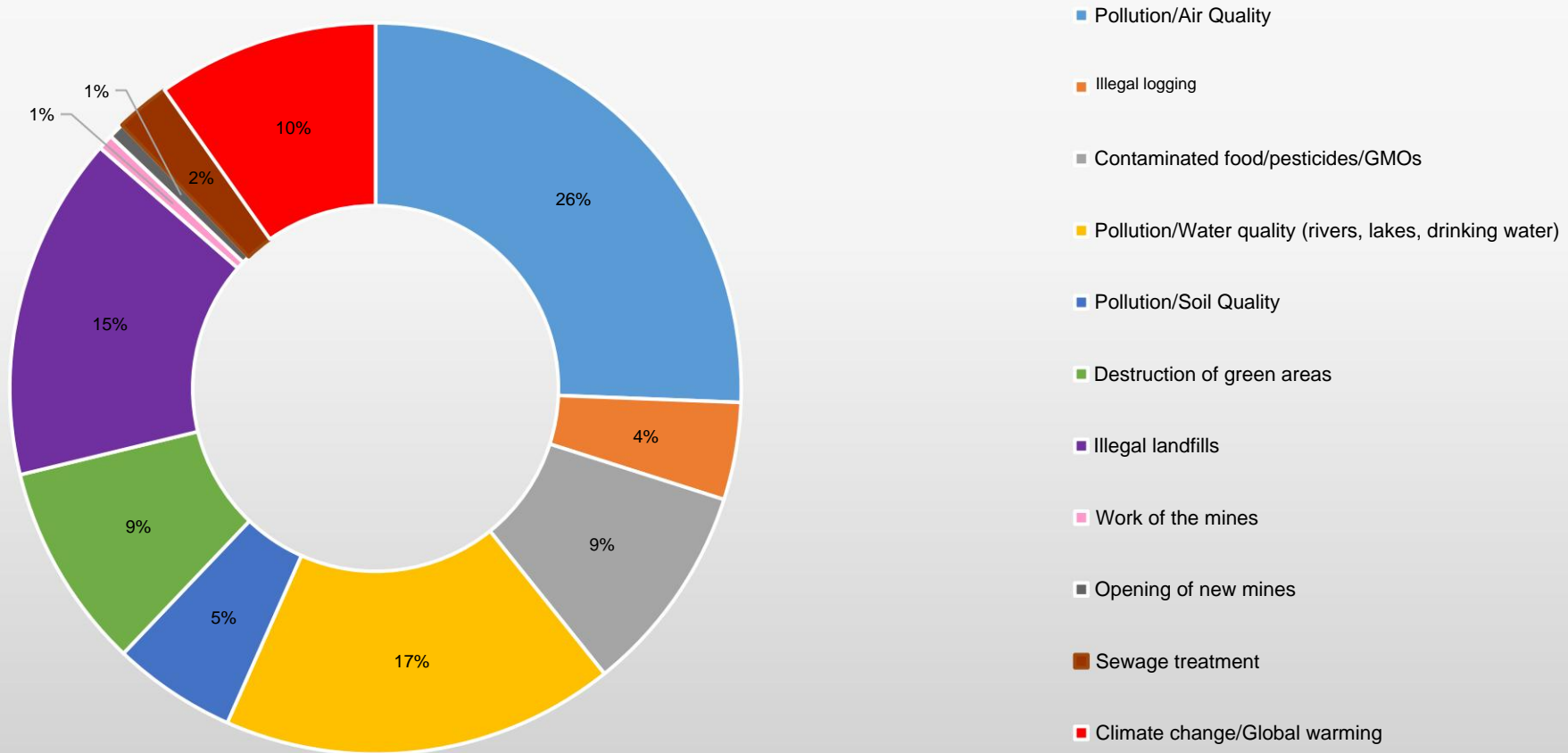


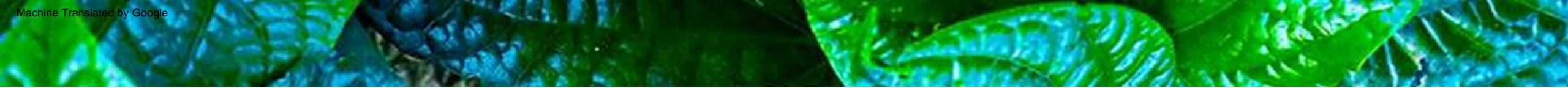
In the Skopje region, air pollution (29%) is the dominant problem. Second in importance is water pollution (16%).



5.11. Environmental problems that concern citizens? (total)

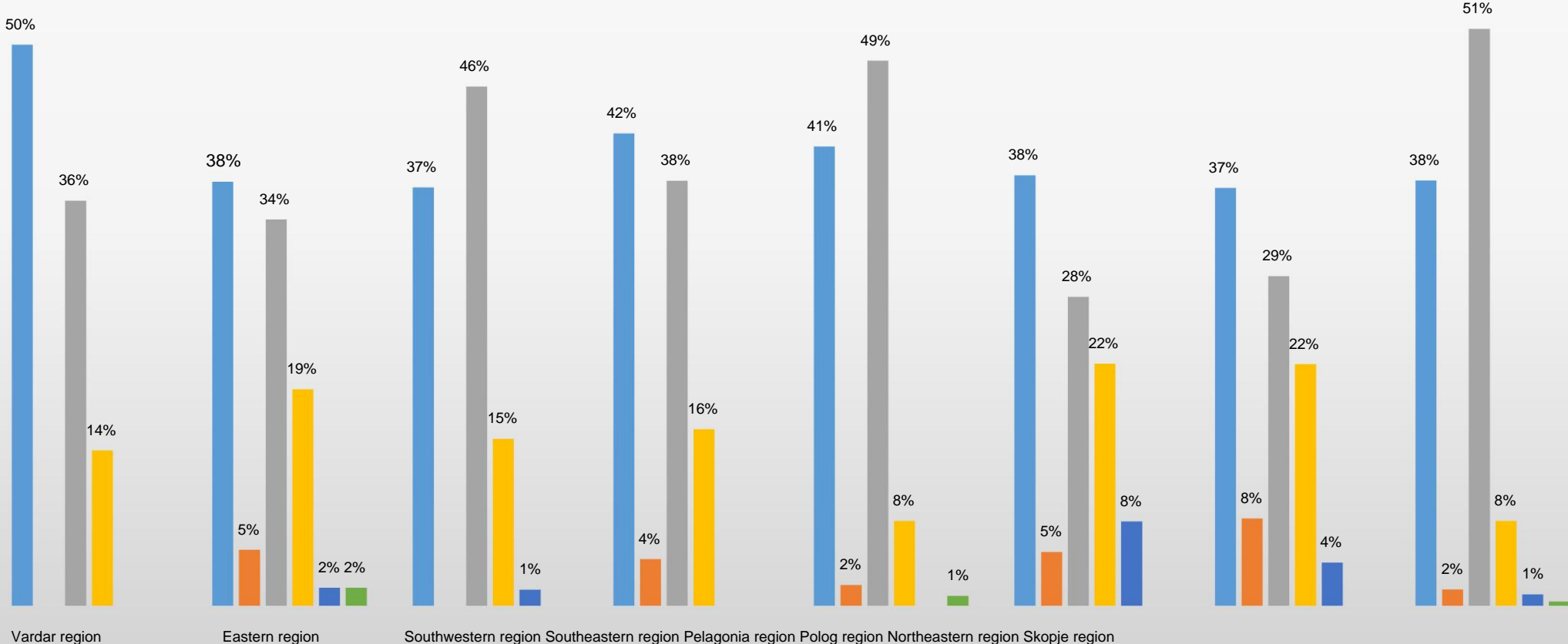
Of the total number of respondents, 26% are concerned about air quality, and 17% about water quality (rivers, lakes, drinking water). Illegal landfills are a concern for 15% of the total respondents and climate change for 10% of the respondents. Less than 10% are concerned about contaminated food and the destruction of green spaces.



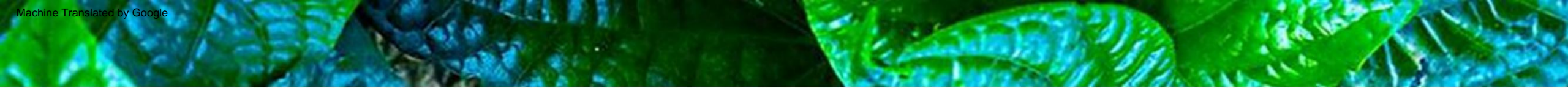


5.12. Is the state doing enough to prevent environmental problems?

The majority of respondents in all planning regions responded that "the state is doing nothing" or "doing very little" to address to the previously mentioned problems. There are almost no answers that claim that the state "is doing everything to prevent environmental problems" environment".



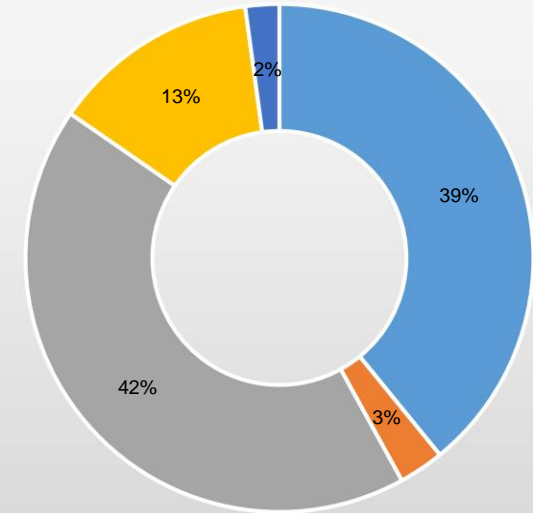
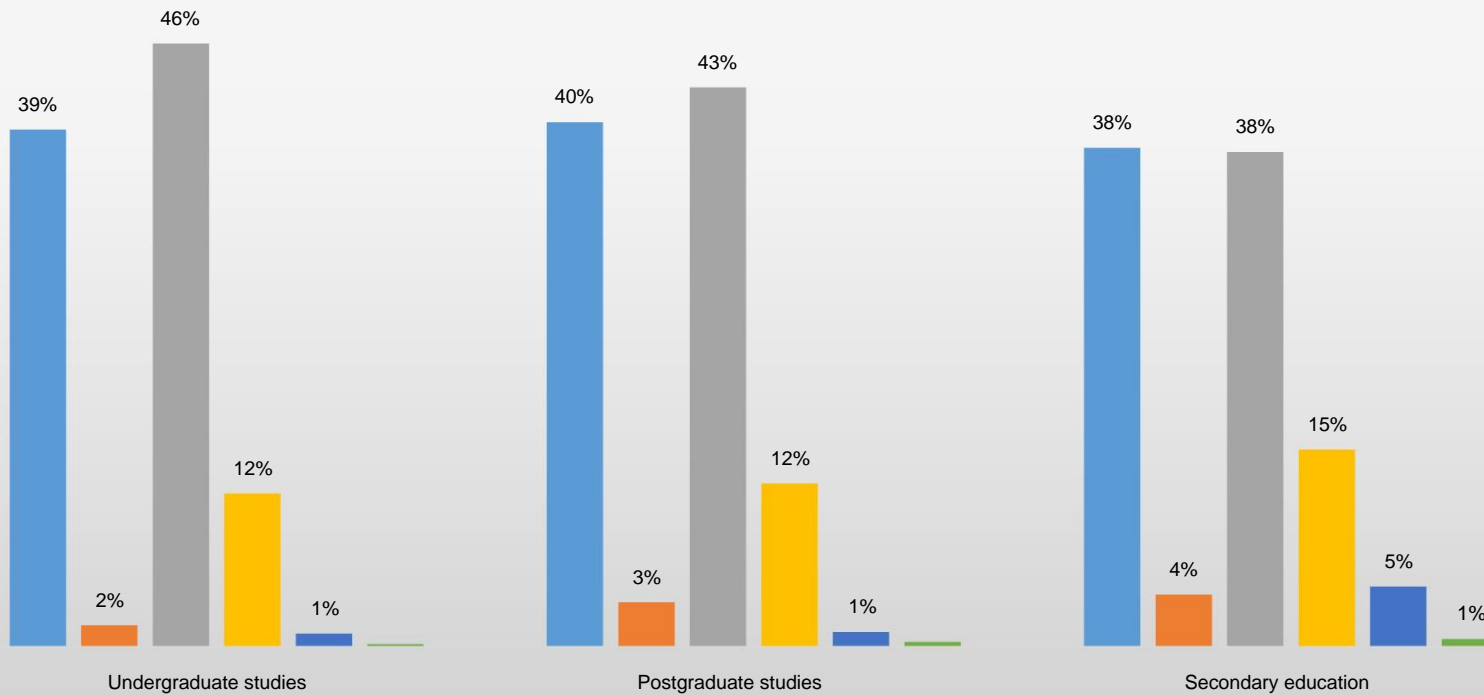
■ Does very little ■ Does nothing ■ Does but not at an enviable level ■ Does enough ■ Does everything ■ environmental problems



5.13. Is the state doing enough to prevent environmental problems ? (total and by type of education)

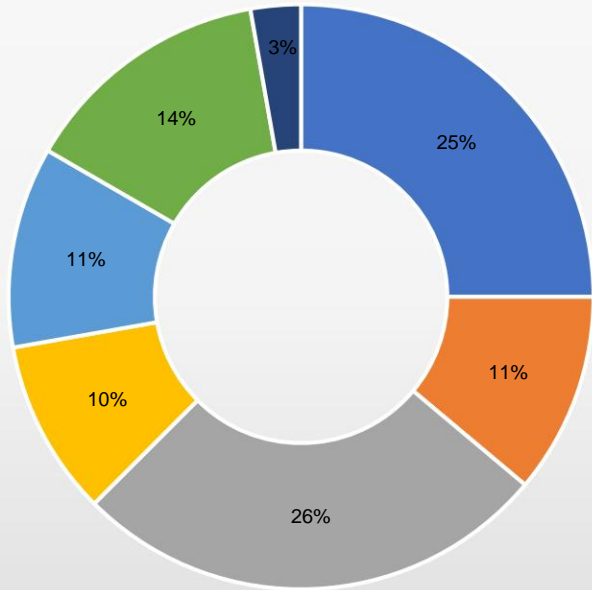
Most citizens, regardless of their level of education, believe that the state is not sufficiently engaged in dealing with environmental problems. The largest percentage of respondents (43–46%) believe that the state “does nothing,” while a minimal portion (1–5%) believe that the investments are sufficient.

■ Does very little ■ Don't know/Can't say ■ Does nothing ■ Does but not at an enviable level ■ Does enough ■ Does everything to prevent environmental problems



5.14. What two things does the state need to do to prevent environmental degradation?

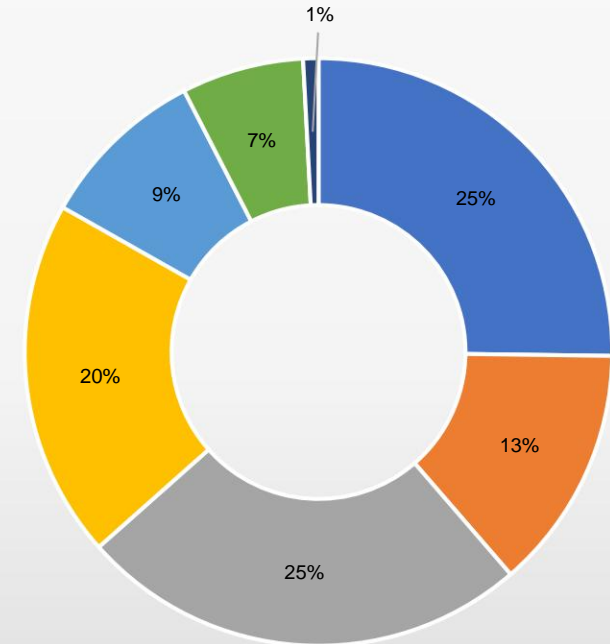
Vardar region



In the Vardar region, citizens most often consider that the most important thing is to prevent deforestation and work on reforestation (26%). The second priority measure is increasing fines for companies, firms and mines (25%), which shows the need for greater responsibility of the industry in environmental protection.

- To increase fines for companies, firms, mines
- Increase fines for citizens
- To prevent deforestation and work on afforestation
- To support organizations that deal with environmental protection
- To subsidize citizens and businesses that select waste
- To subsidize citizens who invest in thermal insulation and cleaner heating methods
- I don't know/I can't say.

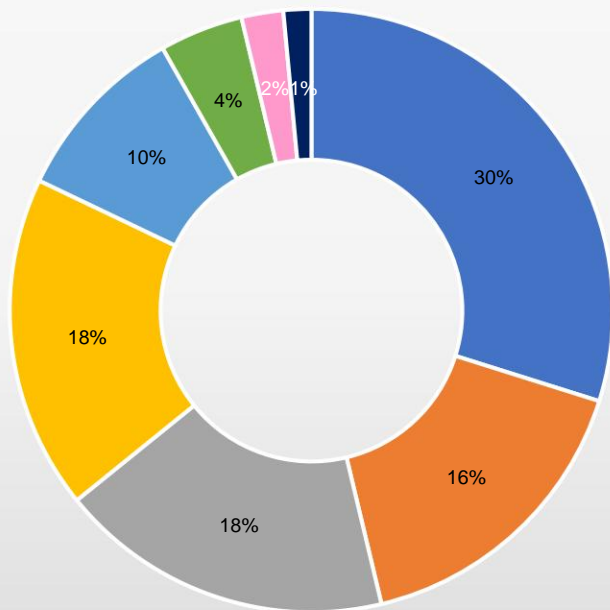
Eastern region



In the Eastern region, the highest priority is given to the same measures as in the Vardar region – preventing deforestation and afforestation (25%) and increasing fines for companies and mines (25%). Additionally, a significant percentage of respondents (20%) believe that support for organizations working on environmental protection is key to improving the situation.

5.14. What two things does the state need to do to prevent environmental degradation?

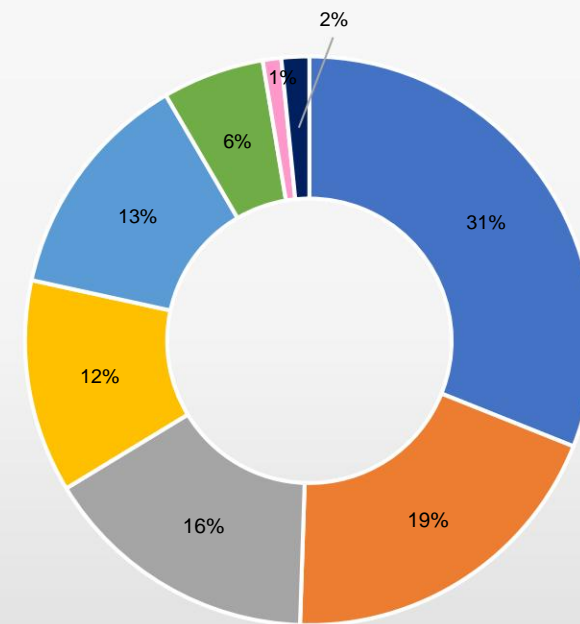
Southwestern region



In the Southwestern region, the largest percentage of respondents believe that it is necessary to increase fines for companies, firms and mines (30%). As the second most important measure, citizens equally rank the need to prevent deforestation and reforestation (18%) and support for organizations dealing with environmental protection (18%).

- To increase fines for companies, firms, mines
- Increase fines for citizens
- To prevent deforestation and work on afforestation
- To support organizations that deal with protection the environment
- To subsidize citizens and businesses that select waste
- To subsidize citizens who invest in thermal insulation and cleaner heating methods
- To increase the price of electricity and water in order to reduce their consumption, and the price difference to invests in protecting and improving the environment
- I don't know/I can't say.

Southeast region

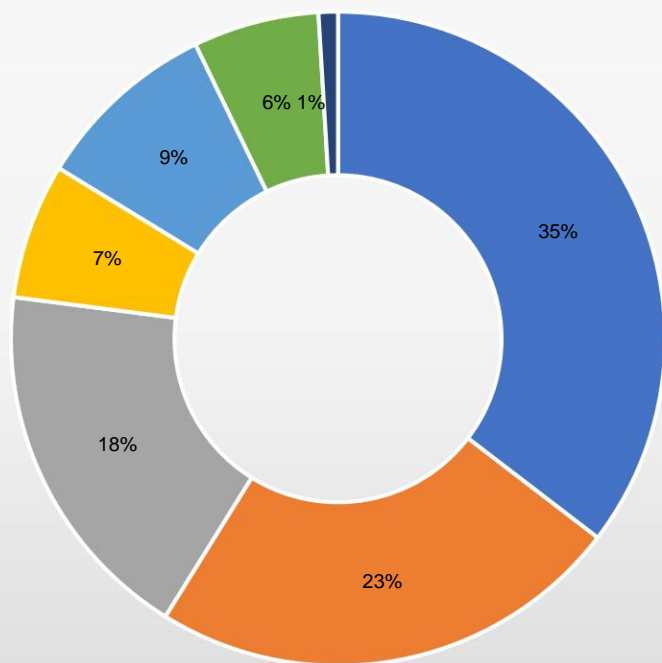


In the Southeast region, increasing fines for companies, firms and mines is also a priority (31%). Second in importance is increasing fines for citizens (19%), which shows that respondents also recognize individual responsibilities.

for environmental damage.

5.14. What two things does the state need to do to prevent environmental degradation?

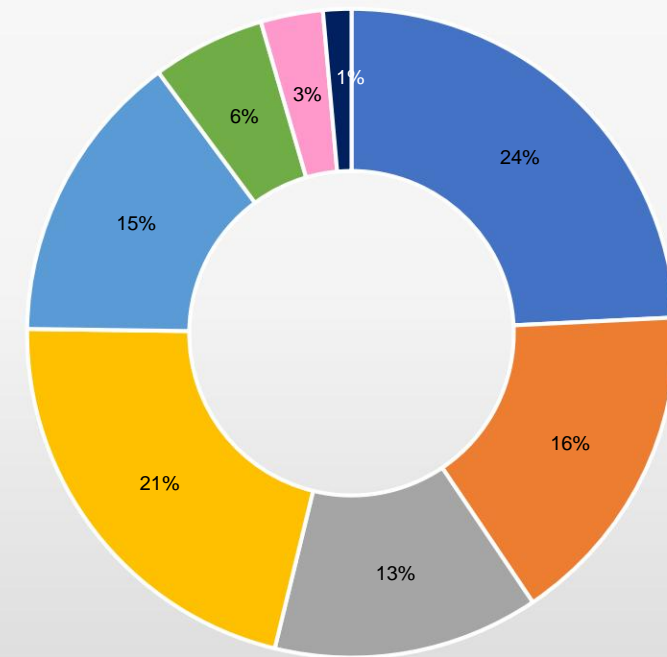
Pelagonia region



In the Pelagonia region, most of the respondents identify the need for increasing fines for companies, firms and mines (35%) as the most significant measure of environmental protection. Right behind this, A high percentage (23%) believes that citizens should face strict sanctions for irresponsible behavior.

- To increase fines for companies, firms, mines
- Increase fines for citizens
- To prevent deforestation and to work for reforestation
- To support organizations that deal with environmental protection
- To subsidize citizens and businesses that select waste
- To subsidize citizens who invest in thermal insulation and cleaner heating methods
- To increase the price of electricity and water in order to reduce their consumption, and the difference in price should be invested in protection and environmental improvement
- I don't know/I can't say.

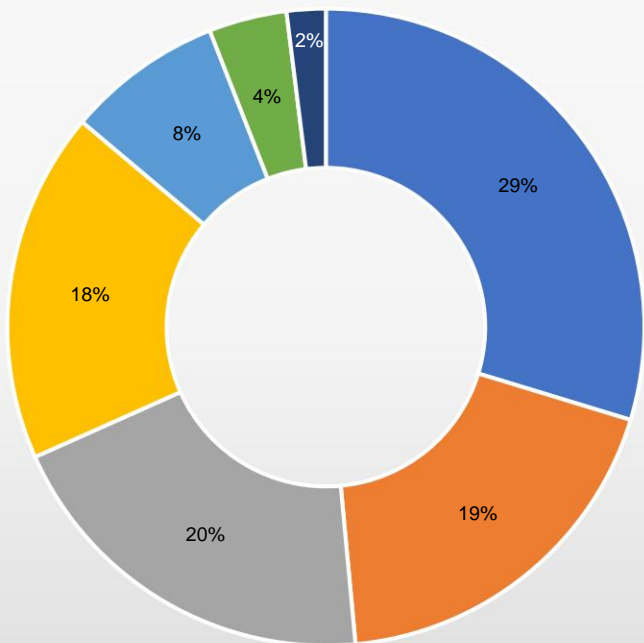
Polog region



In the Polog region, in addition to the increase in fines for companies (24%), citizens in a significant portion point to the need for support for organizations that deal with with environmental protection (21%).

5.14. What two things does the state need to do to prevent environmental degradation?

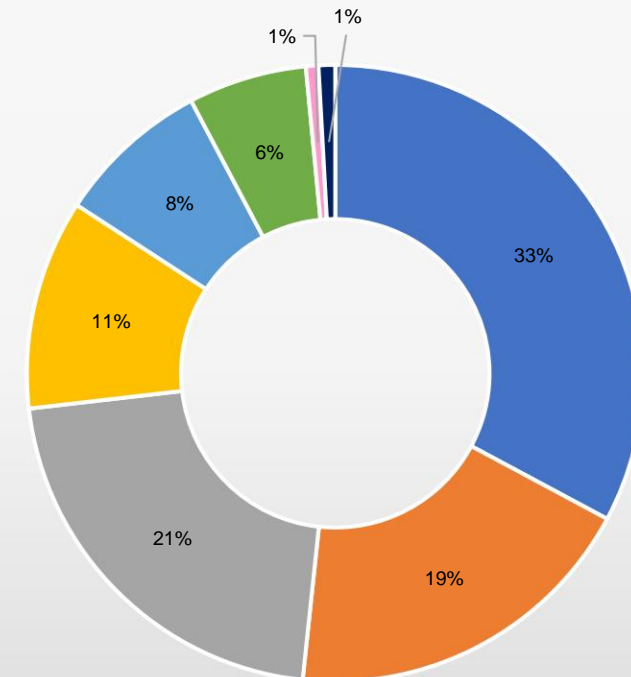
Northeast region



In the Northeast region, increasing fines for companies, firms and mines (29%) is the most important measure according to respondents. Immediately after this, a significant portion of respondents (20%) emphasize the need to prevent deforestation and reforestation.

- To increase fines for companies, firms, mines
- Increase fines for citizens
- To prevent deforestation and work on reforestation
- To support organizations that deal with protection the environment
- To subsidize citizens and businesses that select waste
- To subsidize citizens who invest in thermal insulation and cleaner heating methods
- To increase the price of electricity and water in order to reduce their consumption, and the price difference to invests in protecting and improving the environment
- I don't know/I can't say.

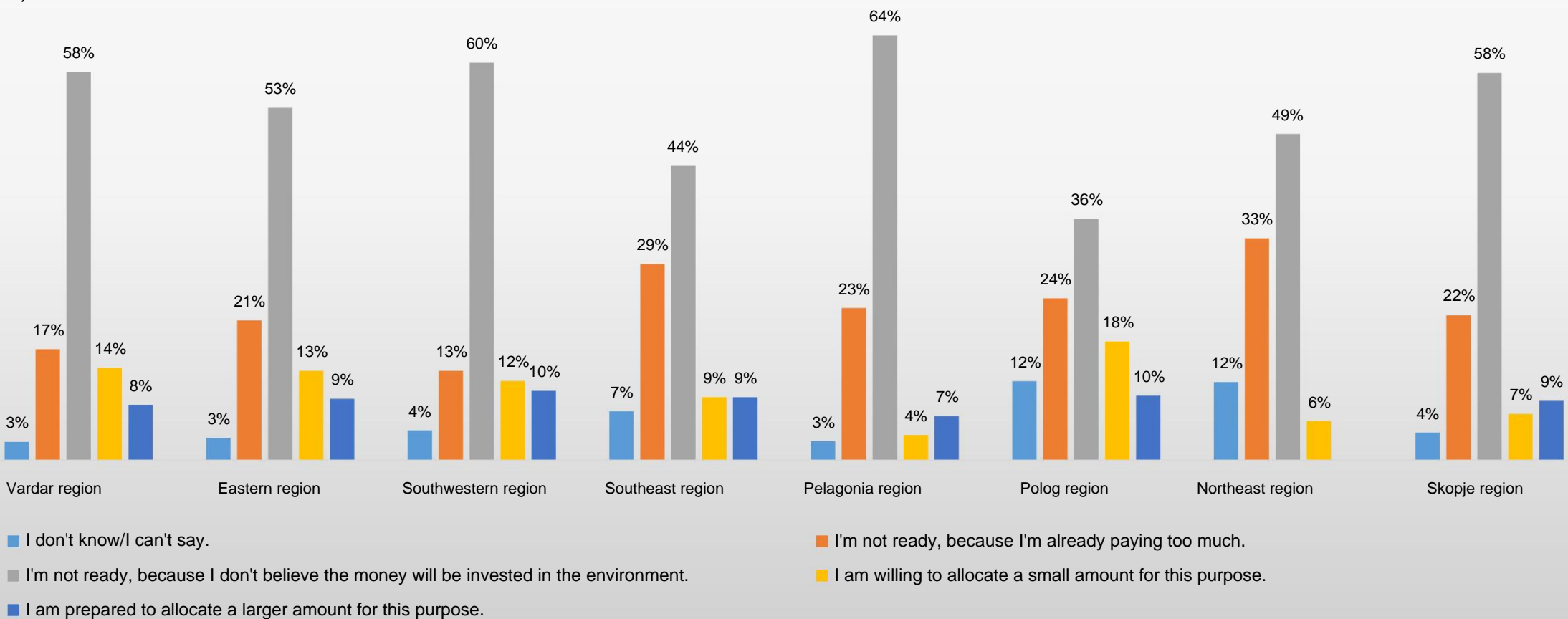
Skopje region



In the Skopje region, the highest priority for respondents is increasing fines for companies, firms and mines (33%). Furthermore, the second highest priority (21%) is dedicated to preventing deforestation and afforestation actions, which highlights the need to improve the ecological balance in the most urbanized region in the country.

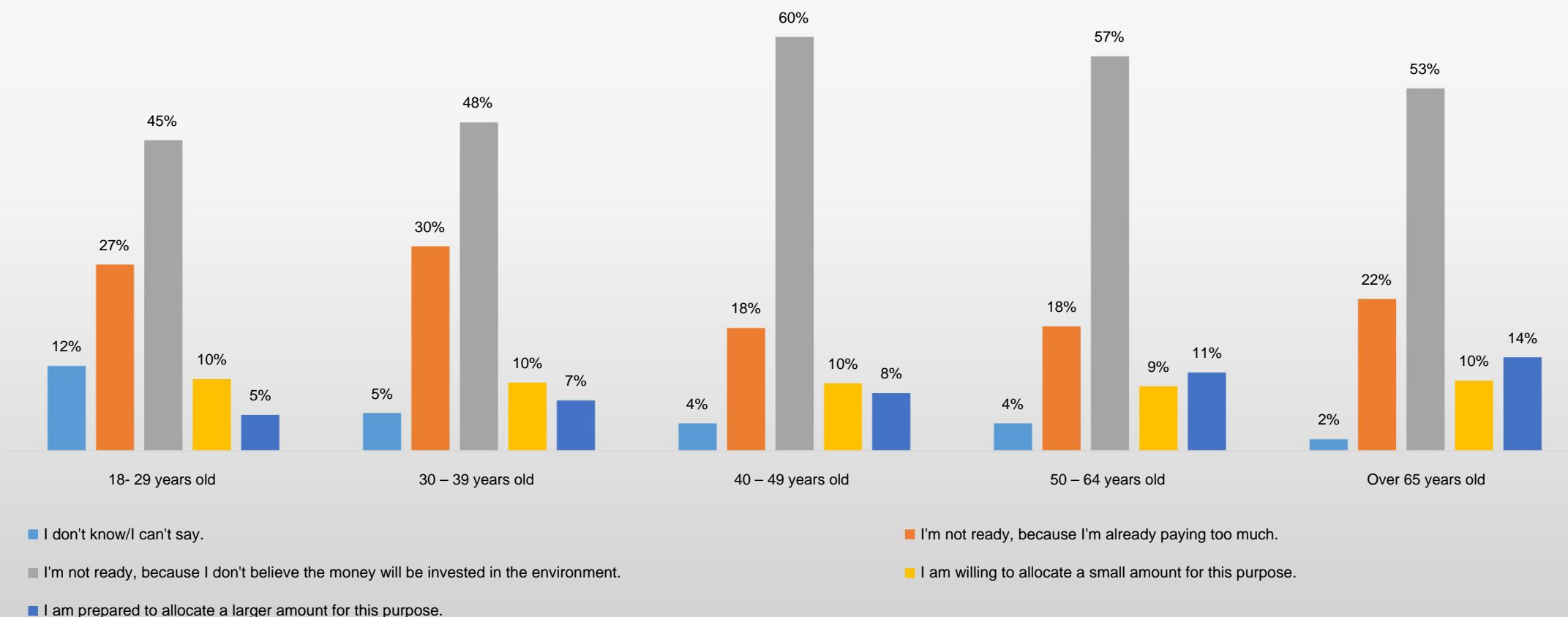
5.15. Citizens' willingness to pay more for a healthy environment (by region)

The majority of respondents in all regions do not agree to higher fees for the aforementioned services, as they express distrust that the funds would really be invested in environmental protection. The most reserved are the citizens of the Pelagonia region (64%), while the greatest willingness for higher taxes for the purpose of a better environment was expressed by respondents from the Polog region (18%).



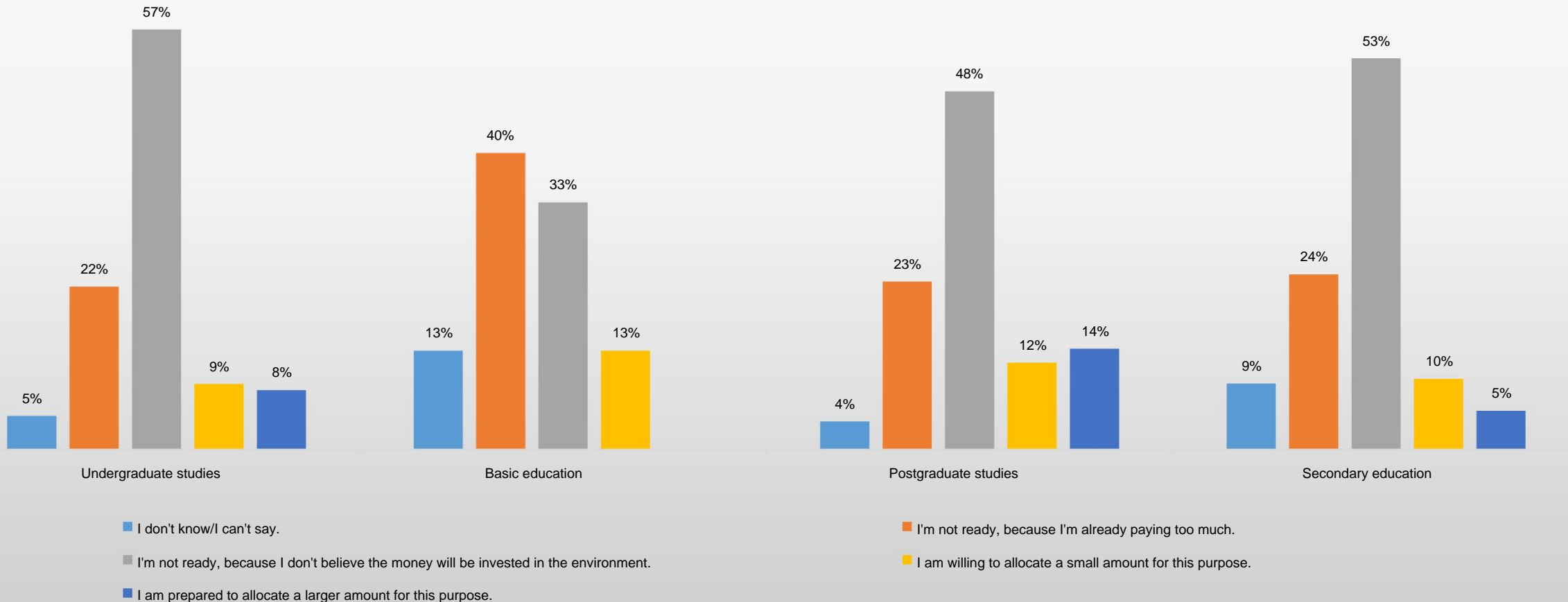
5.16. Willingness of citizens to pay more for a healthy environment (by age)

In all age groups, the largest percentage of respondents are not willing to pay more due to lack of confidence that the money will be used. The highest distrust exists among people aged 40-49 and 50-64 (60%). Willingness to pay more is highest among the elderly (over 65 years old) at 14%, while it is lowest among the younger (18-29 years old) at only 5%.



5.17. Willingness of citizens to pay more for a healthy environment (by education)

People with higher education (undergraduate and postgraduate studies) are more skeptical about environmental investments, with the highest percentage of distrust (57% and 48%). People with primary education (40%) responded that they are not willing, because they already pay too much, and those with secondary education also show high distrust (53%). Common to all educational groups is distrust in the efficiency of investments and a low percentage of willingness to pay higher fees, especially when it comes to high costs.





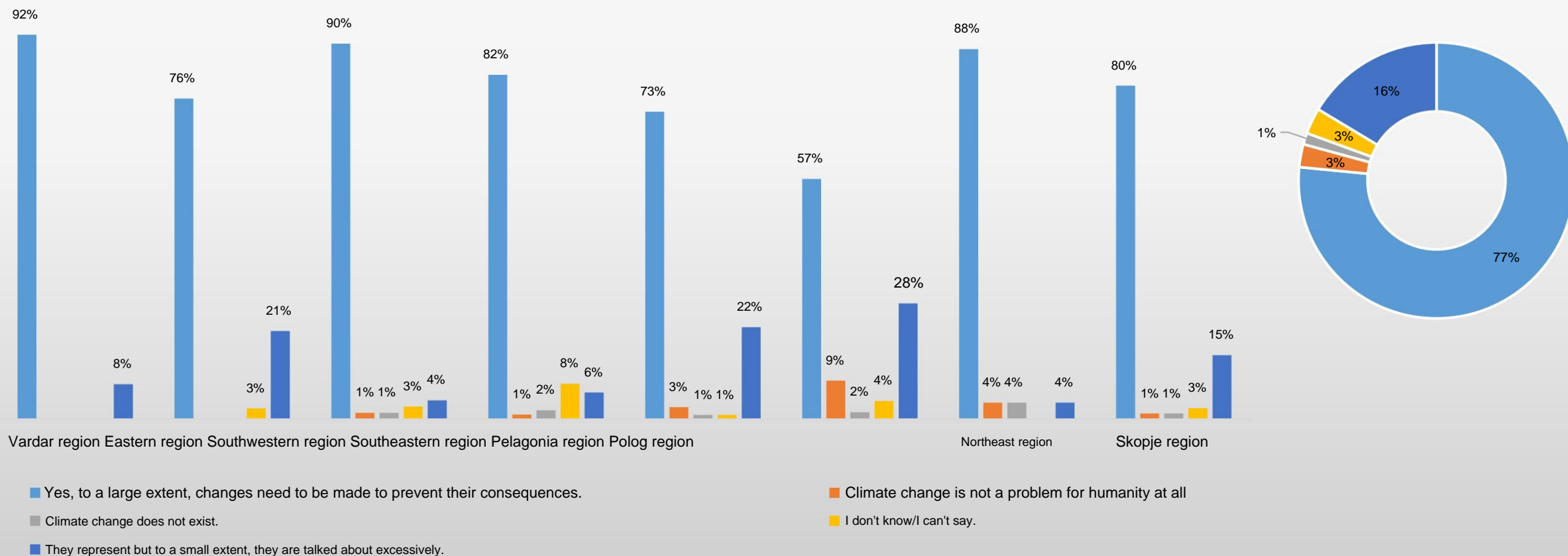
6. Climate change

- 88% of respondents in the Northeast region consider climate change to be a significant problem. However, 28% of respondents in the Polog region think that the topic is being talked about excessively.
- Human activities are identified as the main culprit (over 60% in all regions). In the Polog region, industry is also indicated as the main cause (39%).
- 66% of respondents in the Pelagonia region believe that the current way of producing electricity is harmful. On the other hand, only 27% of respondents in the Polog region share this opinion.
- Most citizens are not willing to pay more for renewable energy sources (highest resistance in the Southeast region – 57%).



6.1. Climate change and humanity? (by region and total)

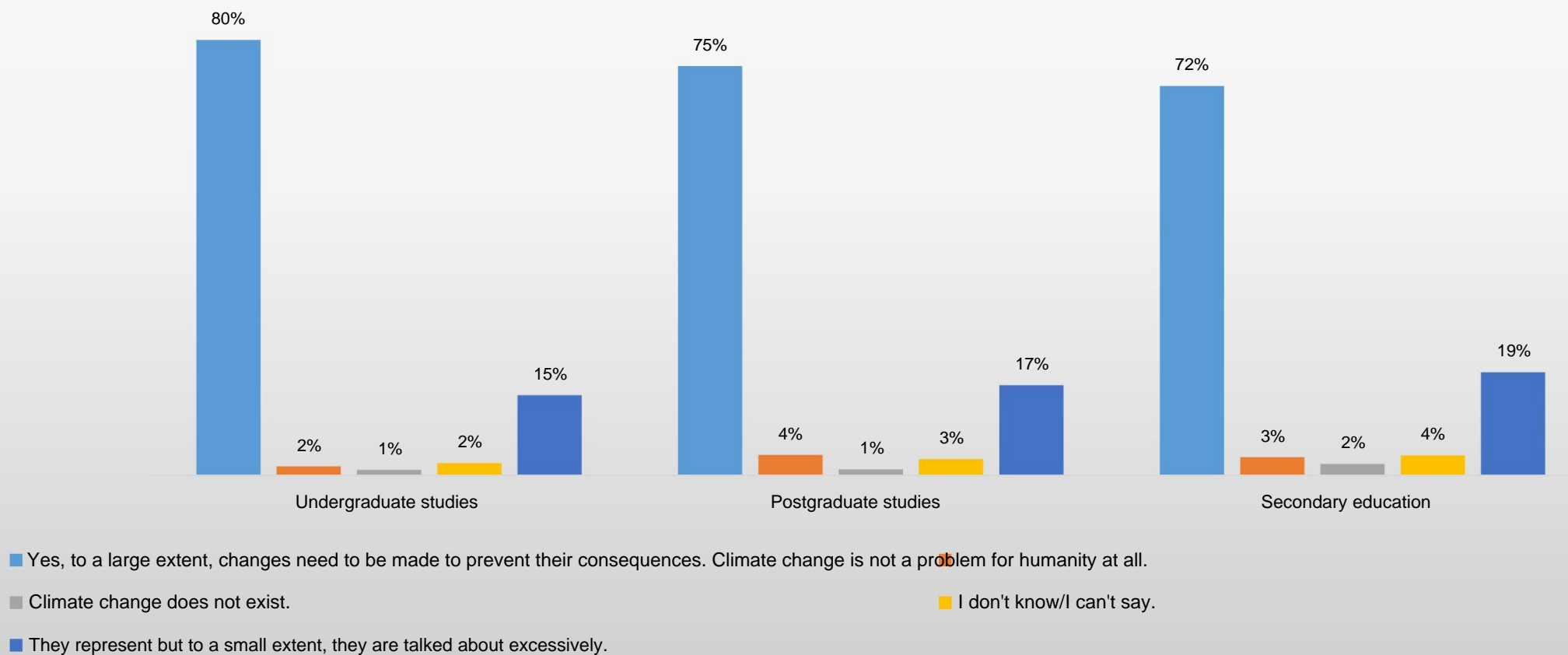
When asked whether climate change is a problem for humanity, a vast majority of respondents in all regions believe that it is. Climate change is a problem for humanity – most in the Northeast region (88%). In the Polog region 57% of respondents believe that they are a problem, but that they are talked about excessively (28%). 77% of the total number of respondents believe that it is necessary to make changes that would prevent their consequences.





6.2. Climate change and humanity? (by education)

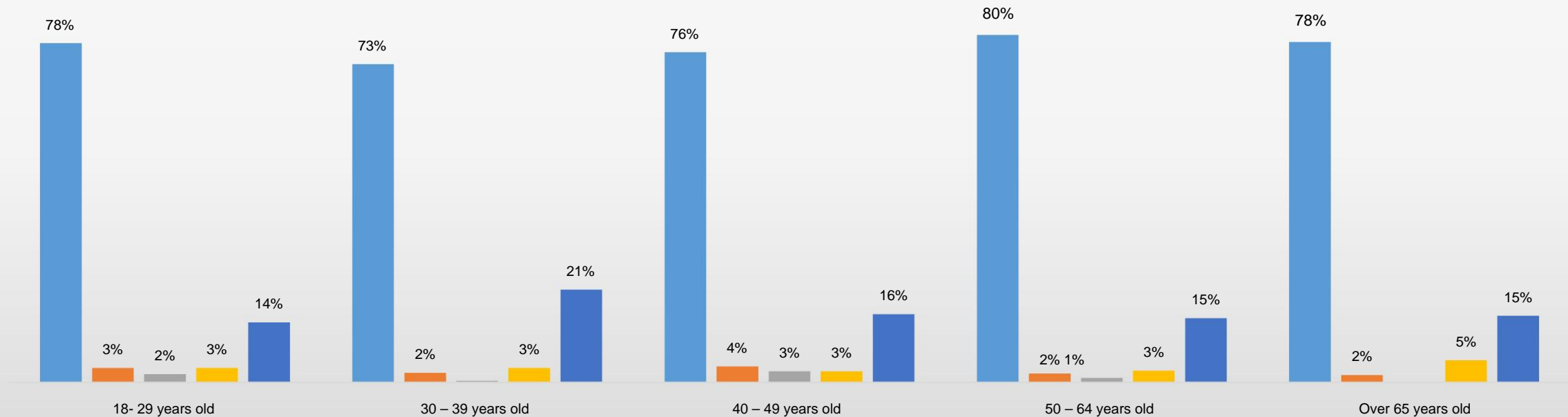
A large majority of respondents (72–80%) recognize the importance of climate change and the need for action to address it. However, a significant portion, especially among respondents with secondary education (19%), believe that they are talked about excessively.





6.3. Climate change and humanity? (by age)

All age groups largely recognize that climate change is a problem (73–80%), but a significant proportion of young people and Adults aged 30–39 (14–21%) believe the topic is overblown. The greatest concern is present among adults aged 50–64. years (80%).



■ Yes, to a large extent, changes need to be made to prevent their consequences.

■ Climate change is not a problem for humanity at all

■ Climate change does not exist.

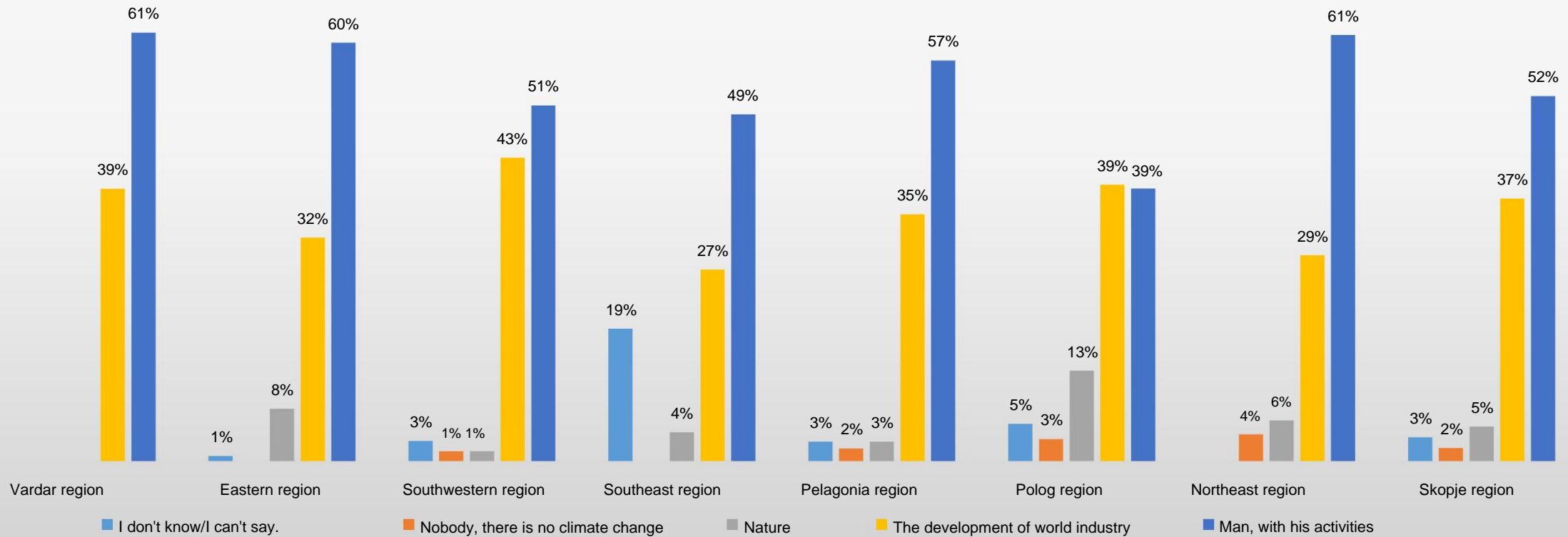
■ I don't know/I can't say.

■ They represent but to a small extent, they are talked about excessively.



6.4. Who is the main culprit for climate change?

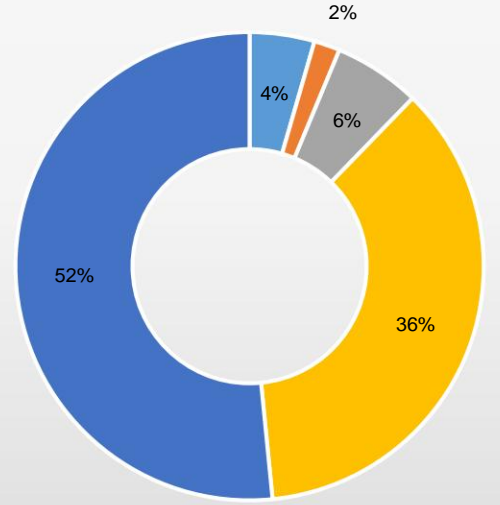
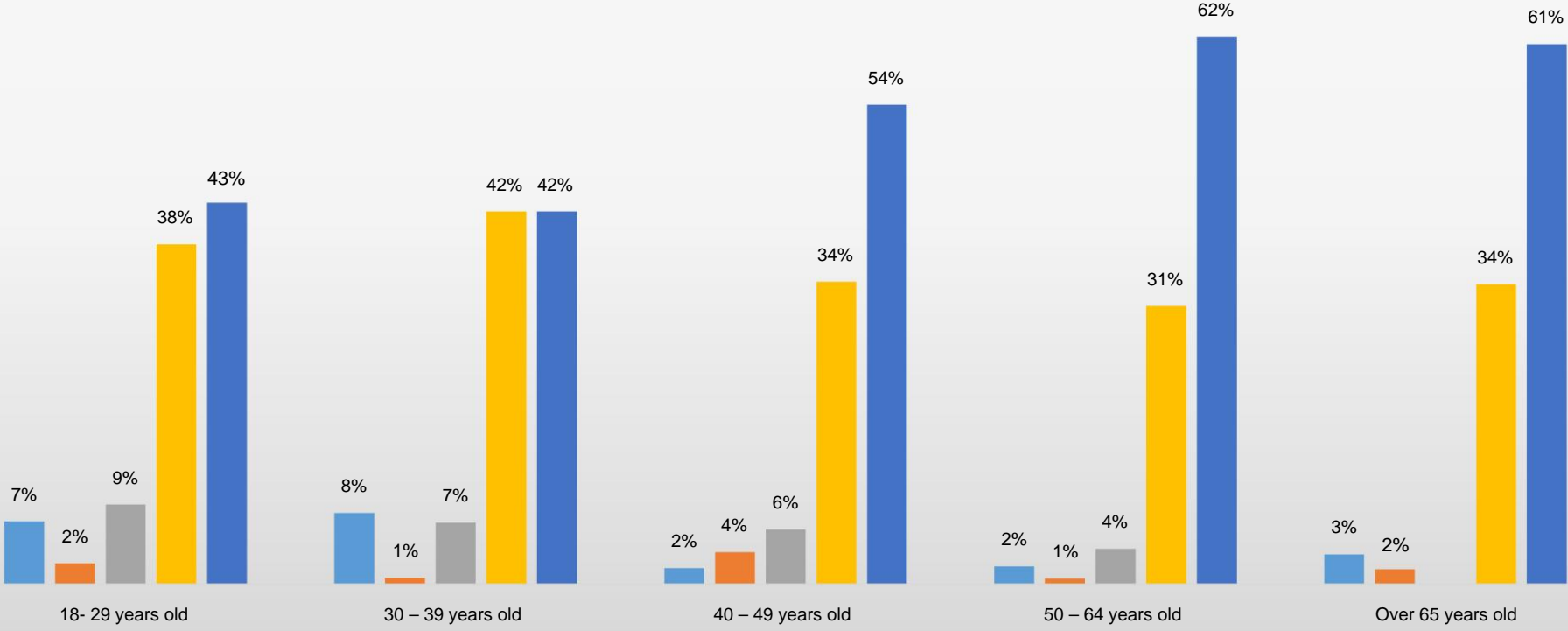
More than half of respondents from all regions maintain the view that the main culprit for climate change is man with his activities, except for the opinion of the respondents from the Polog region (39%) who believe that climate change The development of global industry is responsible for these changes, as are 39% who believe that humans are the main culprit.





6.5. Who is the main culprit for climate change? (by age and total)

Humans and their activities are considered the main culprits for climate change in all age groups, with the highest percentage among older age groups (50–64 years: 62%; Over 64 years: 61%). Industrial development is also a significant “culprit” especially among young people and adults aged 30–39, where the responsibility is shared.

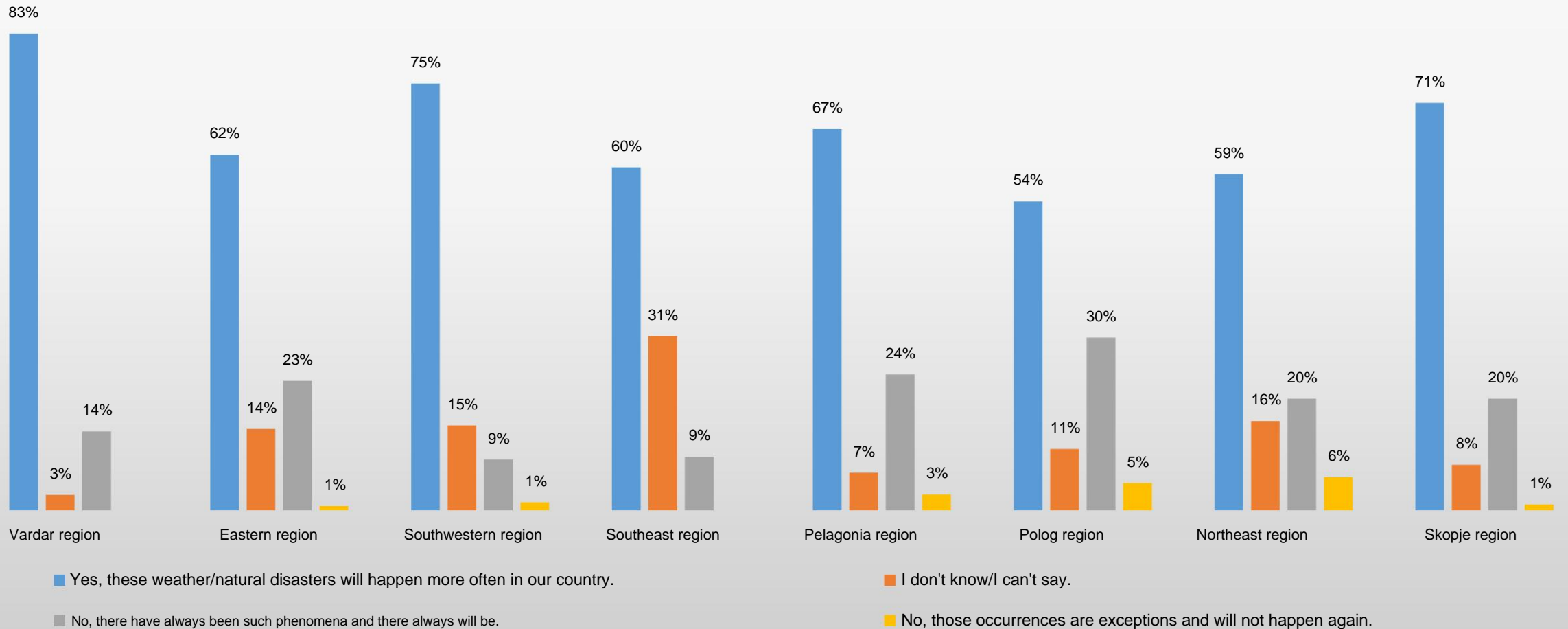


■ I don't know/I can't say.
 ■ Nobody, there is no climate change
 ■ Nature
 ■ The development of world industry
 ■ Man, with his activities



6.6. Weather disasters in the future?

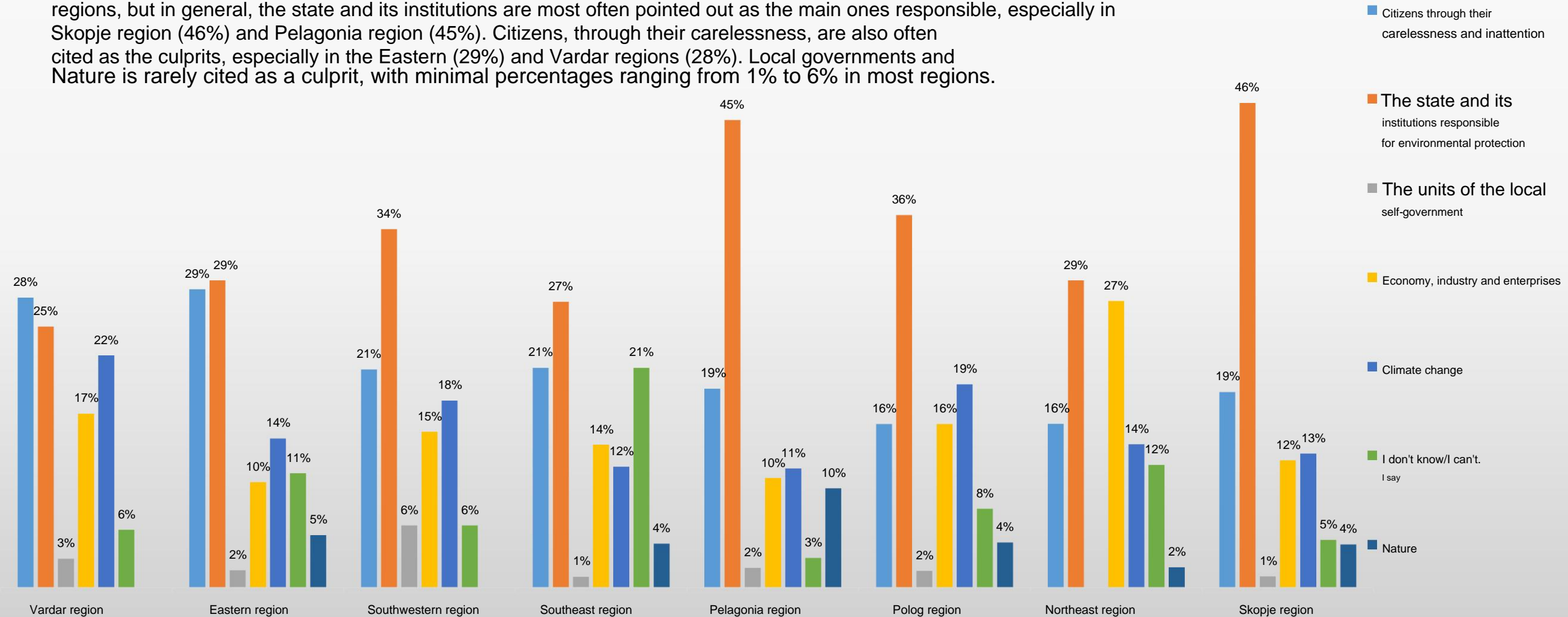
A significant majority of respondents from all planning regions believe that the aforementioned extreme weather events will occur more often in the future. Almost a third of the respondents from the Polog region believe that such phenomena have existed and will always exist.





6.7. Who is most responsible for the consequences of weather/natural disasters?

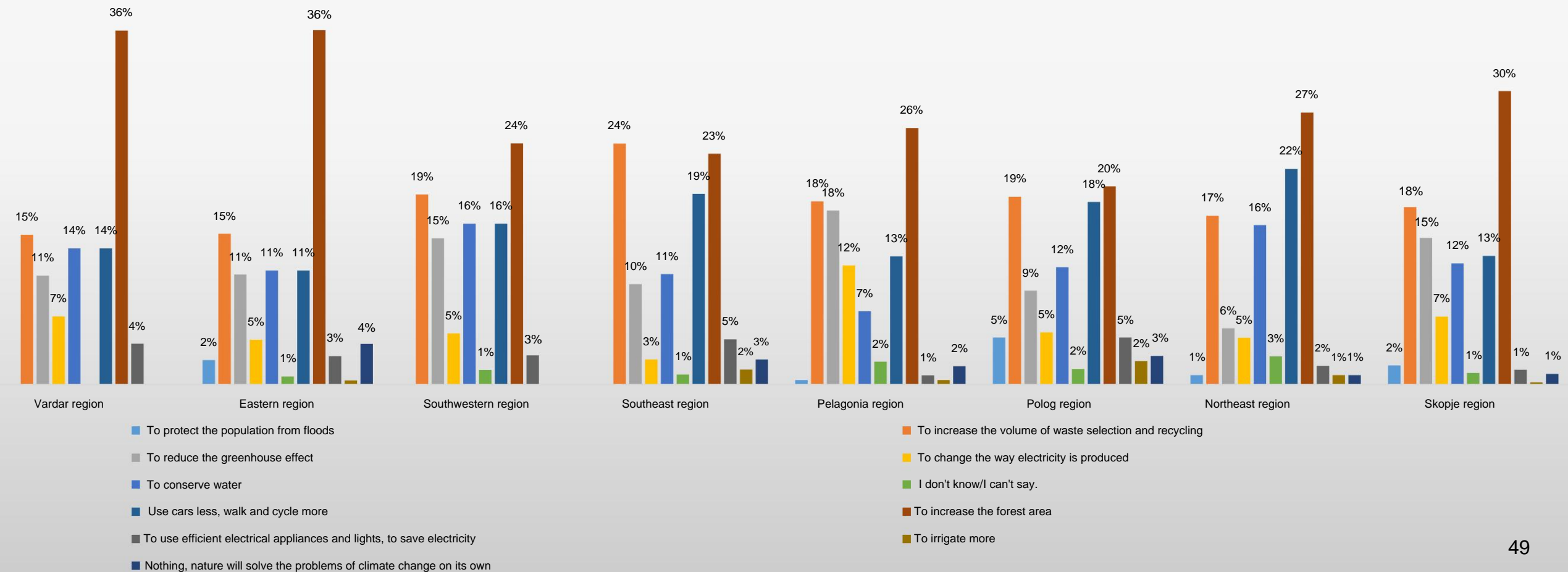
In terms of who is most responsible for the consequences of weather and natural disasters, there are differences between regions, but in general, the state and its institutions are most often pointed out as the main ones responsible, especially in Skopje region (46%) and Pelagonia region (45%). Citizens, through their carelessness, are also often cited as the culprits, especially in the Eastern (29%) and Vardar regions (28%). Local governments and Nature is rarely cited as a culprit, with minimal percentages ranging from 1% to 6% in most regions.





6.8. What should the state and citizens do about climate change?

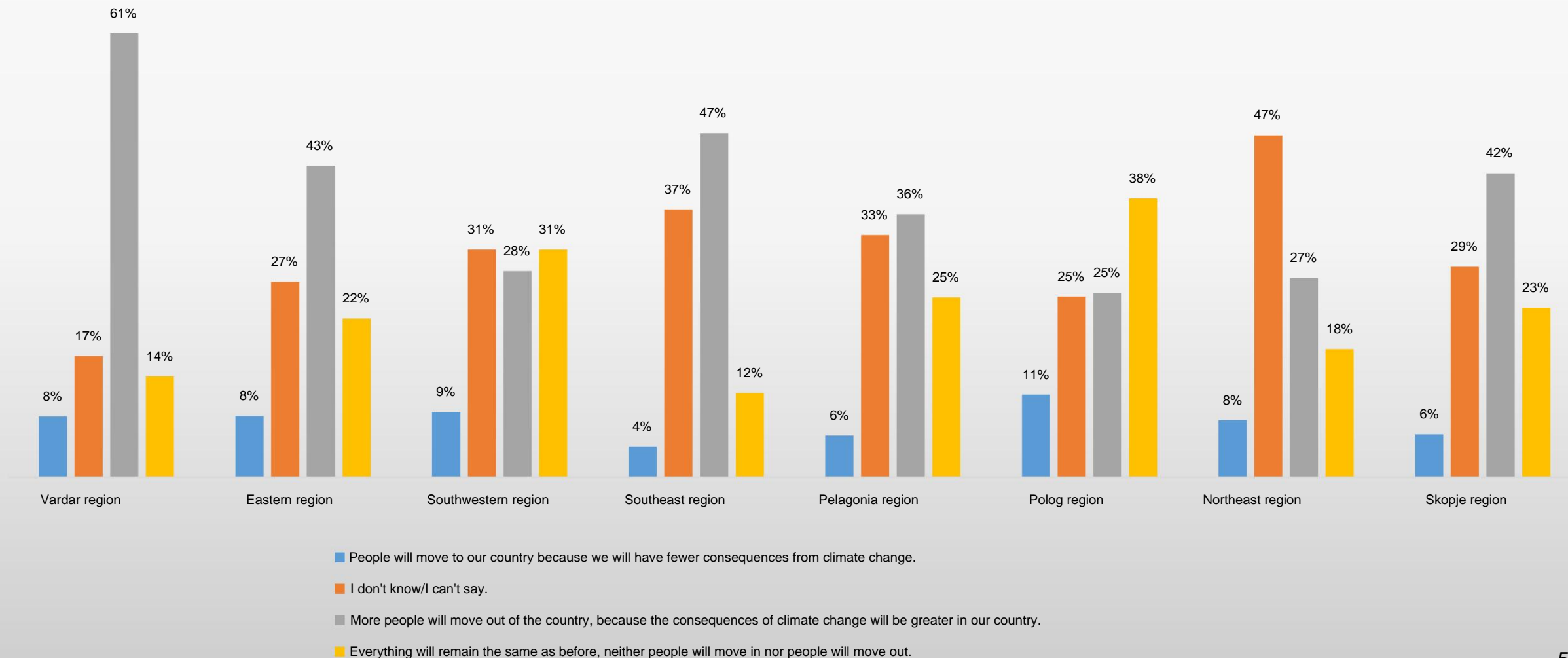
In all regions, the view that forest area should be increased dominates, with the highest percentages in the Skopje region (30%), the Vardar region (30%), and the Eastern region (36%), and the Eastern region (36%). A significant number of respondents also believe that waste sorting and recycling is crucial, with the highest share in the Southeast region (24%), Polog and Southwest regions (19%). Other measures, such as water conservation and changing the way electricity is produced, have moderate support, while few believe that nature itself will solve the problem.





6.9. Climate change as a cause of migration

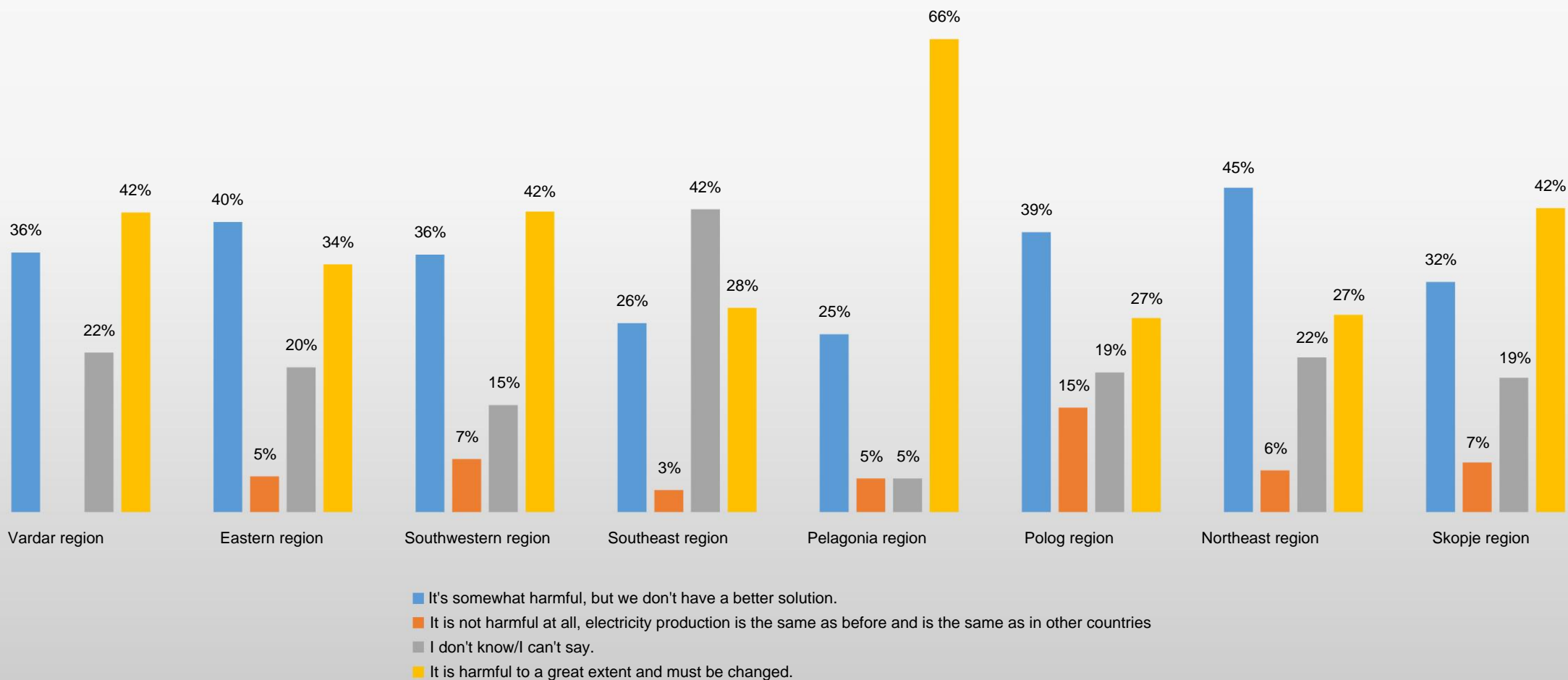
Migration to our country due to problems caused by climate change is not expected to occur to a significant extent. The majority of respondents believe that citizens will emigrate from our country to other countries.





6.10 Effects of electricity production on human health

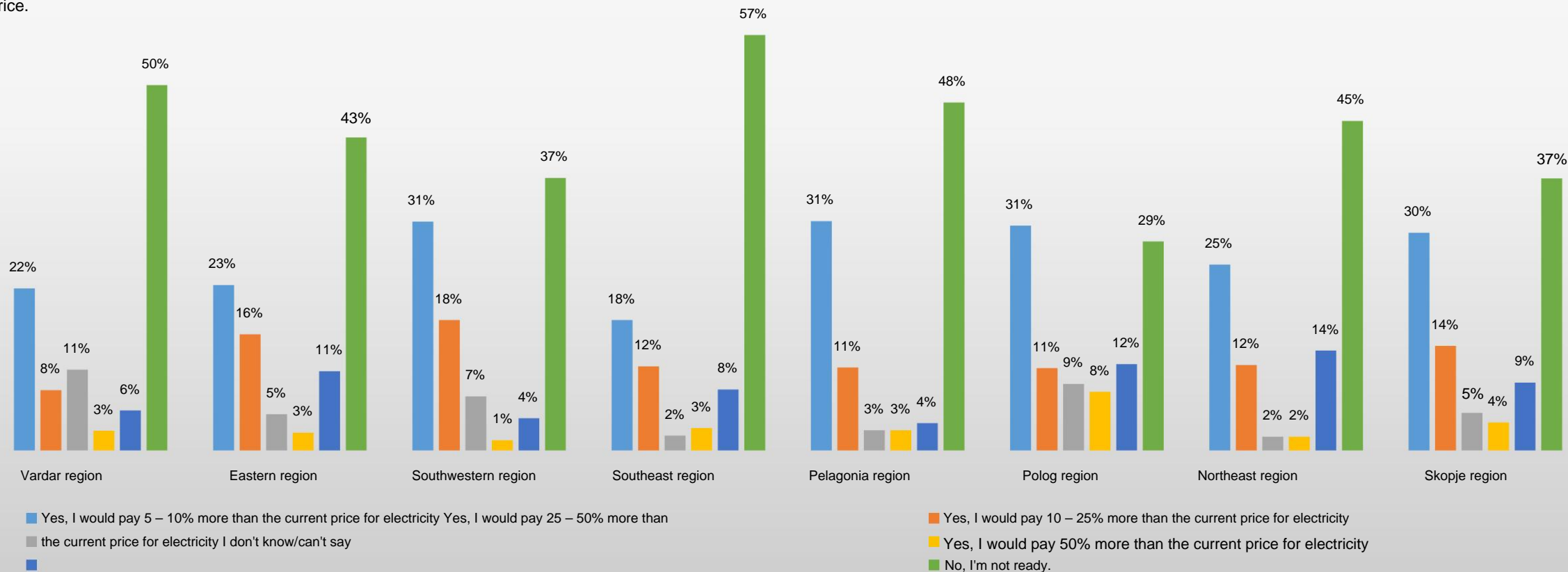
A high 66% of respondents in the Pelagonia region believe that the current method of electricity production in the country is harmful to citizens and that it must be changed to a large extent, and only 27% of respondents from the Polog region claim the same. On average, almost a third of all respondents believe that it is somewhat harmful, but that we have no other choice.





6.11. Would you be willing to pay more for electricity produced from wind/solar/geothermal energy (renewable sources) and contribute to changing the way electricity is produced?

The majority of citizens in all planning regions are **not** willing to pay a higher price for energy from renewable sources, and in the Southeast region this percentage is the highest (57%). Those who are willing to do so are limited to 5-10% higher price.





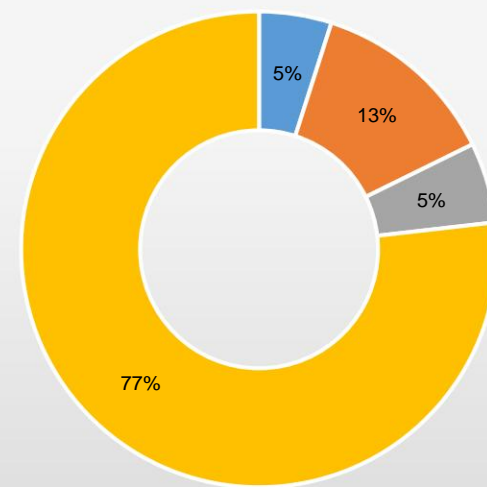
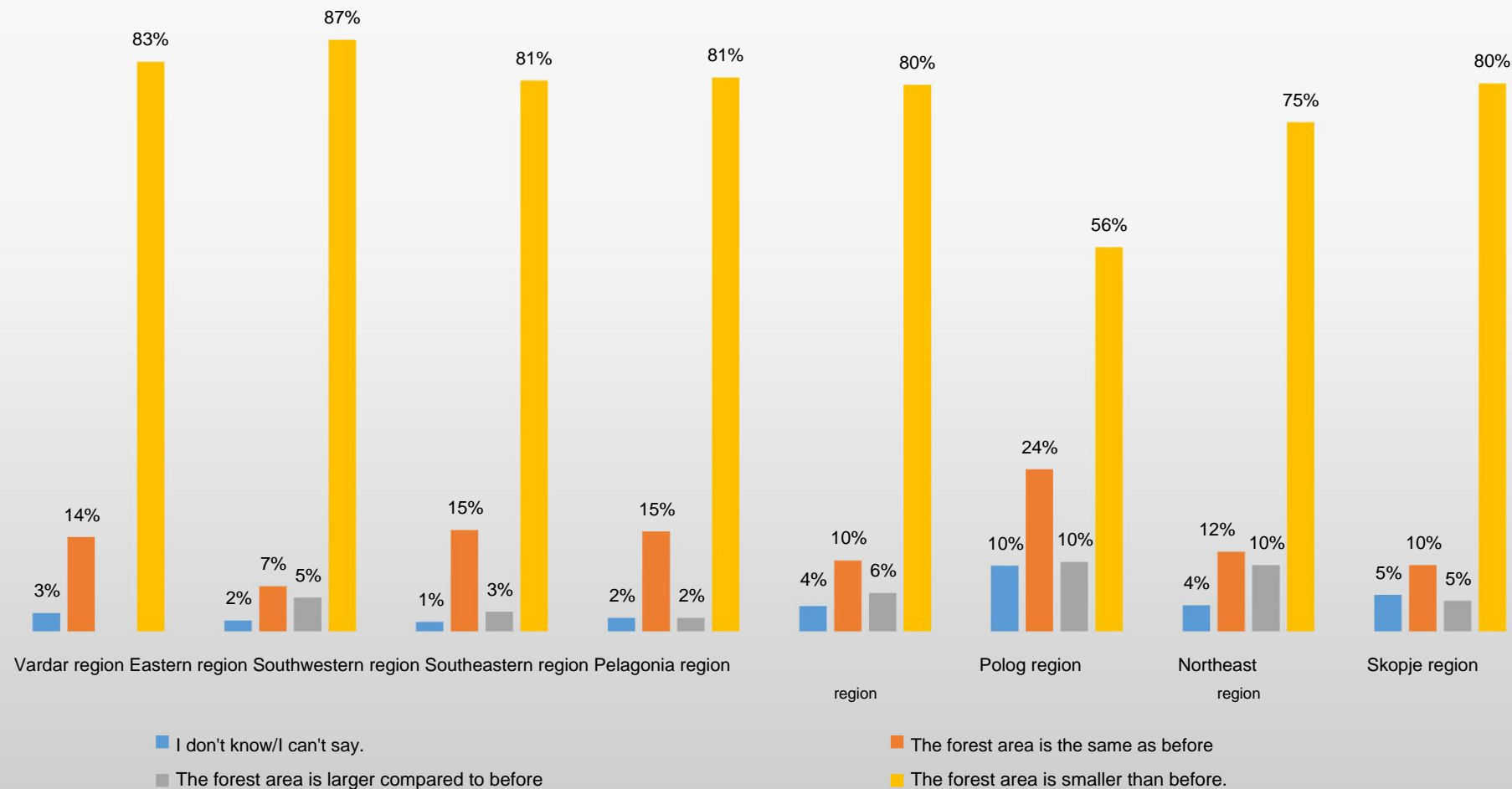
7. FORESTS AND NATURAL RESOURCES

- Most of the respondents from almost all planning regions believe that the forest area has significantly decreased in their place of residence.
- Citizens and state institutions are identified as the main responsible for uncontrolled logging and burning. Also, the economy and industry are considered "very responsible" in most regions, especially in the Northeast region.
- Forests are often considered most important for providing oxygen, reducing temperatures, and as natural habitats for various animal and plant species. Forests are also often seen as resources for firewood and furniture.
- Over 50% of respondents would participate in reforestation actions. Older age groups (40-64 years) show the greatest willingness for personal engagement.
- A very small percentage (2-5%) are willing to pay higher afforestation taxes.



7.1. Forest area today and when you were a child? (by region and total)

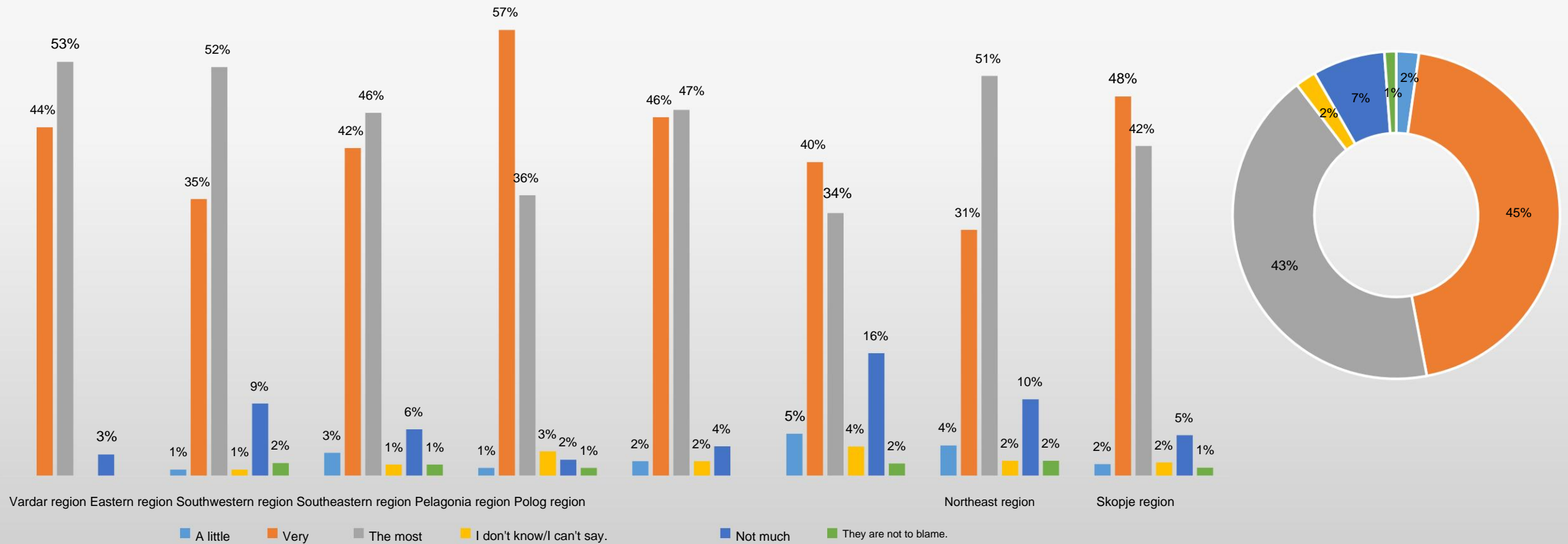
A vast majority of respondents in all planning regions believe that today the place where they grew up is significantly smaller. The area covered by forests. The largest number of respondents who claim this are from the Eastern region (84%).





7.2. To what extent are citizens responsible for the state of the forests in the country through their actions of uncontrolled cutting and burning? (by region and total)

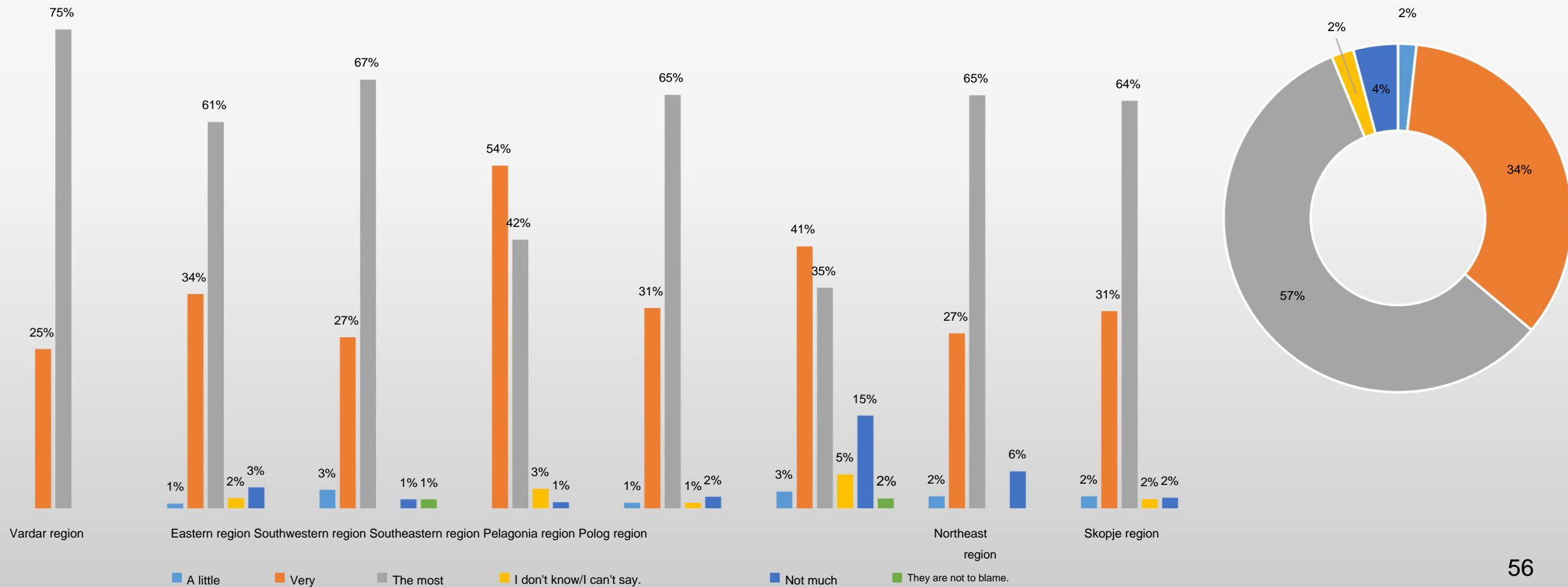
Almost half of the respondents from all regions believe that those responsible for the state of forests are "most" or "very" citizens with their behavior, i.e. uncontrolled logging and burning of forests.





7.3. To what extent are the state and its institutions responsible for forest protection and management responsible for the state of forests in the country?

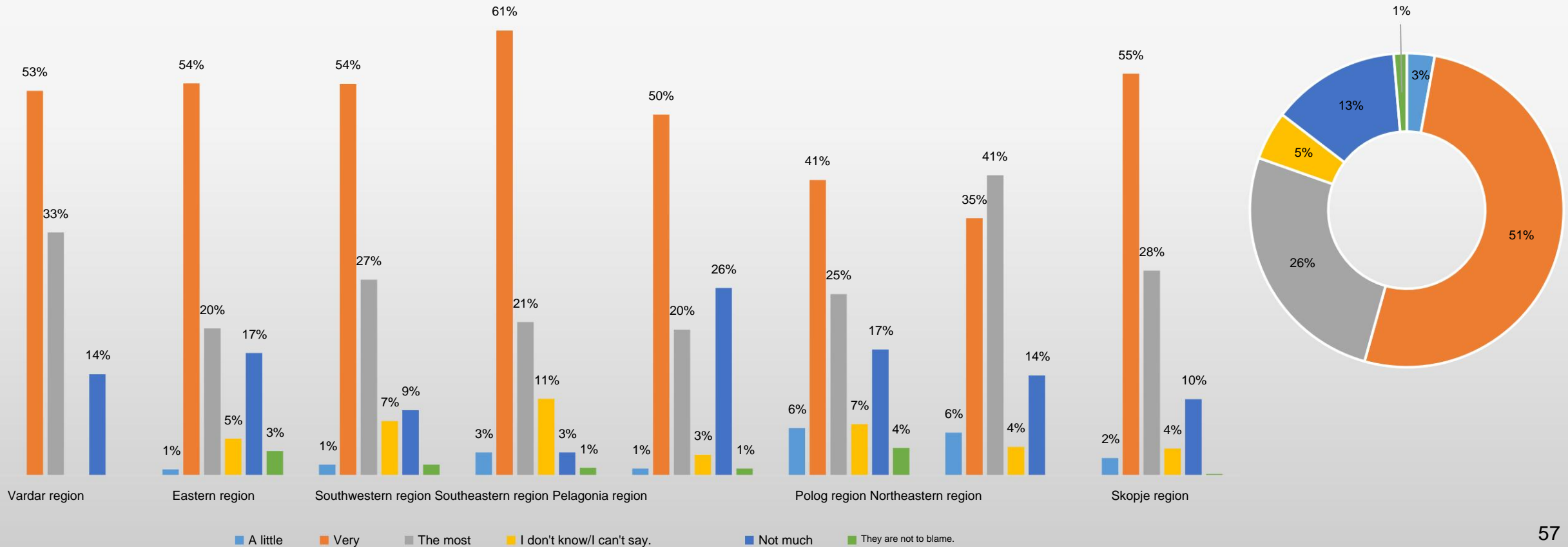
The state is indicated as being most responsible for the state of forests among respondents from all planning regions, with a high majority.





7.4. To what extent are the economy, industry and companies responsible for the state of forests in the country? (by region and total)

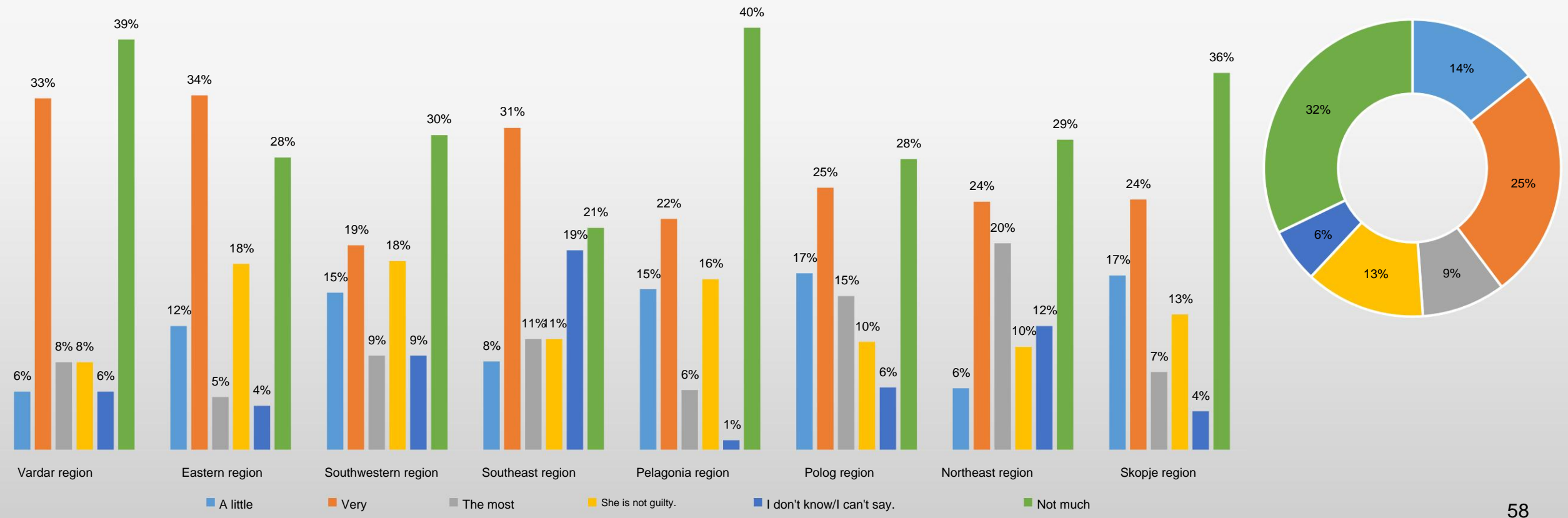
In five of the planning regions, at least half of the respondents believe that the economy, industry and companies are "very" responsible for the state of the forests in the country. In the Northeast region, the highest number of respondents who believe that The economy, industry and companies are "most" responsible for this issue.





7.5. To what extent are nature itself, pests, forest fires and weather disasters responsible for the state of forests in the country? (by region and total)

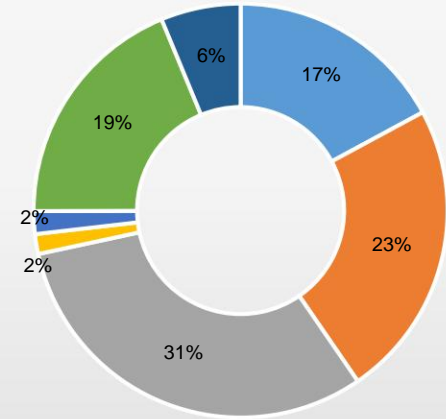
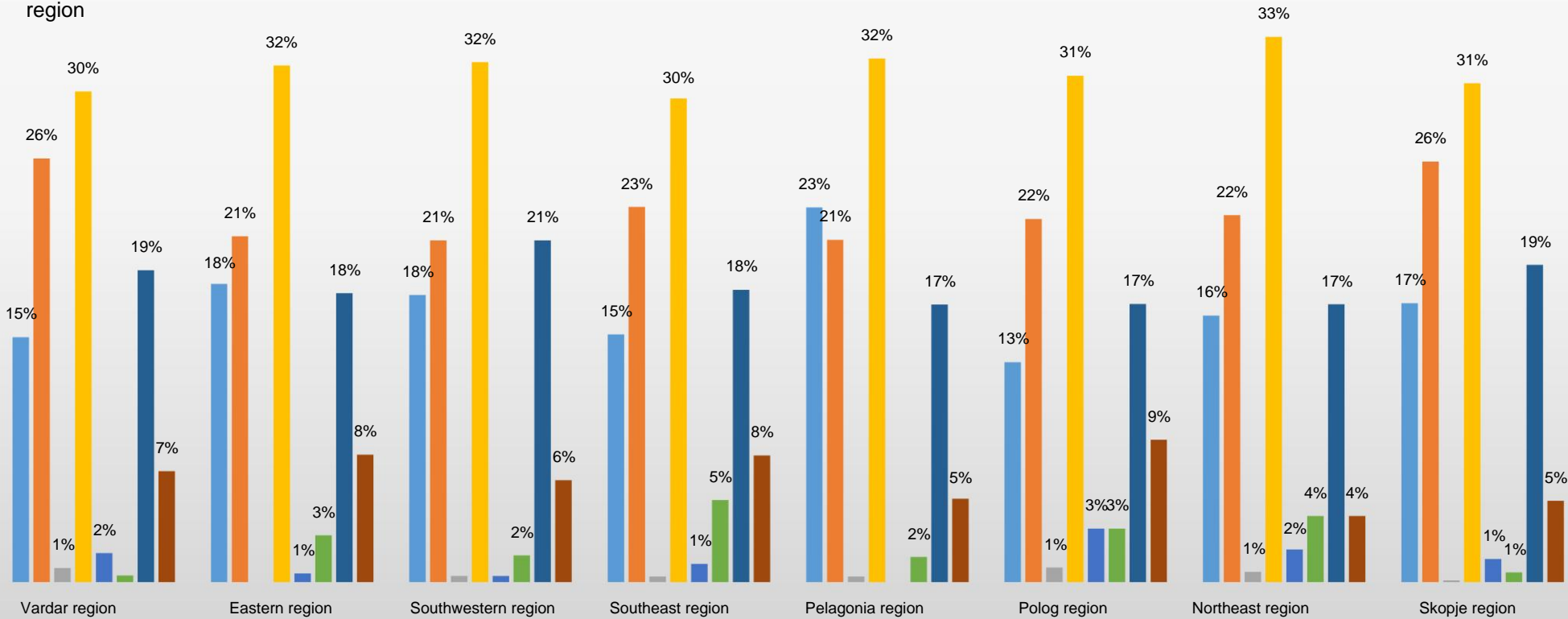
The answers “not very” and “very” are the most common choices among respondents in all planning regions, which indicates a certain contradiction in the statement. Most of the respondents in the Eastern and Southwestern regions claim that nature is not to blame for the aforementioned conditions.





7.6 Three reasons why forests are important? (by region and total)

In almost all regions, respondents answered that the most important functions of forests are providing oxygen, reducing temperatures and the role of habitats for a large number of species. The high percentage of responses that see forests as resource for the furniture industry and a source of firewood. This is especially pronounced among the citizens of the South-West, Skopje, Vardar regions



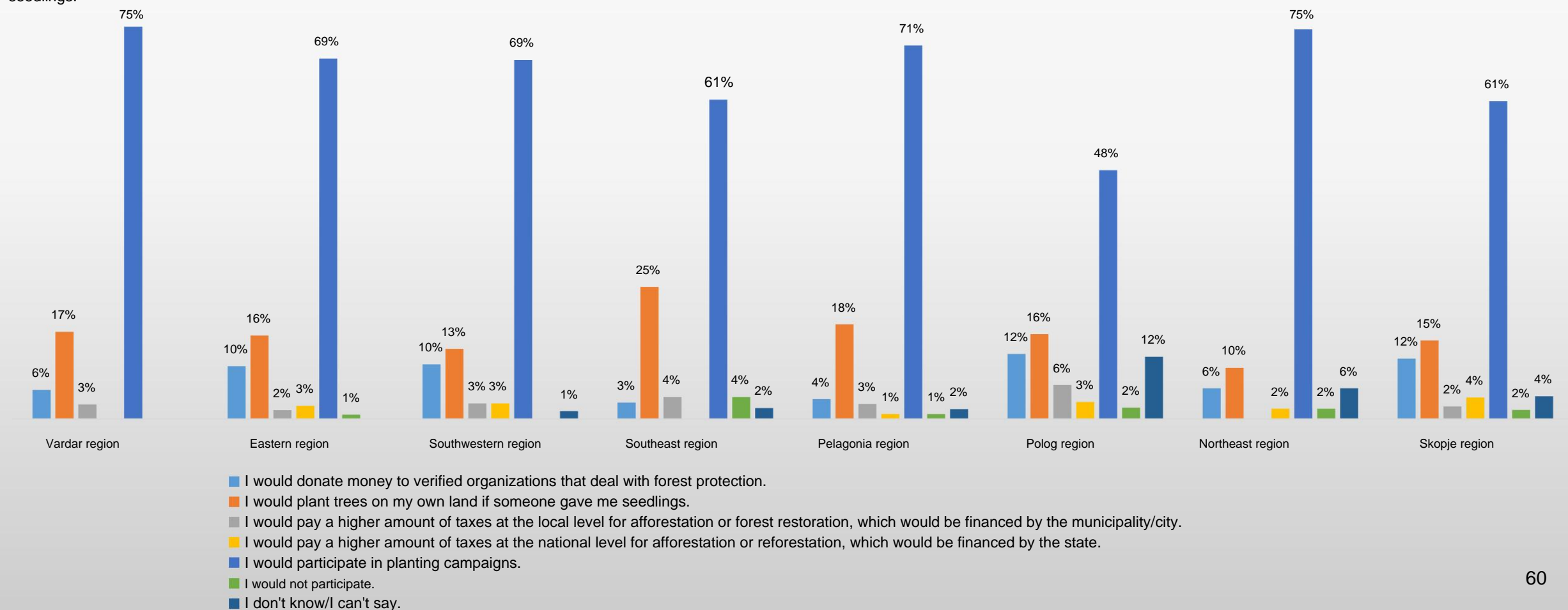
- They slow down the rainstorms by accumulating water
- I don't know/can't say
- They provide wood which is an important
- element in furniture production and construction
- They are important for the habitats of wild animals and birds

- Reduces the temperature of the soil surface
- They produce oxygen.
- They provide firewood.
- They are beautiful and a pleasant place to walk.



7.7 Involvement in the afforestation process or in the forest restoration process?

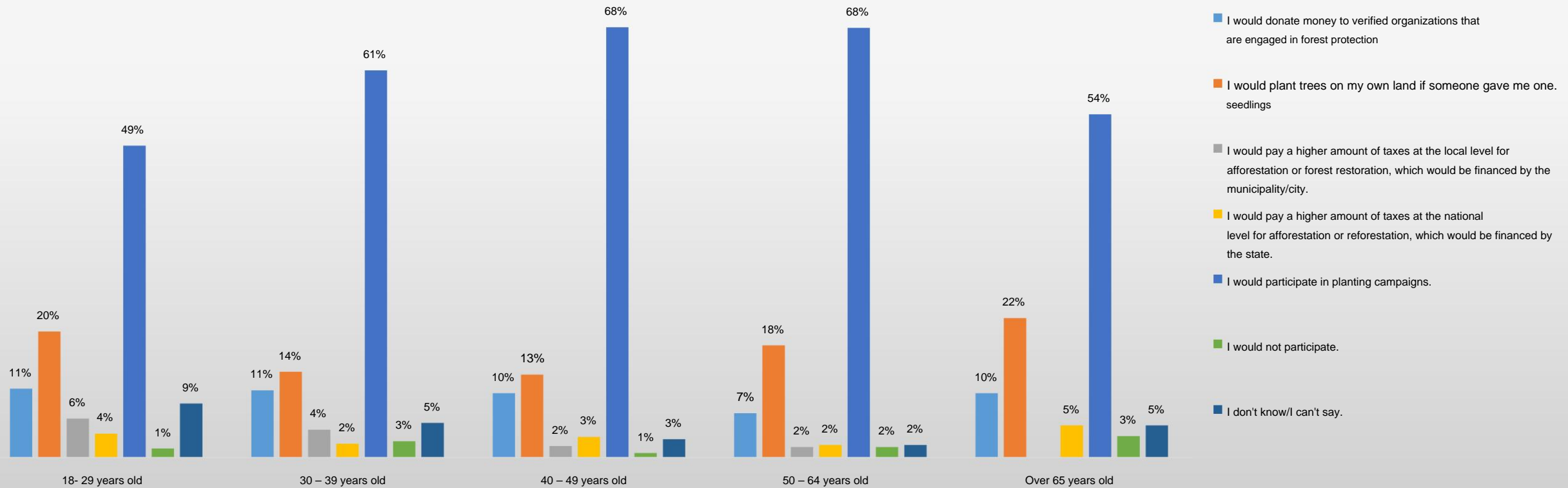
Regarding personal engagement in forest restoration, most of the respondents opted to participate in afforestation actions. (at least half in all planning regions). Then come those who would plant trees on their own land, if provided with seedlings.





7.8 Involvement in the afforestation process or in the forest restoration process? (by age)

Across all age groups, the majority of respondents would participate in tree planting actions, with the highest support among those aged 40-49 (68%) and 50-64 years old (68%). Planting trees on one's own land, if they have seedlings, also receives significant support, especially among those over 65 years (22%). Up to 9% of 18-29 year olds express undecidedness. Paying higher taxes for afforestation has the lowest percentage representation, especially at the national level, where percentages range from 2-5%.





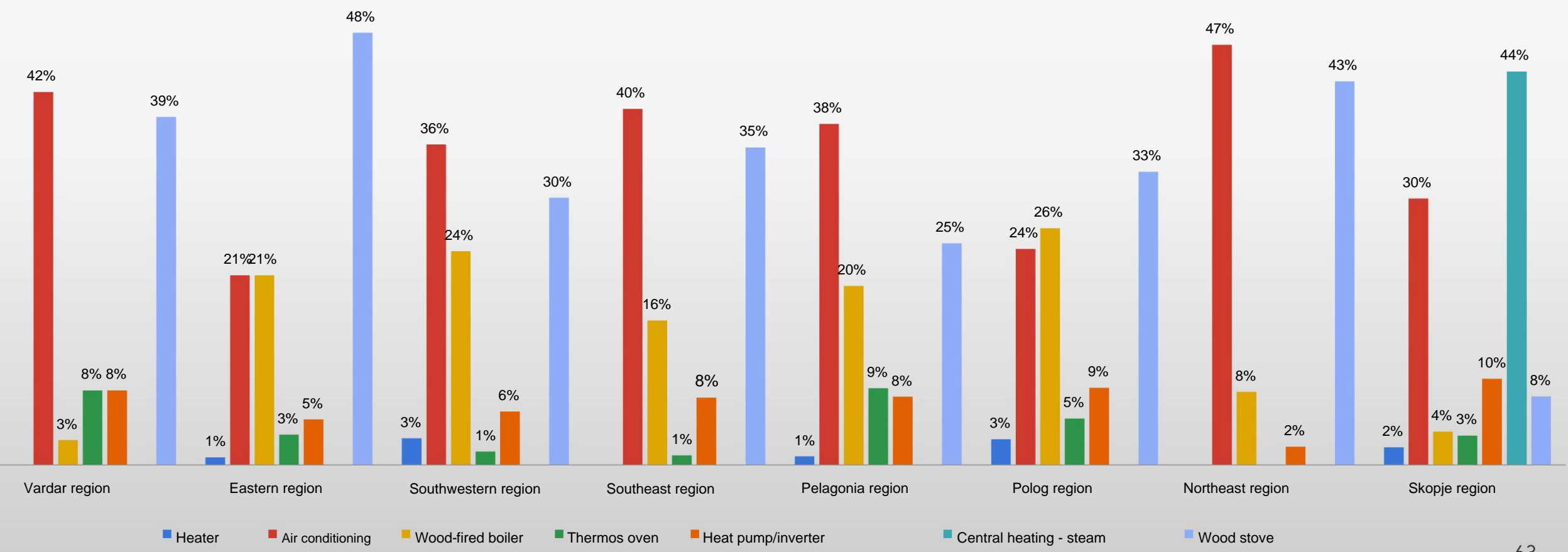
8. Energy and energy poverty

- Wood stoves dominate in rural areas (43%), while air conditioners are most common in urban areas (33%). Firewood is the most commonly used energy source, especially in the Eastern region.
- The most common electricity bills are between 2001 and 3000 denars. The Southeast region has the highest average bills, over 5000 denars.
- Most respondents are not willing to invest in new heating appliances or thermal insulation due to lack of funds. 44% of those surveyed would buy a new appliance if they had a 30% subsidy.
- Half of the respondents from the Skopje region often cancel outdoor activities due to polluted air. In all regions, the dominant view is that the state is most responsible for pollution.
- Over a third of respondents in the Skopje region already have an air purifier. Most respondents from other regions do not plan to buy one due to the high price.
- The most common measure to improve air quality is changing the heating method and participating in reforestation.



Energy 8.1. What is the main device you use for heating?

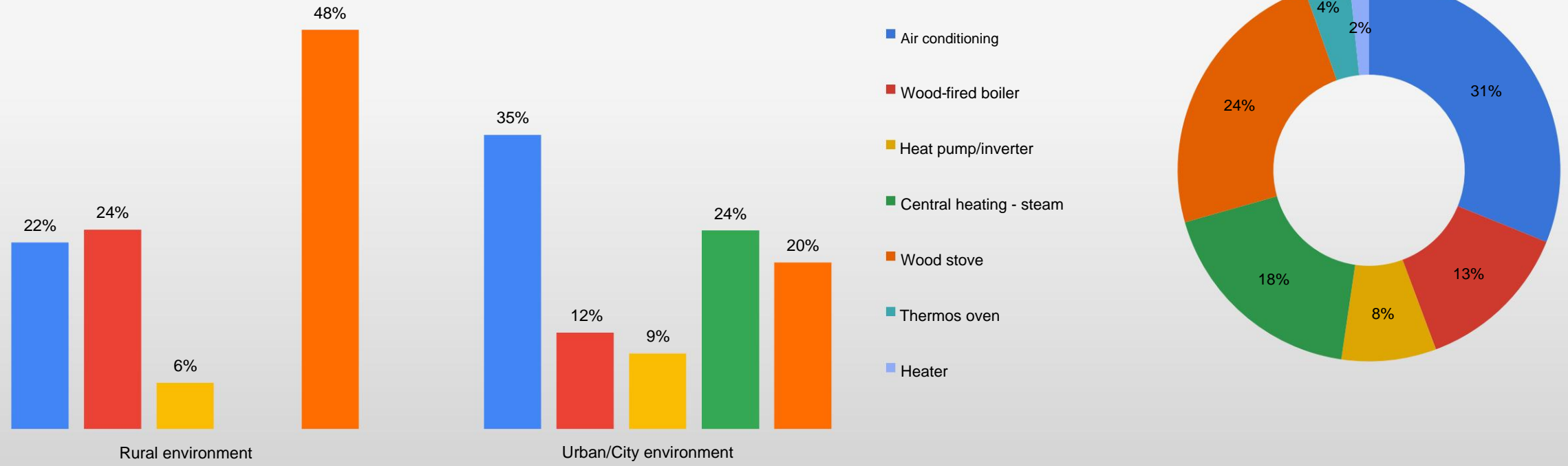
Almost half of the respondents from the Eastern and Northeastern regions use a wood stove. The number of respondents is significant who use air conditioning in the Northeast and Vardar regions, while less than 10% in all regions chose heating pump/inverter as a heating device. It remains unclear whether citizens make a distinction between an air conditioner and an inverter.





8.2. What is the main device you use for heating? Energy (by living environment and total)

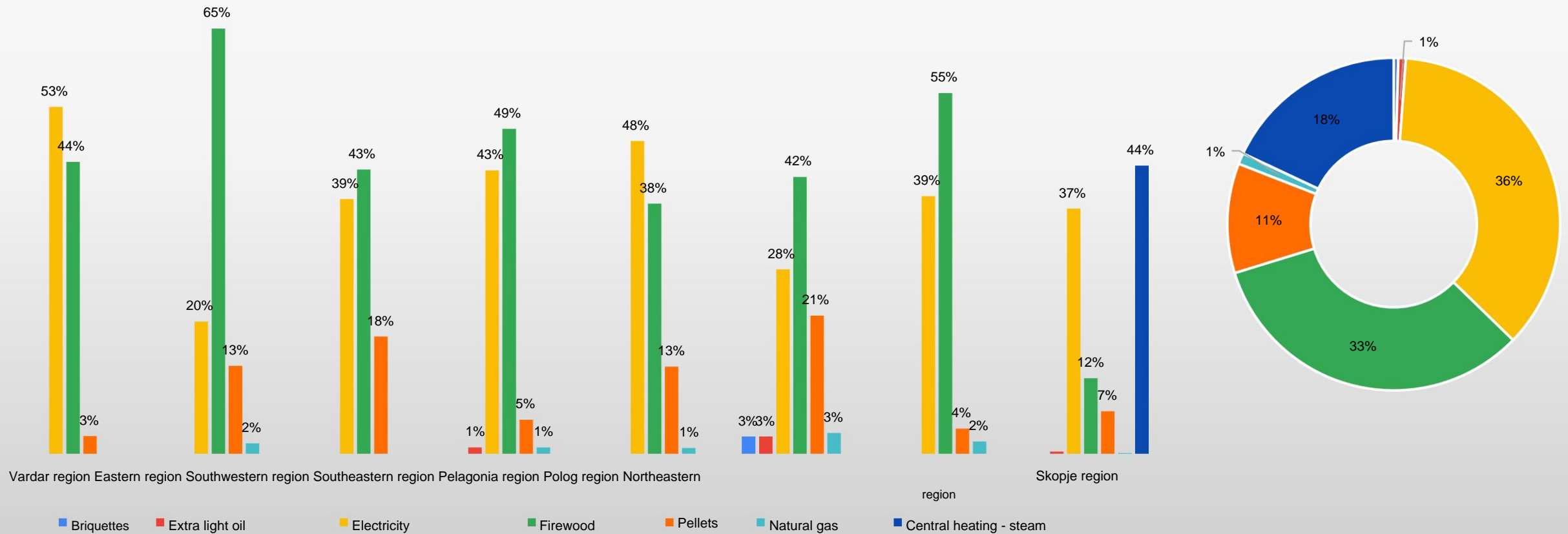
In rural areas, the most commonly used heating device is a wood stove, used by 48% of respondents. Almost equally popular are air conditioners and wood boilers. In urban or city areas, air conditioners are most commonly used, with 35%, followed by central heating (steam) with 24%.





8.3. What types of fuel do you use to heat your home? (by region and total)

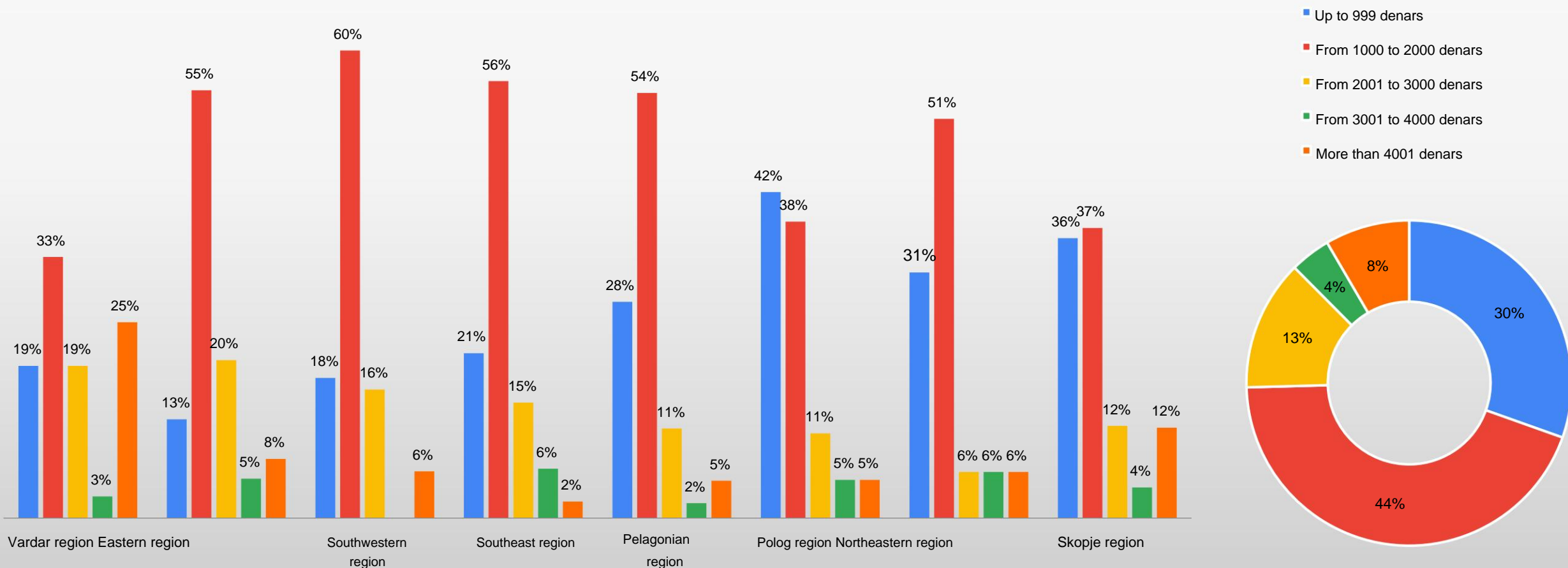
More than half of the respondents in the Vardar region use electricity to heat their homes. The percentage of firewood is high in almost all planning regions – the highest in the East (65%), and the lowest in the Skopje region. Pellets are most common in the Polog region, and central heating - steam in the Skopje region.





8.4. How much do you pay for utilities and water on average per month? (by region and total)

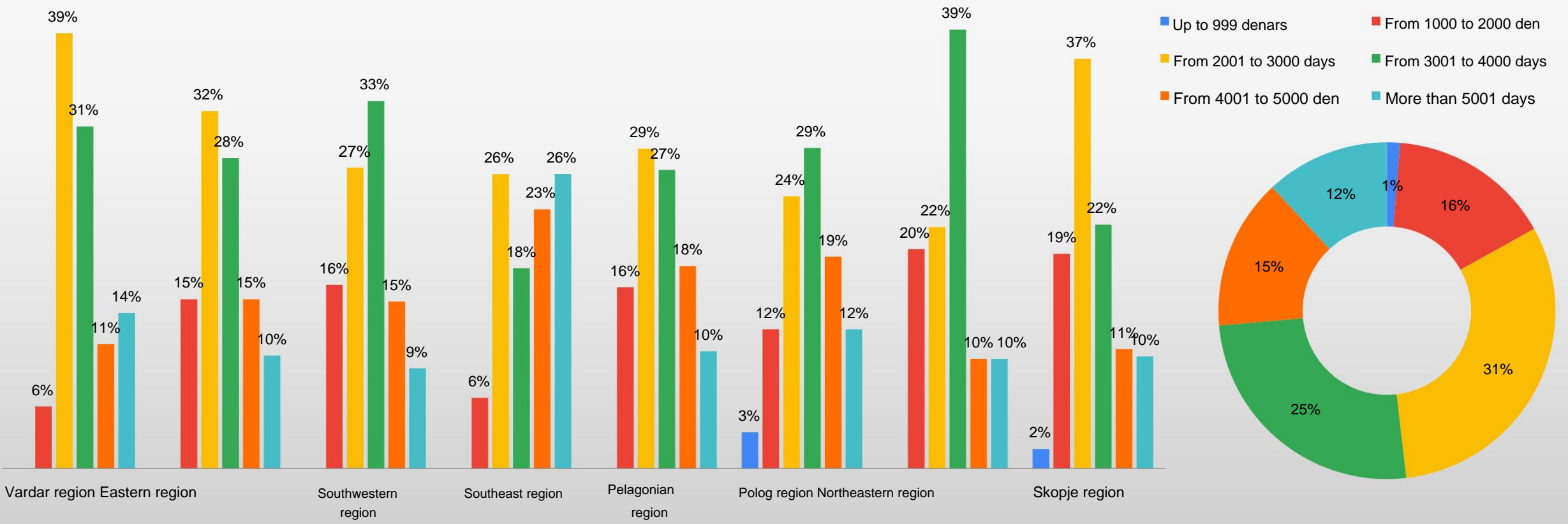
In all planning regions except Polog, the majority of respondents pay between 1000 and 2000 denars per month for utilities and water. In the Polog region, the majority of respondents pay up to 999 denars for these services.





8.5. How much do you pay for electricity on average per month? (by region and total)

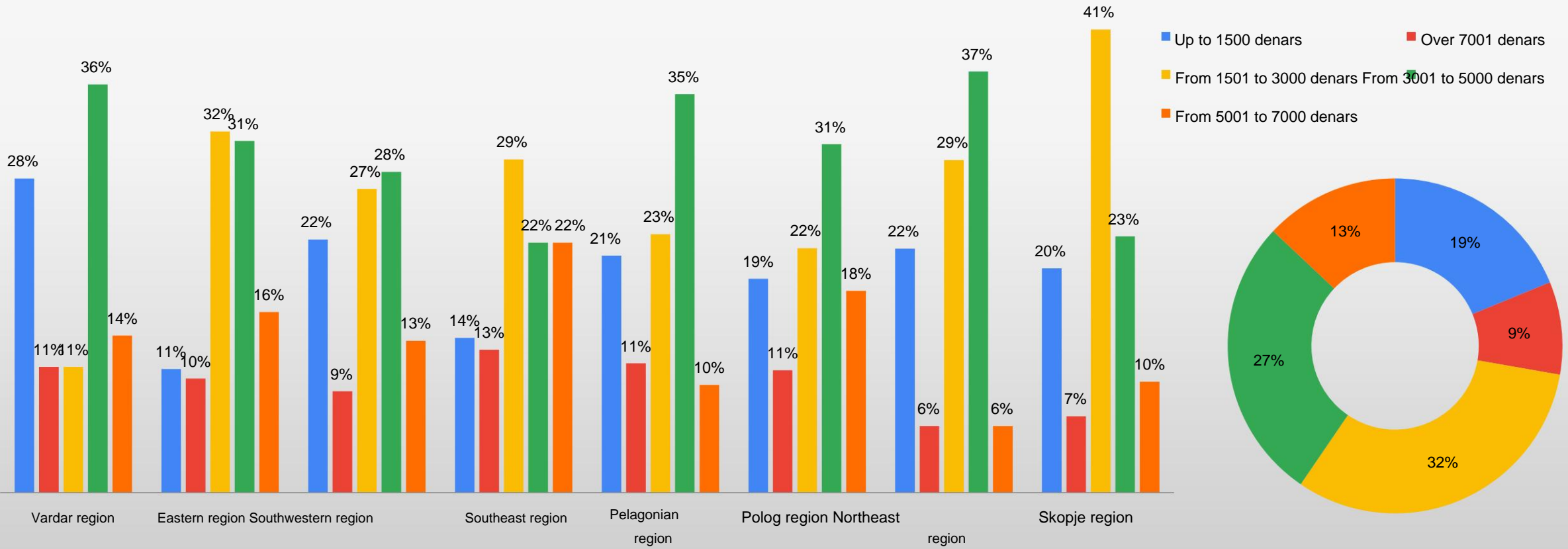
In the Northeastern and Southwestern regions, most respondents pay between 3001 and 4000 denars for this service. The Southeastern region is the only one in which the majority of respondents pay the most for electricity – over 5001 denars, while in the other regions the bills are most often in the range of 2001 to 3000 denars. This is of course also correlated with the fact that electricity is used for heating.





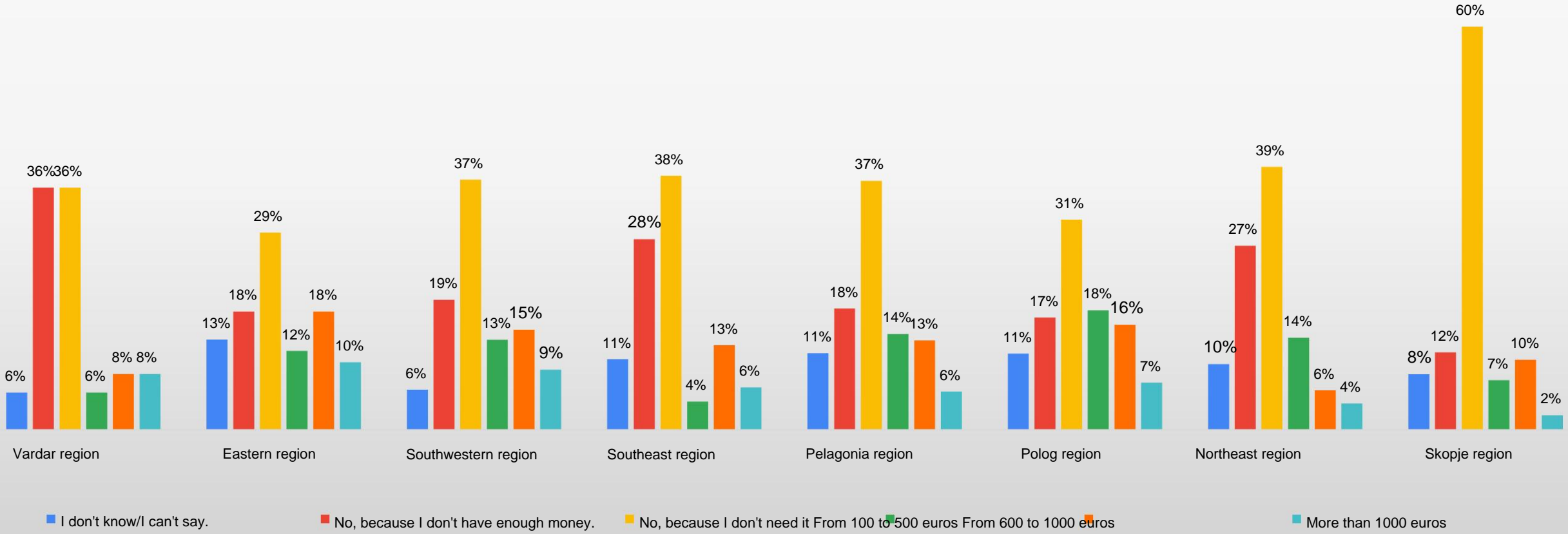
8.6. How much do you pay on average per month for heating (steam, firewood, pellets, oil, gas, etc.) (by region and total)

As for the amount of monthly heating bills, in the Skopje, East and Southeast regions they are mostly in the category of 1501 to 3000 denars, and in all other regions the majority of respondents pay between 3001 and 5000 denars. These costs are also correlated with the type of energy source that is predominantly used, i.e. the unavailability of certain energy sources or technologies such as natural gas and central heating in most of the planning regions.



8.7. Would you invest money in buying a new radiator, and if so, how much?

The majority of those surveyed in all planning regions are not prepared for this type of investment, because they believe they do not have the A significant proportion of respondents in all planning regions responded that they would not do so due to lack of financial resources.

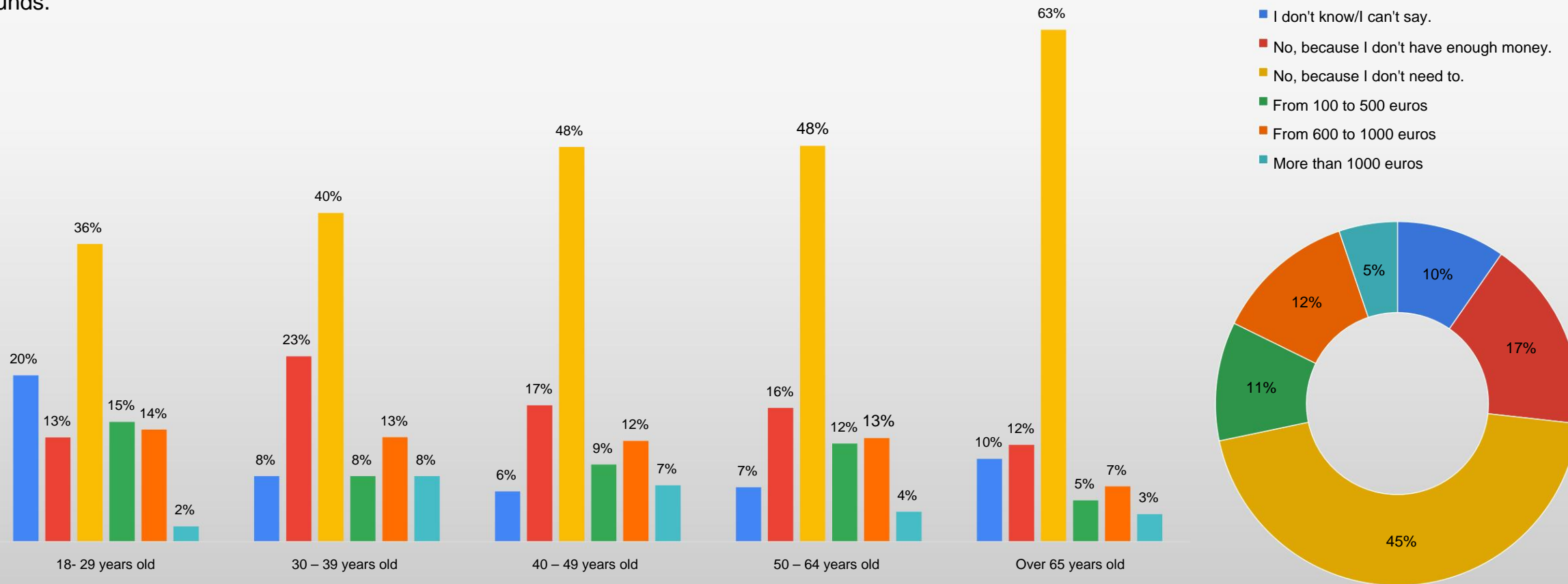




8.8. Would you invest money in buying a new radiator, and if so, how much?

(by age and total)

The majority of respondents from all age groups are not prepared for this type of investment, because they believe they do not need it. Young people, i.e. respondents aged 18-29, stated that they do not know whether they would invest in a new heating element, while A significant portion of respondents from other age groups responded that they would not do so due to lack of financial resources. funds.

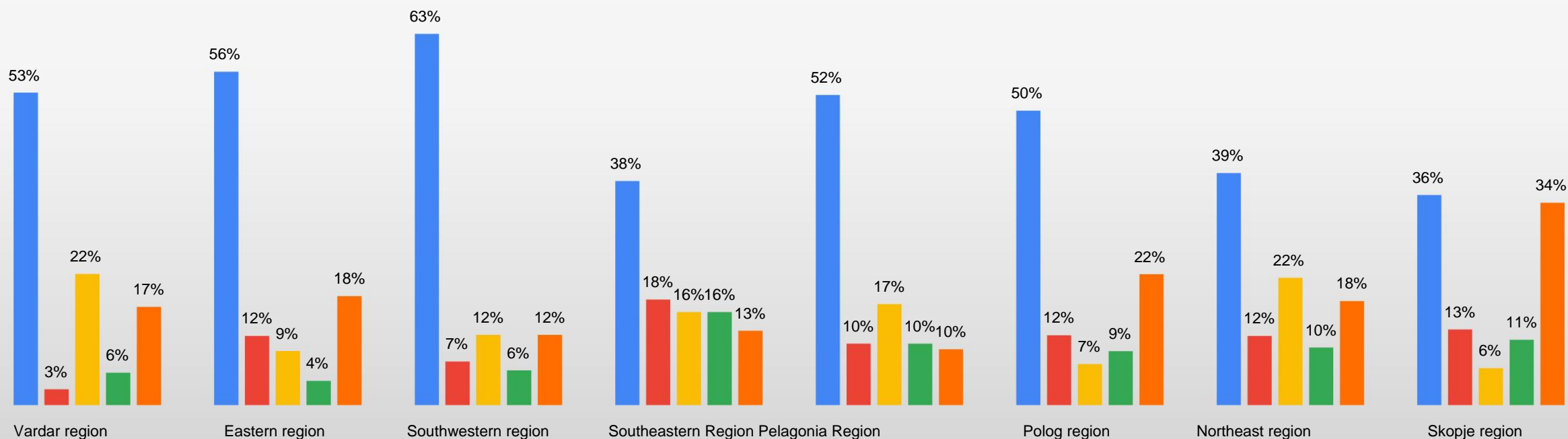




8.9. If the state gives you subsidies for the purchase of a new heating element for your household by 30%, would you then be willing to buy a new and more modern device?

Providing subsidies for investing in household heating significantly changes citizens' willingness to investment. In this case, a significant majority in all planning regions except Skopje declare that they will invest.

The availability of a central heating system in the Skopje region explains the dominant attitude among these respondents that they are satisfied with the the existing situation.



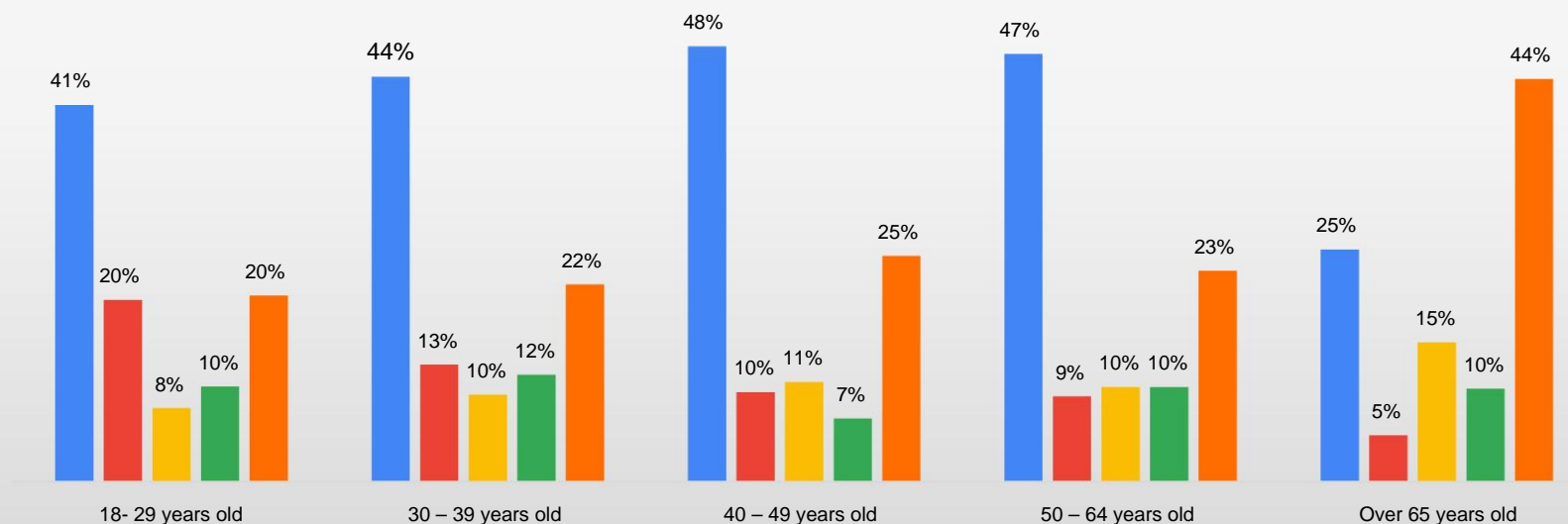
■ Yes, I would buy ■ I don't know/can't say ■ No, because even with the subsidies I wouldn't have enough money for a new one ■ No, because I have a new device ■ No, because I am satisfied with the current one



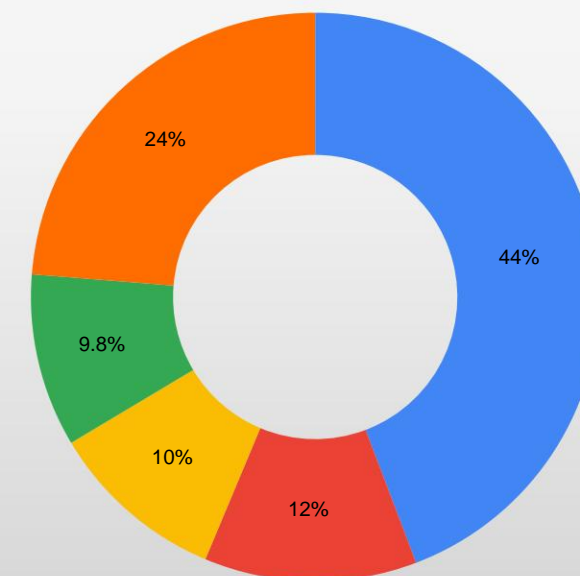
8.10 If the state gives you subsidies for the purchase of a new heating element for your household by 30%, would you then be willing to buy a new and more modern device? (by age and total)

The largest percentage of respondents (48%) aged 40 to 49 stated that they would bought a new and more modern device, while 44% of the age group over 65 years old They replied that they would not buy because they were satisfied with the permanent one.

Total of all respondents 44% They replied that they would buy a new heater. body if the state provides subsidies with 30%



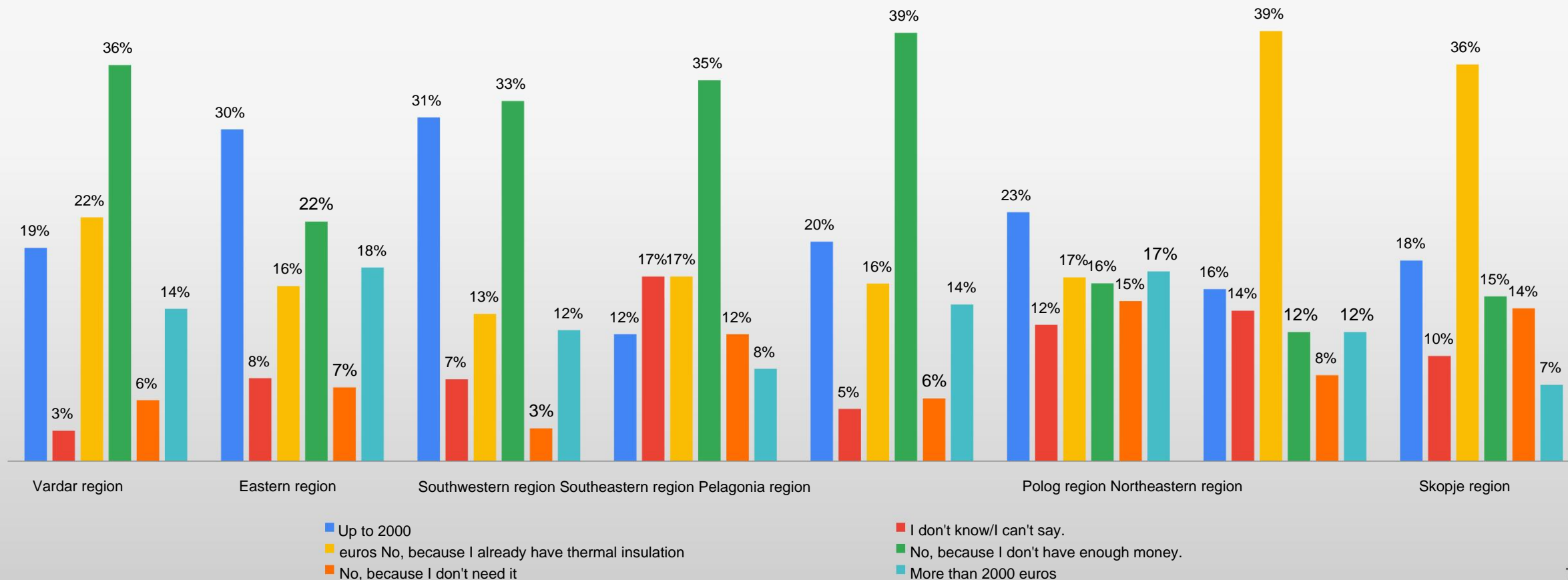
- Yes, I would buy it.
- I don't know/I can't say.
- No, because even with the subsidies I wouldn't have enough money for a new one.
- No, because I have a new device.
- No, because I am happy with the current one.





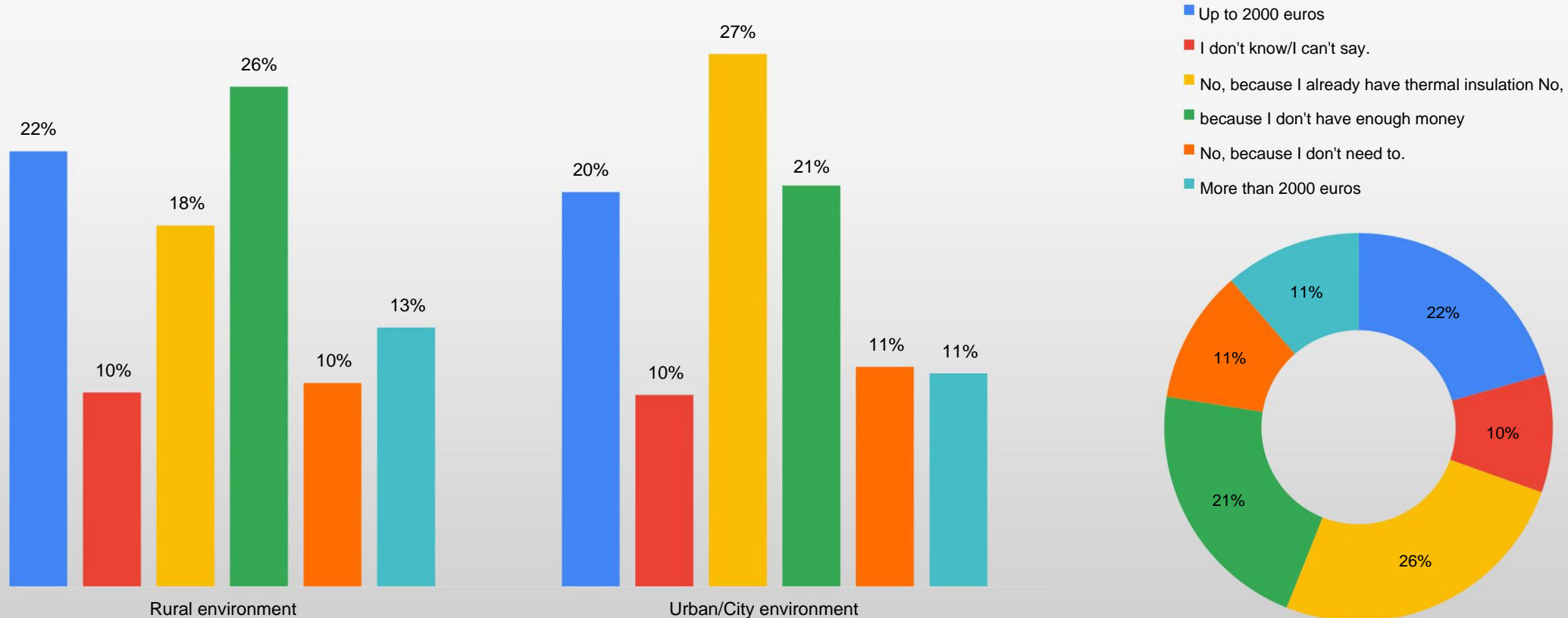
8.11. Would you invest in thermal insulation for your home, and if so, how much?

Only in the Skopje and Northeastern regions did the majority of respondents declare that they already have adequate thermal insulation. (36% and 39% respectively), while the majority of respondents in other planning regions say they do not have enough funds for such a project. investment. 23% of respondents from the Polog region stated that they would invest up to 2,000 euros for thermal insulation of their home.



8.12. Would you invest in thermal insulation for your home, and if so, how much? (by living environment and total)

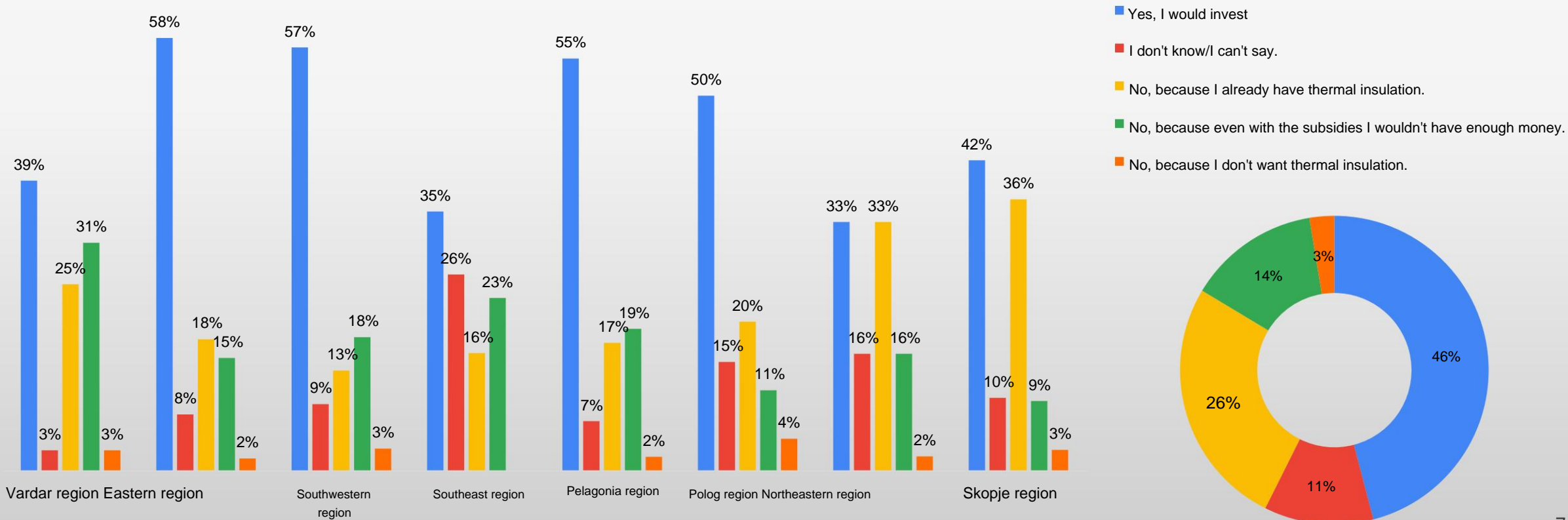
Respondents from urban/city areas (27%) stated that they would not invest in thermal insulation because they already have it. On the other hand, 26% of respondents from rural areas responded that they would not invest because they do not have enough money.





8.13. If the state would give you subsidies for installing a heating system insulation up to 30%, would you then be ready for an investment? (by region and total)

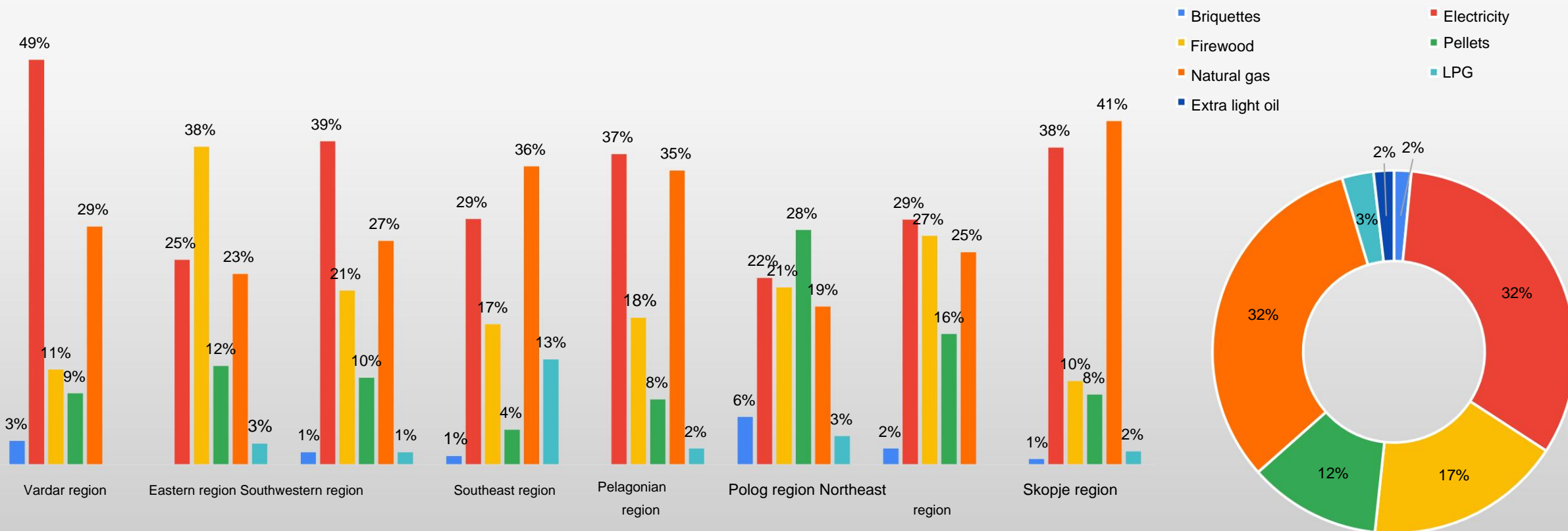
And in this case, if there are subsidies, the willingness to invest changes significantly and this is dominantly expressed in all planning regions. However, in the Vardar region, almost a third (31%) of respondents claim that despite the subsidies, they do not will have enough funds for such an investment. The same is thought by 23% of those surveyed in the Southeast region.





8.14. Which type of fuel do you consider to be the most favorable and economical for your needs? (by region and total)

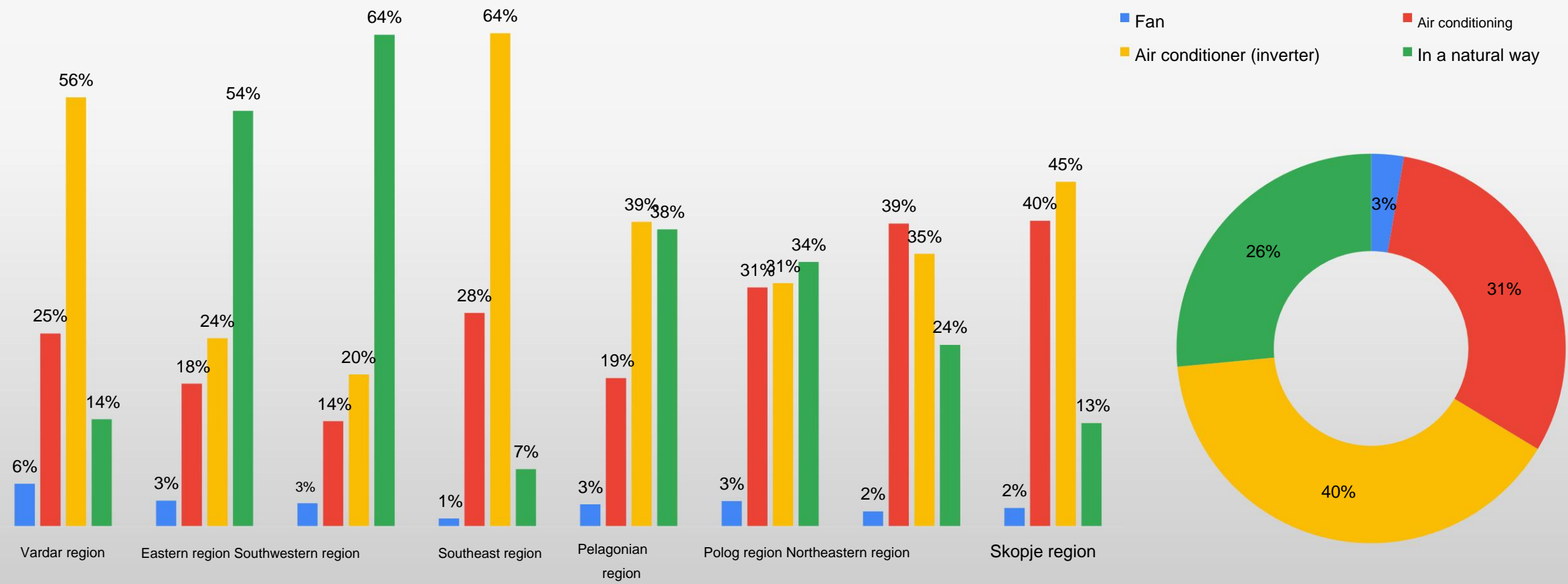
It is worrying that for almost half of the respondents in the Vardar region, electricity is the most economical option for heating. This percentage of respondents is also significant in other regions. In the Skopje region, the majority of citizens believe that the most cost-effective option is natural gas, given that central heating using this primary energy source is dominant there. Some of the respondents from the Eastern region (38%) believe that it is most economical to heat with firewood, and in the Polog region (28%) with pellets.





8.15 How do you cool your household? (by region and total)

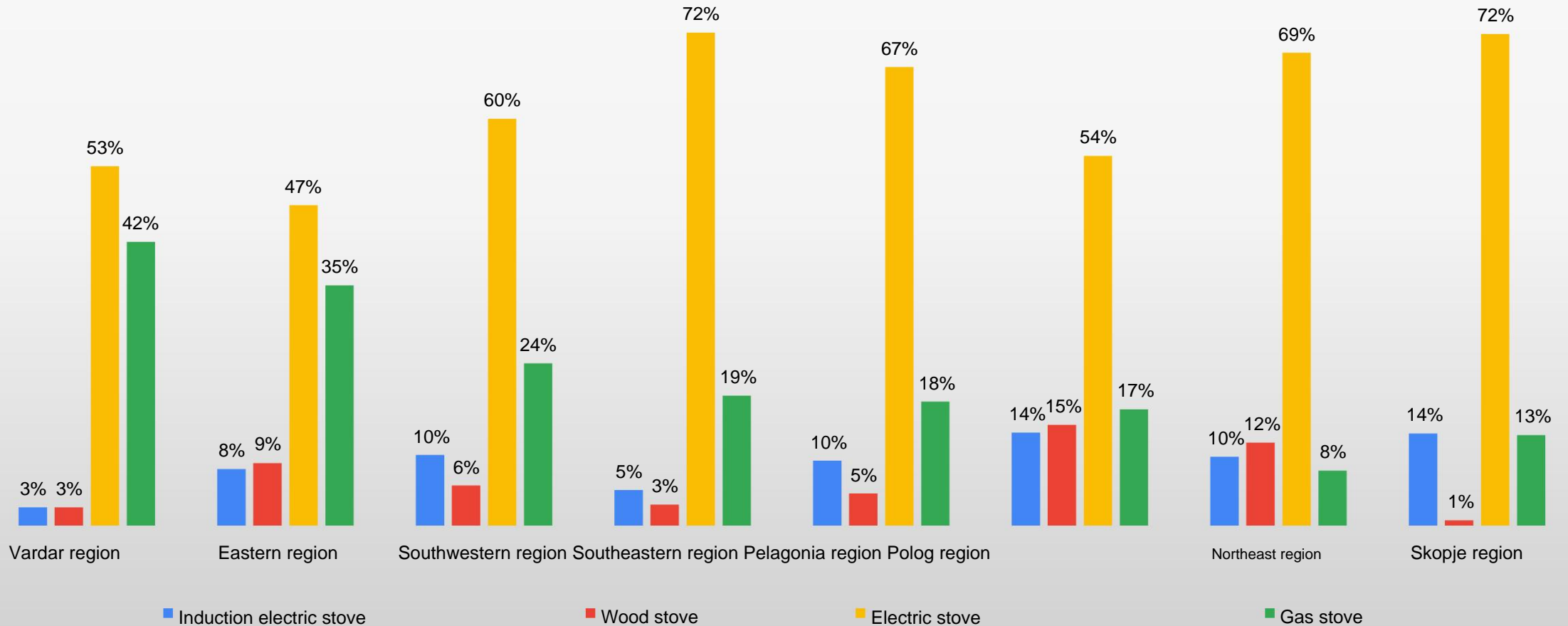
Regarding household cooling options, the majority of respondents in the East and Southwest regions responded that they do it naturally. In all other regions, air conditioning or air conditioning (inverter) solutions dominate. Inverters are most widely used among respondents in the Southeast, Vardar and Skopje regions.





8.16 What type of stove do you most often use for preparing food?

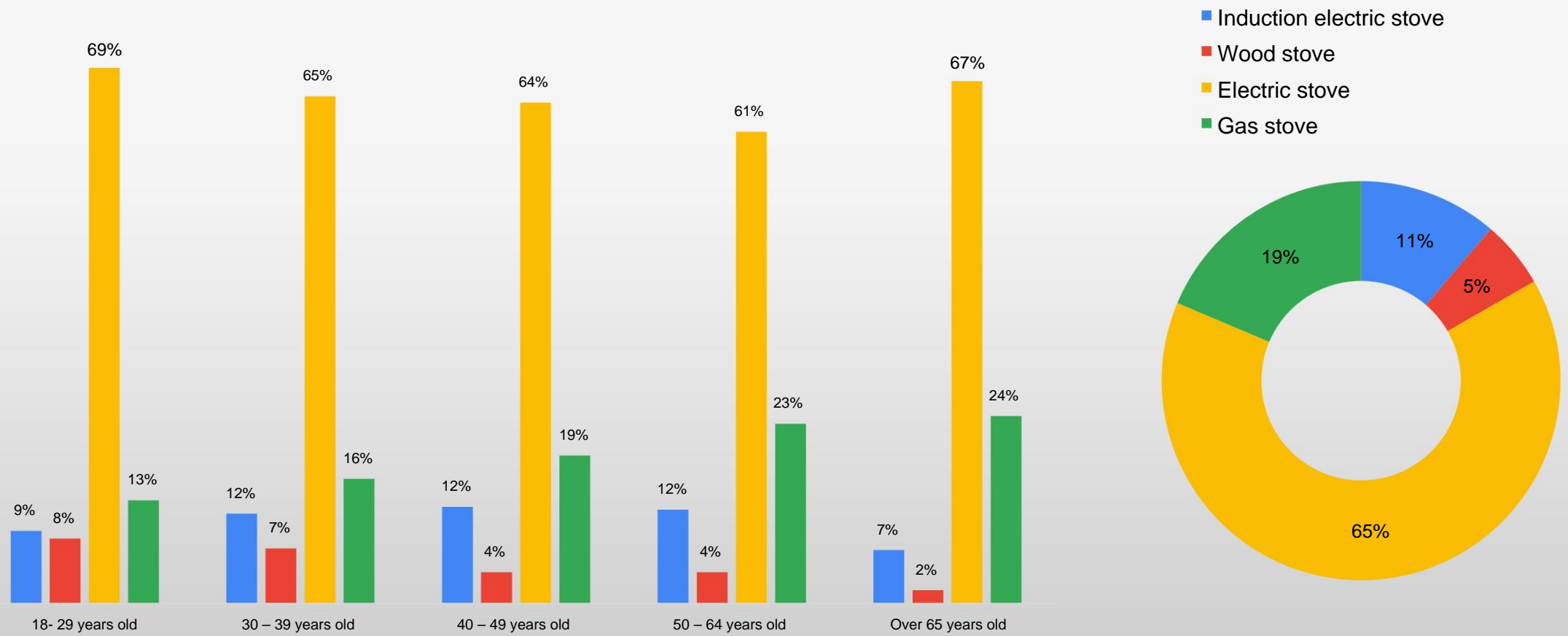
By far the most commonly used cooking appliance in all planning regions is the electric stove. Only in the Eastern and In the Vardar region, the share of respondents who use a gas stove is significant, although there, too, the electric stove is the most used option.





8.17. What type of stove do you most often use for preparing food? (by age and total)

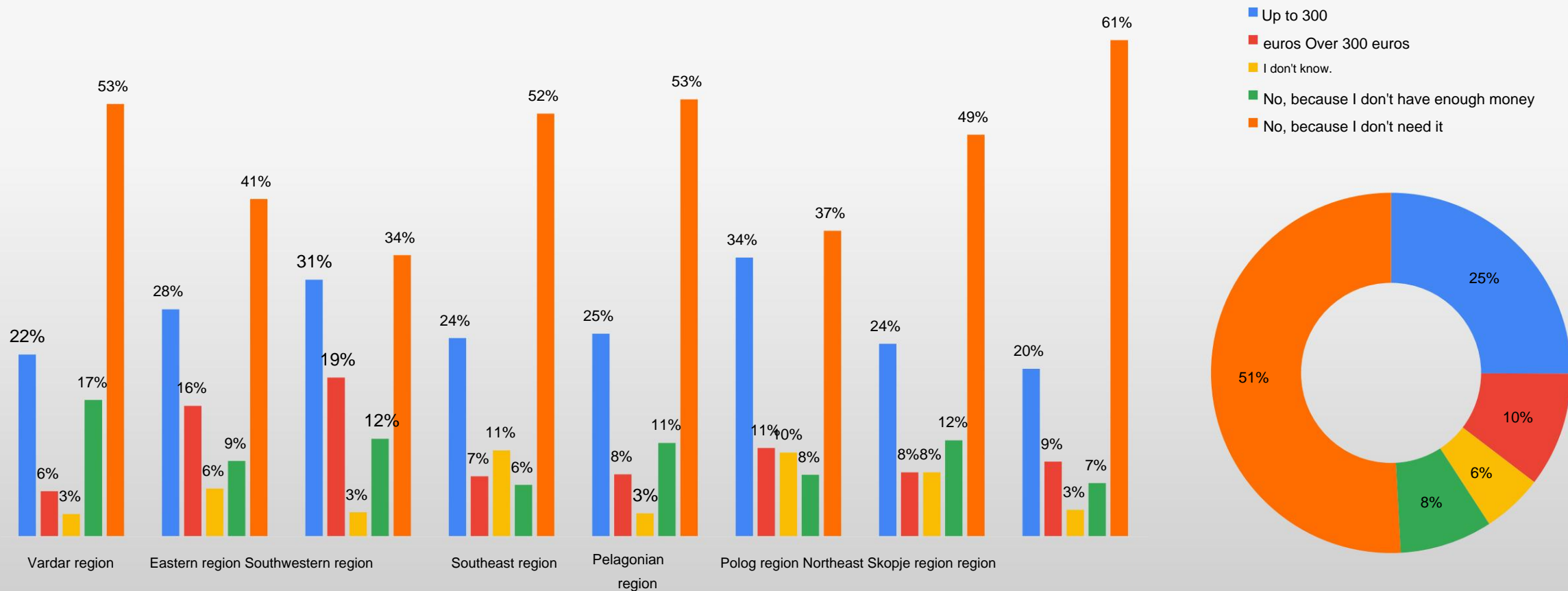
The most used appliance in all age groups is the electric stove. After the electric stove, as follows
The most commonly used is the gas stove.





8.18 Would you buy a new household stove and if so, how much would you spend on it?

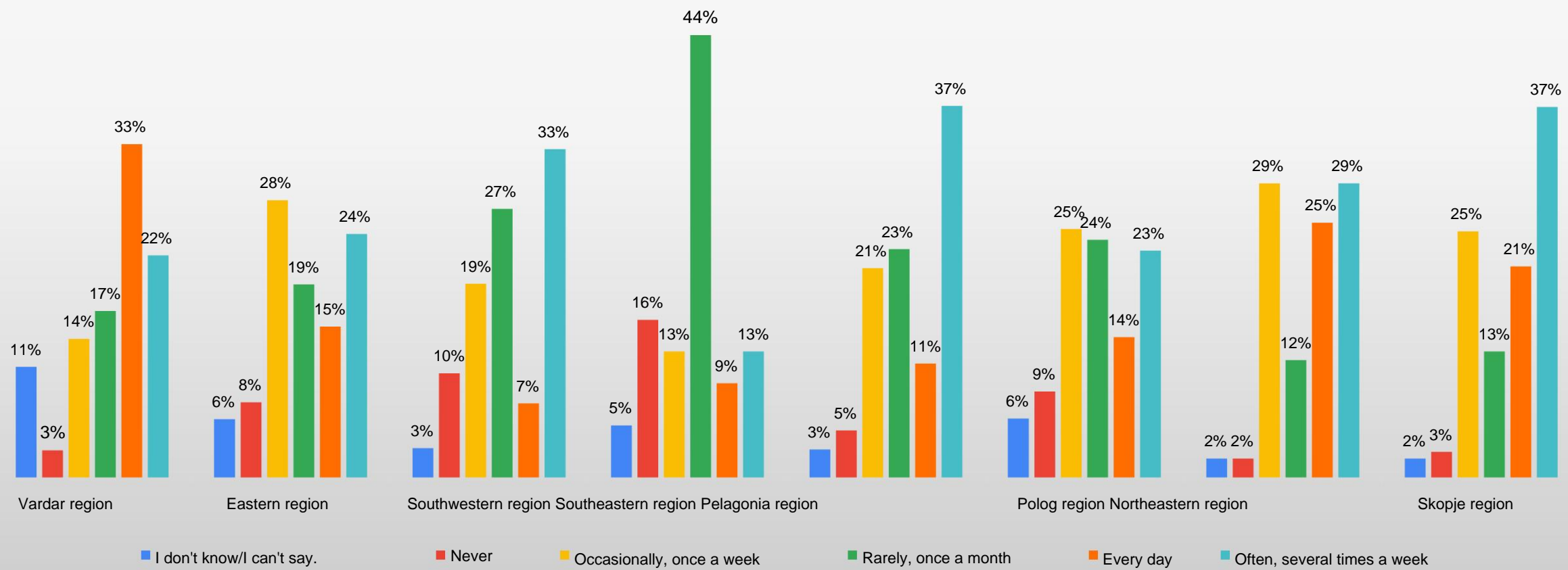
The majority of respondents in all planning regions responded that they did not need to buy a new stove, followed everywhere by the group of respondents who would buy a new stove with a price of up to 300 euros.





8.19 How often do you monitor air quality information in your area? your city?

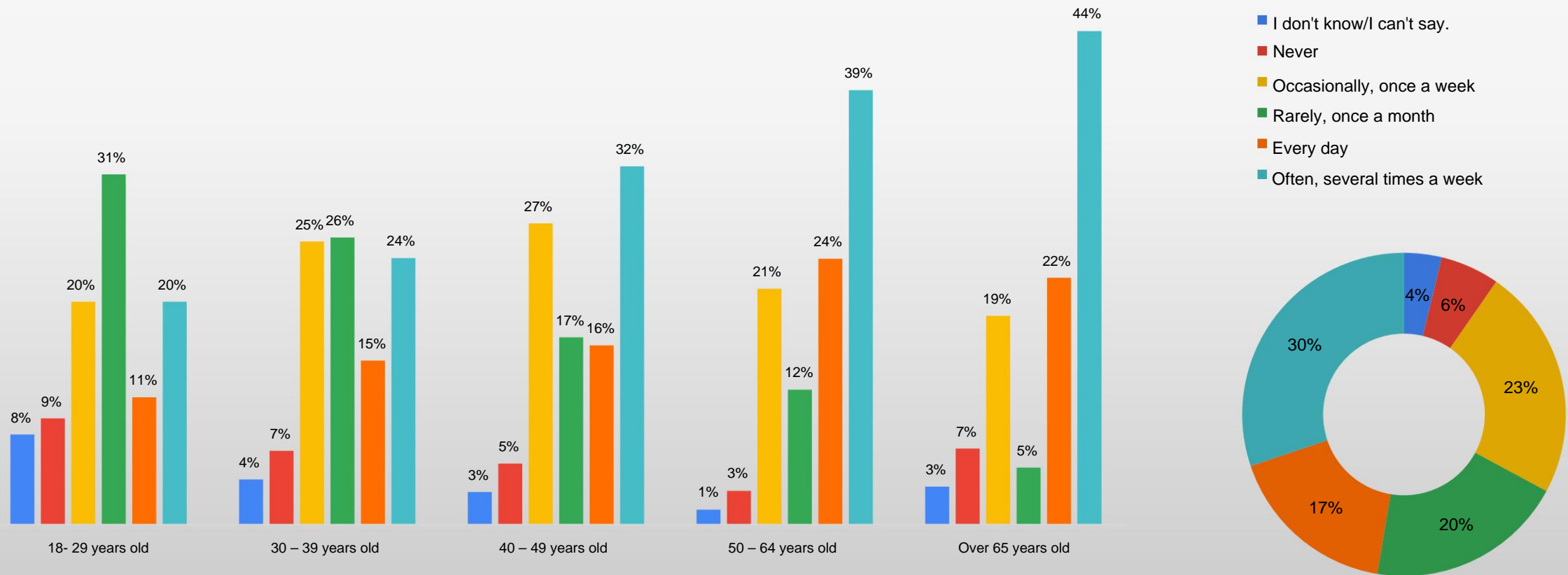
33% of respondents from the Vardar region stated that they monitor air quality information every day. Almost Half of the respondents from the Southeast region, or 44%, rarely follow information about air quality at the local level, i.e. once a month. The majority of respondents from Skopje, Pelagonia and The Southwestern region. Most of the respondents in the Northeastern and Eastern regions do it occasionally, i.e. once a Sunday.





8.20. How often do you monitor information about air quality in your city? (by age and total)

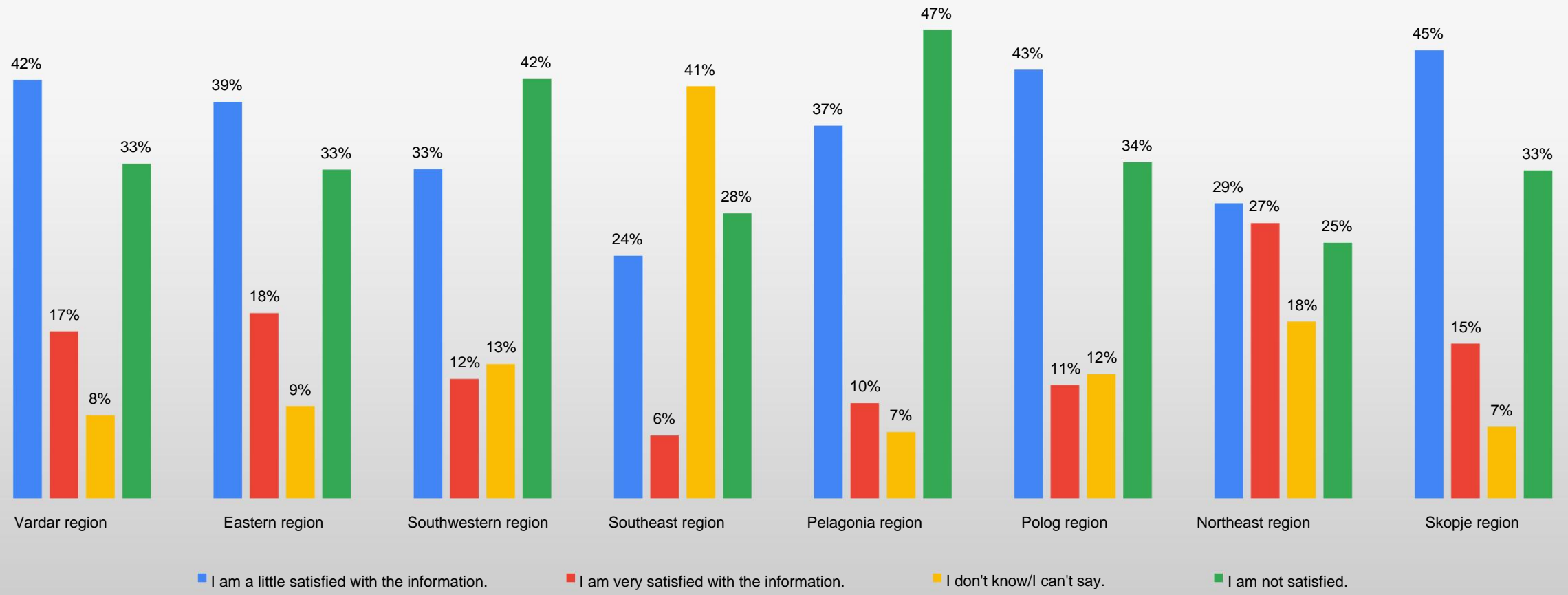
The 18-29 age group with the highest percentage (31%) responded that they rarely, once a month, monitor air quality information. Furthermore, the majority of respondents aged 30-39 check the information once a week and the 50-64 age group check air quality information frequently, several times a week.





8.21. How satisfied are you with the information you receive through media about air pollution in your city?

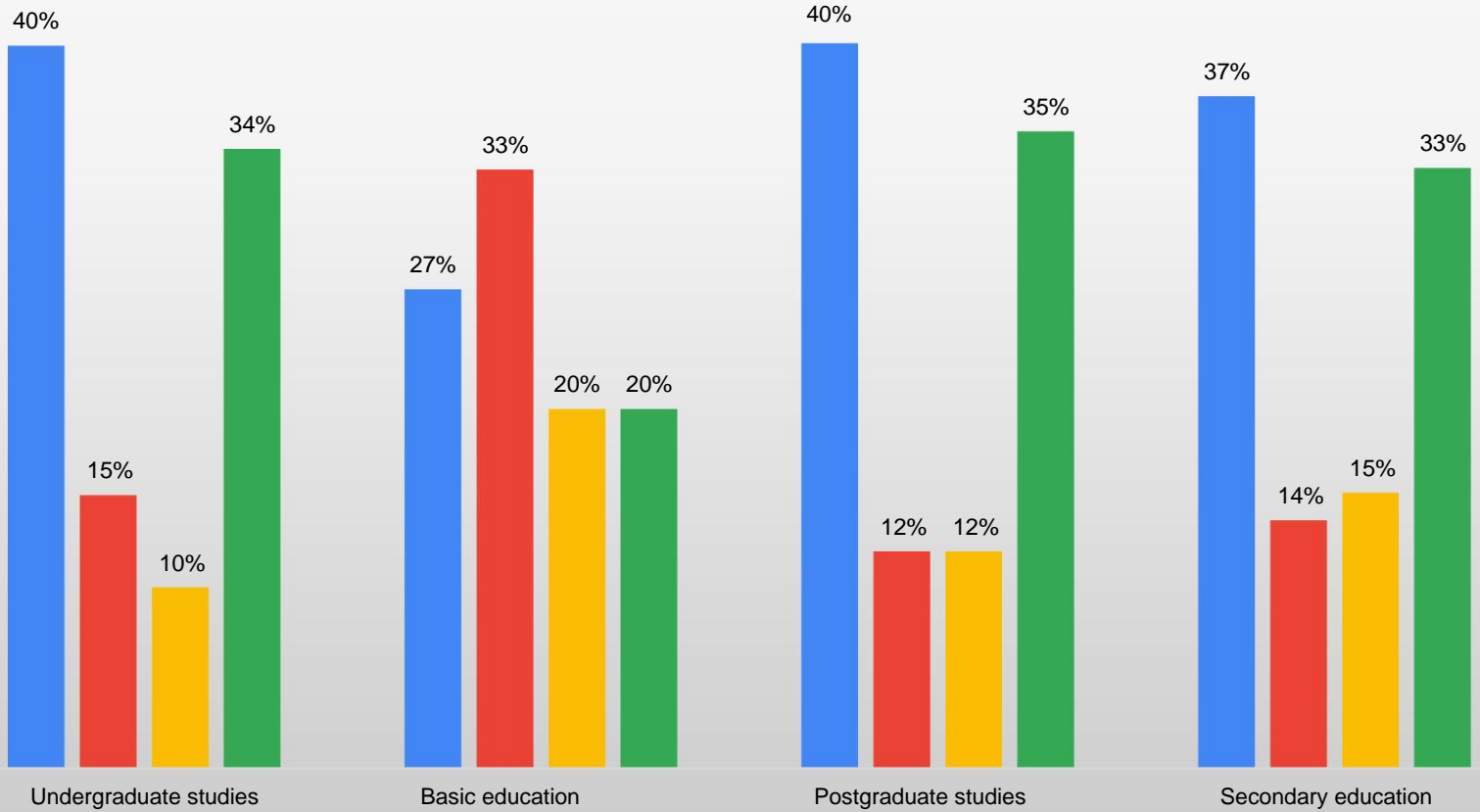
In all planning regions, respondents are mostly either not satisfied or somewhat satisfied with the quality of information regarding air pollution. The highest percentage of respondents who are very satisfied with the quality of this information is registered in The Northeast region has 27%, while in all other regions, the percentage of respondents satisfied with the information is below 18%.



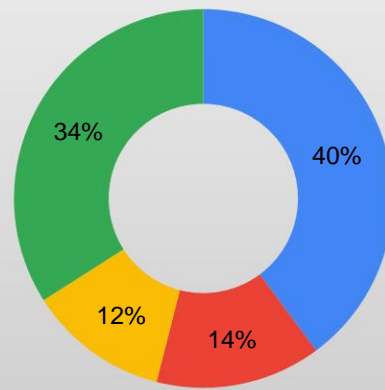


8.22. How satisfied are you with the information you receive through the media about air pollution in your city? (by education and total)

In all planning regions, respondents are mostly either not satisfied or somewhat satisfied with the quality of information regarding air pollution. The highest percentage of respondents who are very satisfied with the quality of this information is registered in the North-Eastern region.

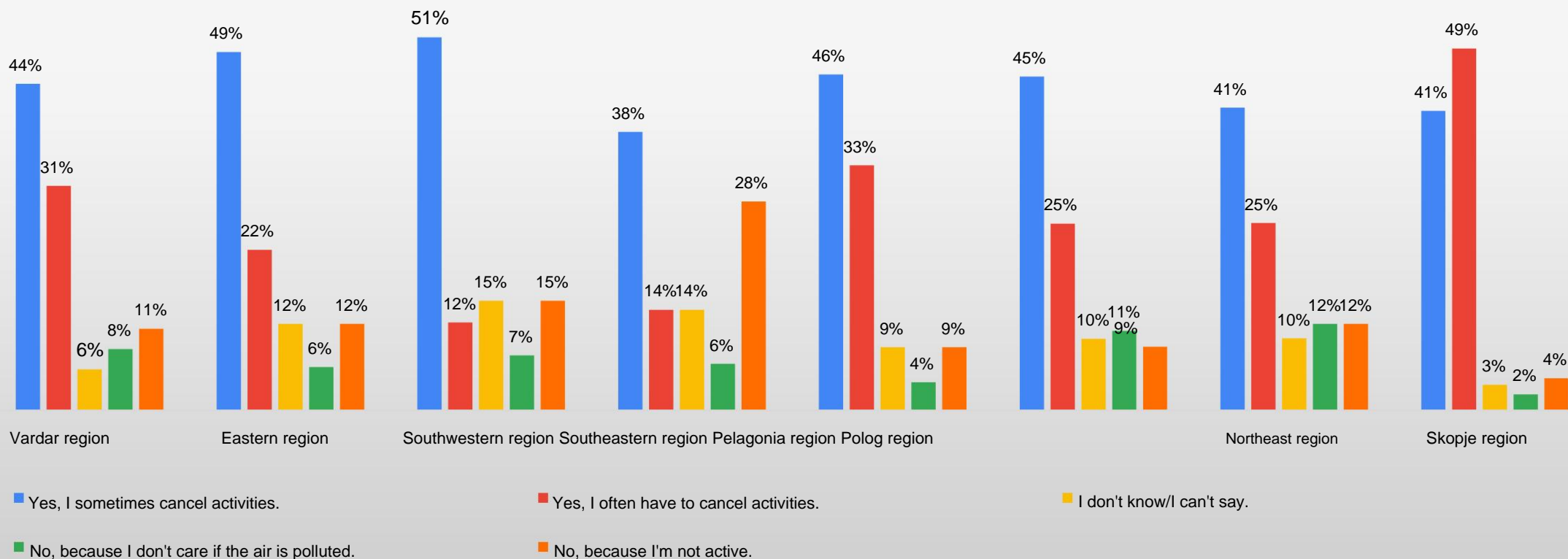


- I am a little satisfied with the information.
- I am very satisfied with the information.
- I don't know/I can't say.
- I am not satisfied.



8.23. Have you ever decided to give up outdoor activities (sports, recreation, hiking, mountaineering...) due to the polluted air in your city?

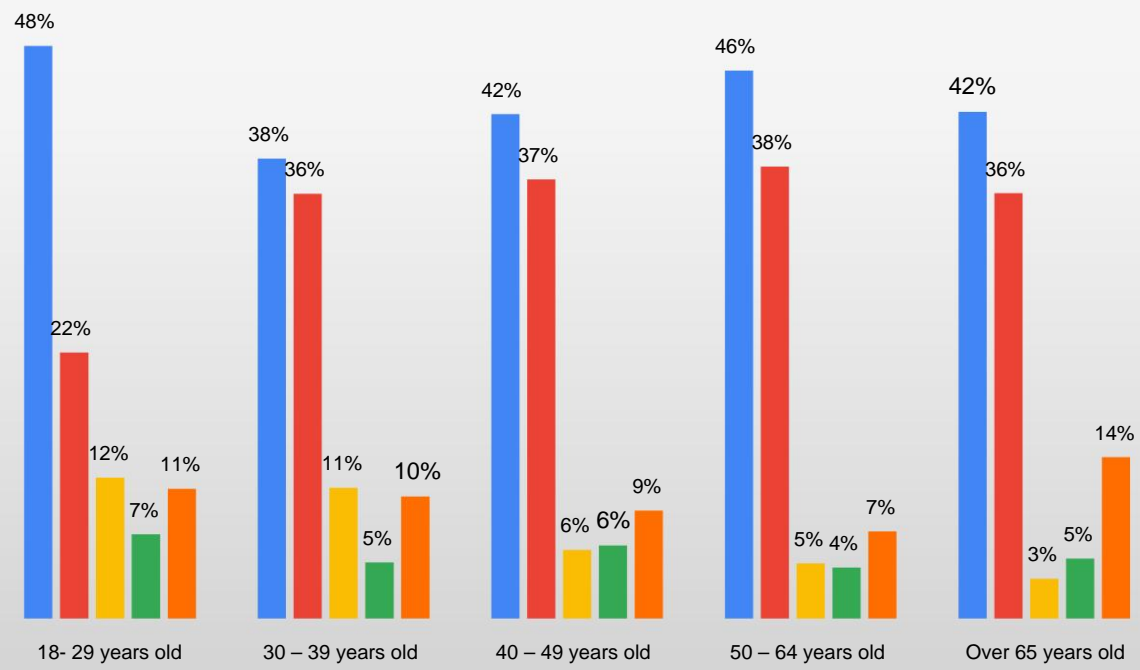
Half of respondents in the Skopje region say they often cancel planned outdoor activities due to polluted air. In all planning regions, almost half of those surveyed said that they sometimes cancel these activities for the reasons stated. For less than 10% of respondents in all regions, air quality does not affect their plans.



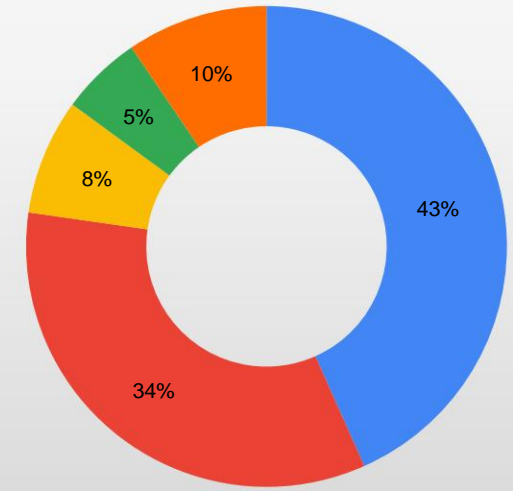


8.24. Have you ever decided to give up outdoor activities (sports, recreation, hiking, mountaineering...) due to the polluted air in your city?

The majority of respondents (48%) aged 18-29 responded that they sometimes cancel activities, as did 46% of those aged 50-64, while in all age groups the percentage of those who do not care is below 7%.



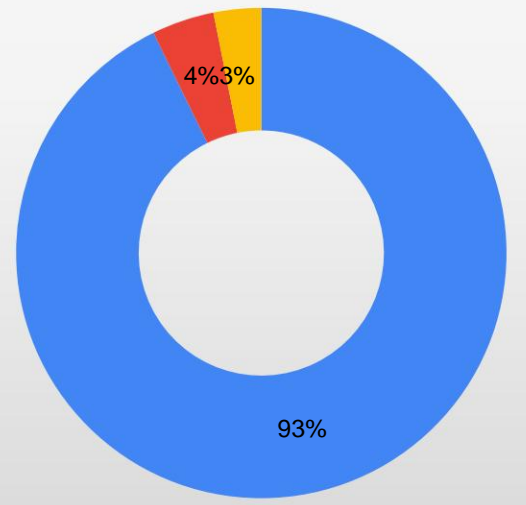
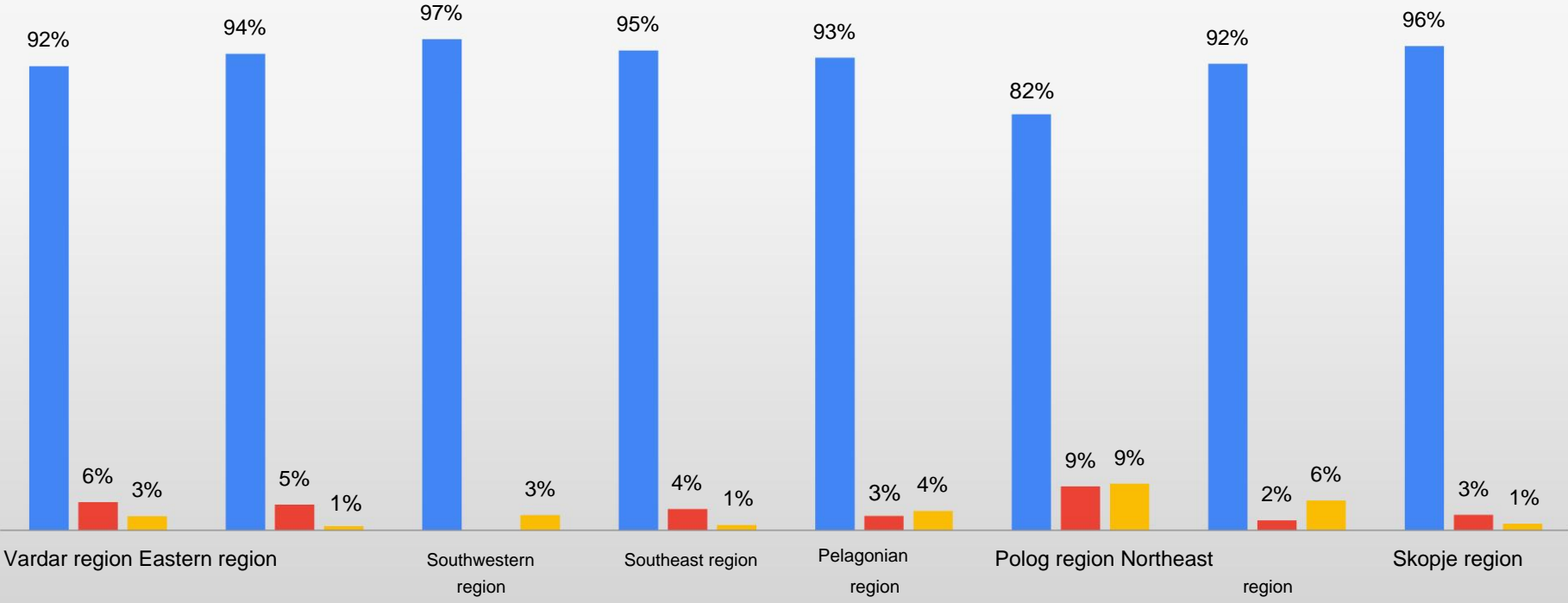
- Yes, sometimes I cancel them. the activities
- Yes, it often happens to me that cancel the activities
- I don't know/I can't say.
- No, because I don't care if the air is polluted.
- No, because I'm not active.





8.25. Do you think that schools and kindergartens should follow information on air pollution and adapt it accordingly children's outdoor activities? (by region and total)

A convincing majority of respondents in all planning regions believe that schools and kindergartens should monitor air quality information and organize outdoor activities accordingly.

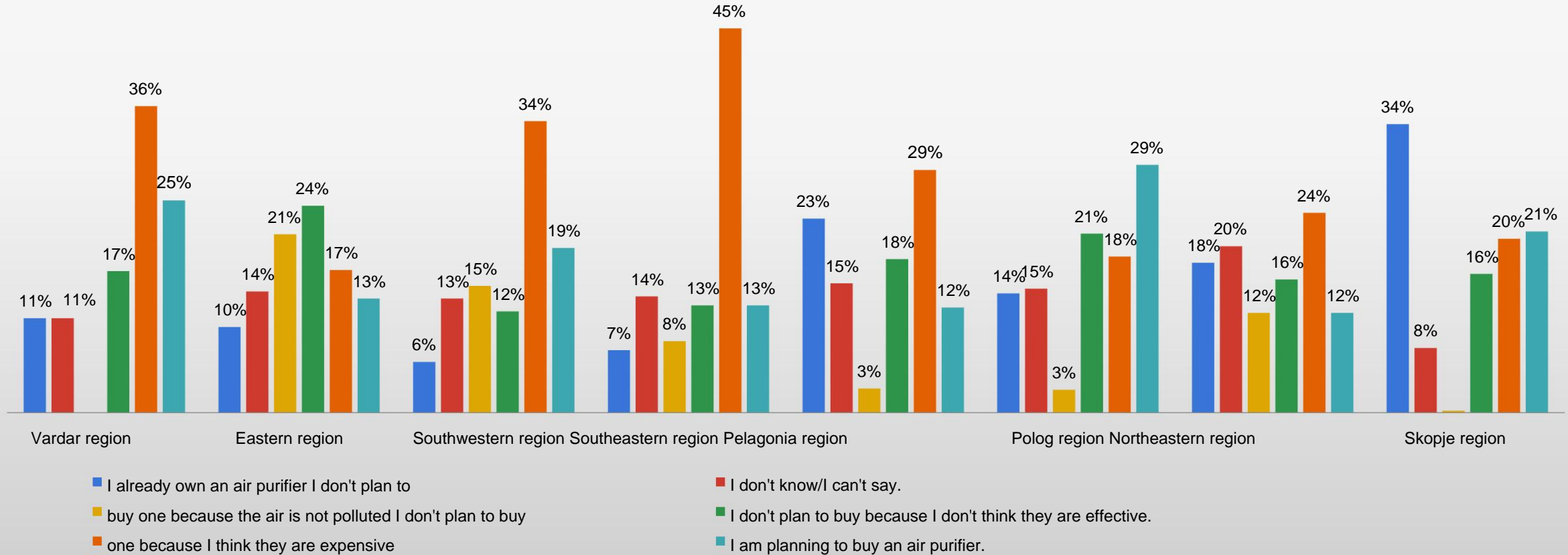


■ Yes, they must follow the information ■ I don't know/I can't say. ■ No, they don't have to follow the information.



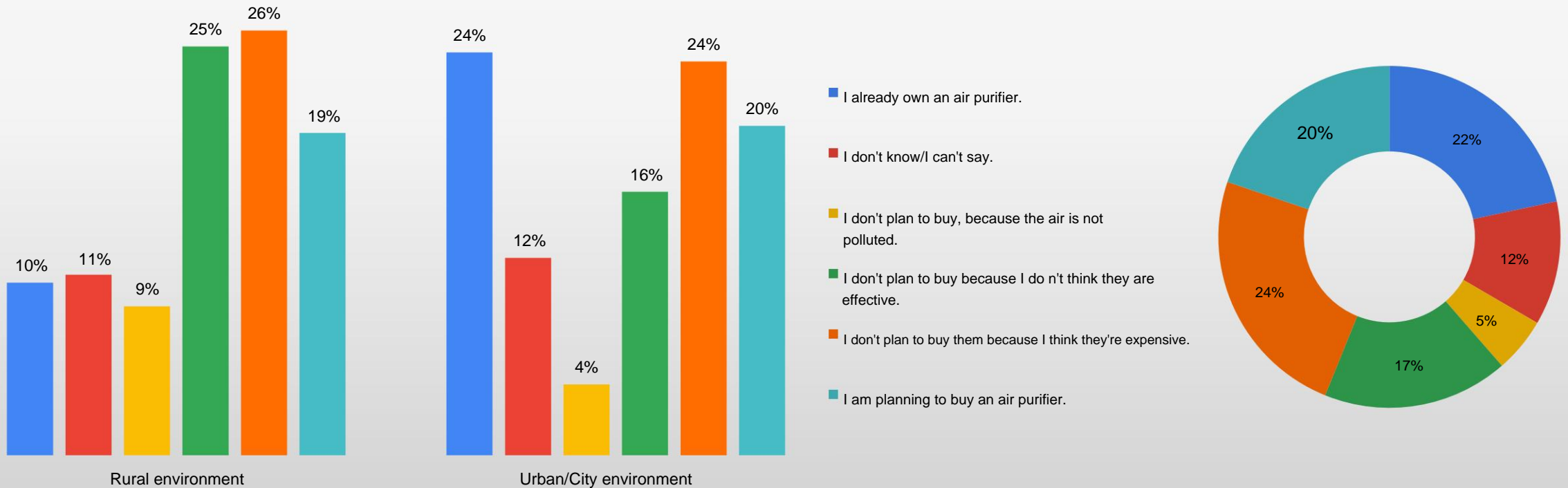
8.26 Do you already own or plan to purchase an air purifier? air for your home or office?

In the Skopje region, more than a third of respondents already have an air purifier at home or in the office, while in all other planning regions, around 30% of those surveyed said they did not plan to buy due to their high price.



8.27. Do you already own or plan to purchase an air purifier for your home or office? (by place of residence and total)

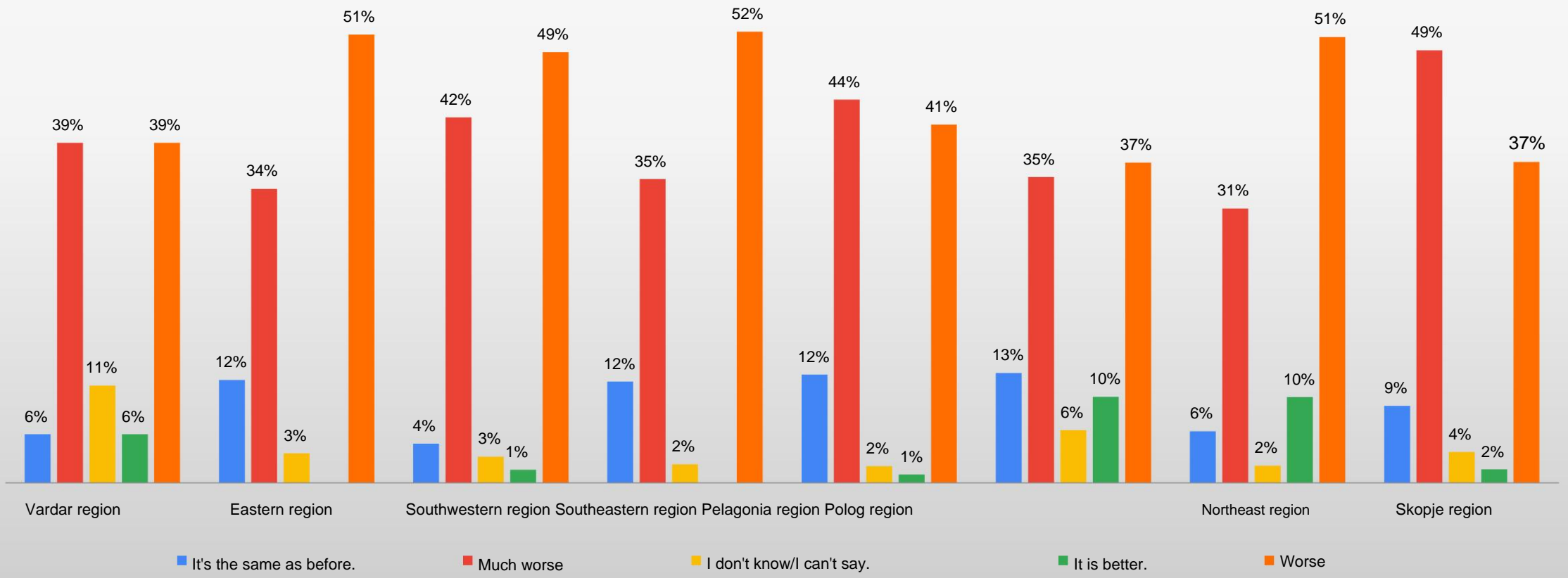
In the Skopje region, more than a third of respondents already have an air purifier at home or in the office, while in all other planning regions, around 30% of those surveyed said they did not plan to buy one due to their price.





8.28 Do you think the air is better or worse compared to before? ten years?

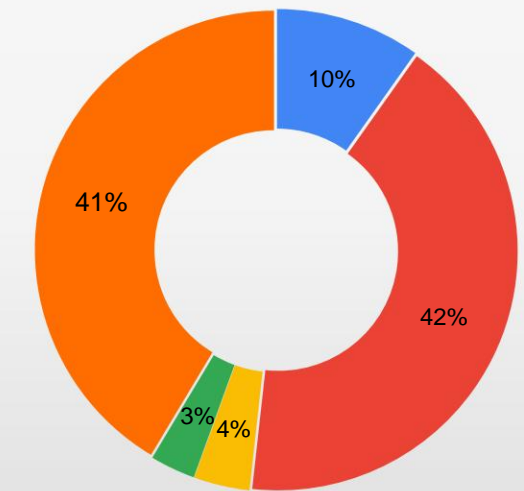
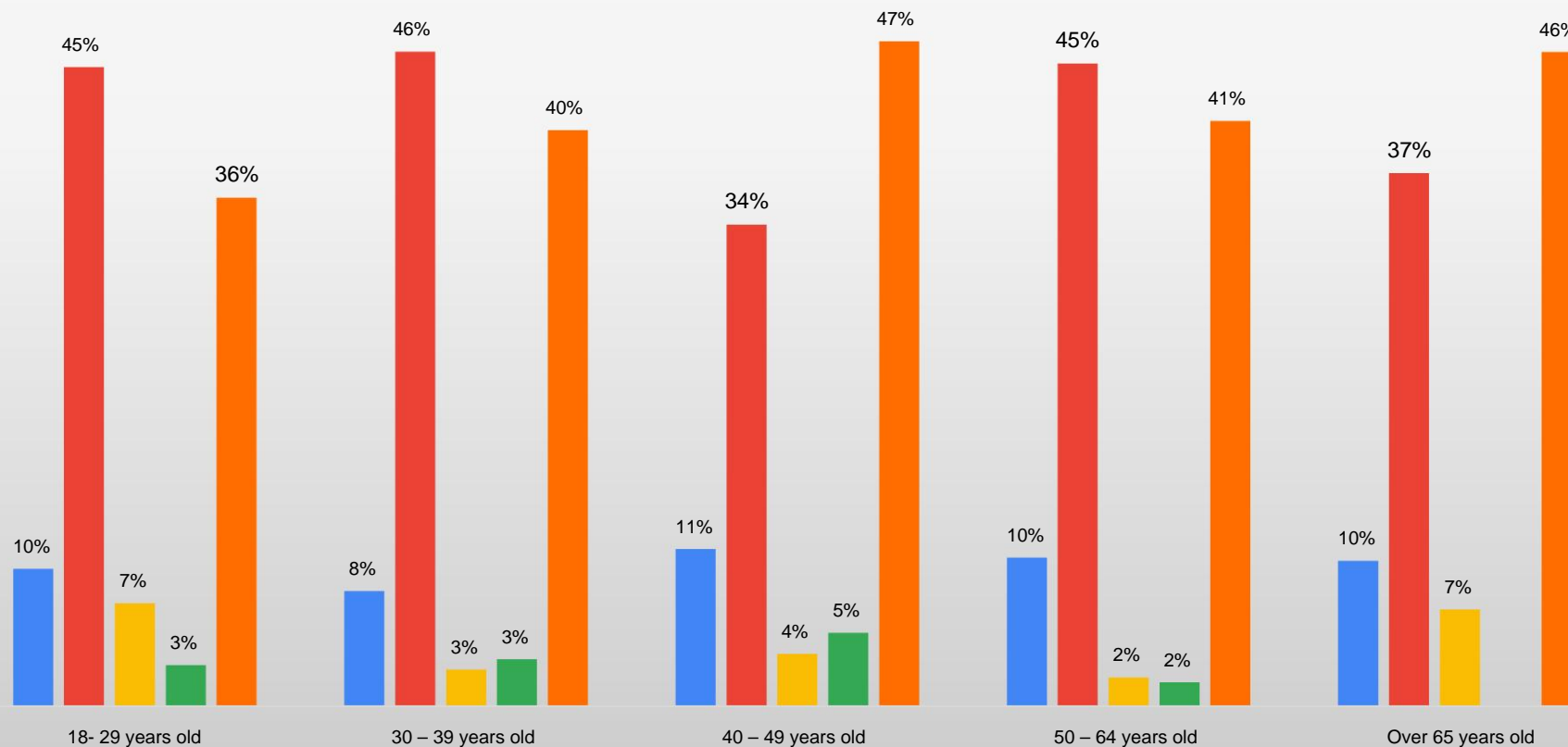
A significant portion of respondents, over 50%, in all planning regions believe that the air is the same as before or worse. In the Skopje region, half of the respondents believe that the air is much worse than it was ten years ago, which is the highest percentage among surveyed from all planning regions.





8.29 Do you think the air is better or worse in comparison with ten years ago? (by region and total)

A significant proportion of respondents from all age groups believe that the air is much worse or worse. 46% of respondents The ages of 18-29, 30-39 and 50-64 think that the air is much worse. A significant percentage of 36-46% falls on the worse air in all age groups. A slight 2-3% believe that the air is better compared to 10 years ago.

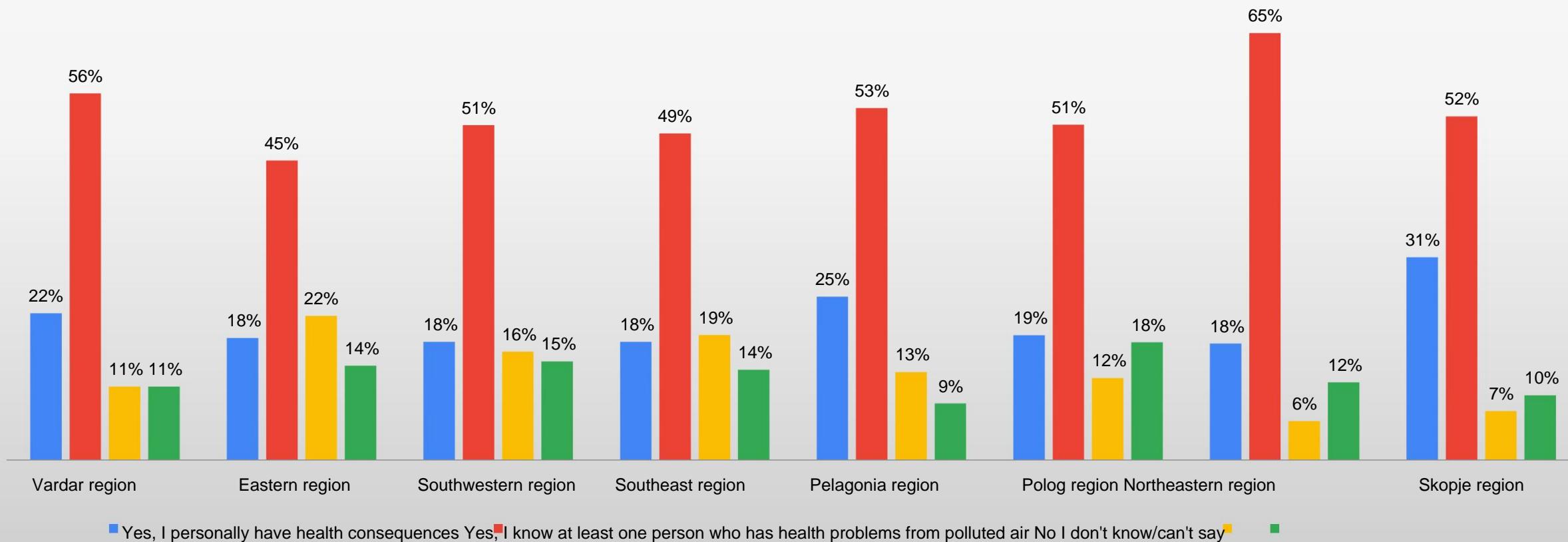


- It's the same as before.
- Much worse
- I don't know/I can't say.
- It is better.
- Worse



8.30 Are you or someone close to you experiencing health problems? consequences of polluted air?

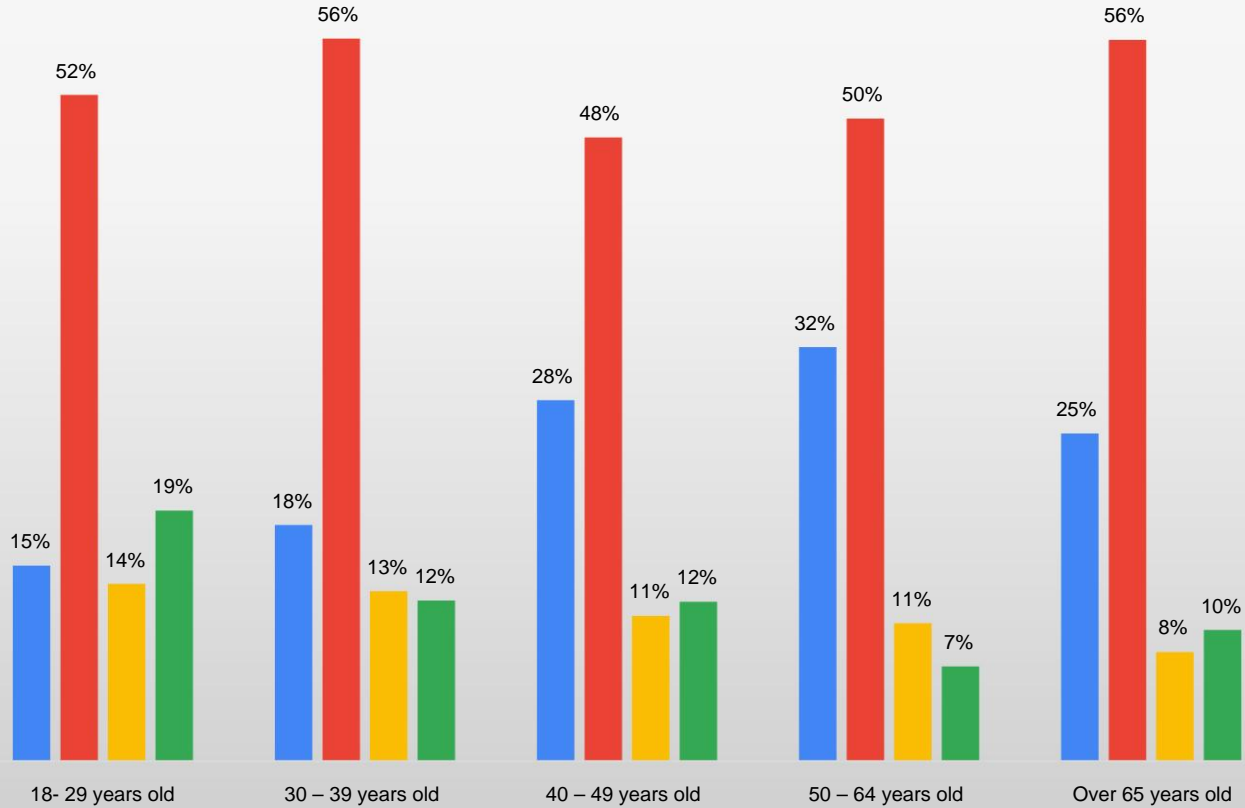
On average, half of those surveyed in all regions responded that they know at least one person with health consequences caused by from polluted air. Most of these responses are concentrated in the Northeast region (65%). This is followed by the group respondents who stated that they personally experienced health consequences, the share of which ranges between 20 and 31% depending on the region. The highest percentage of such conditions is registered in the Skopje region.



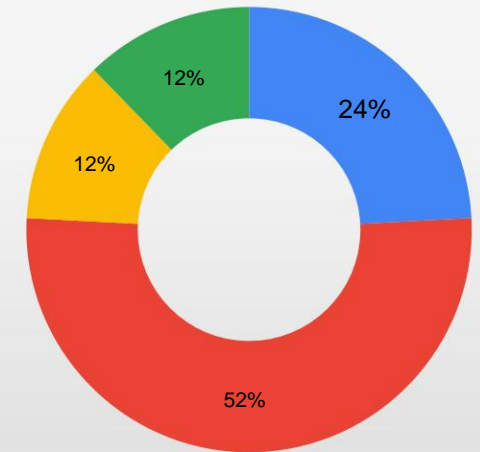


8.31 Are you or someone close to you experiencing health consequences? from polluted air? (by age and total)

The majority of respondents, over 48% of all age groups, know at least one person who has health problems from polluted air. 32% of the 50 to 64 age group responded that they personally experienced health consequences

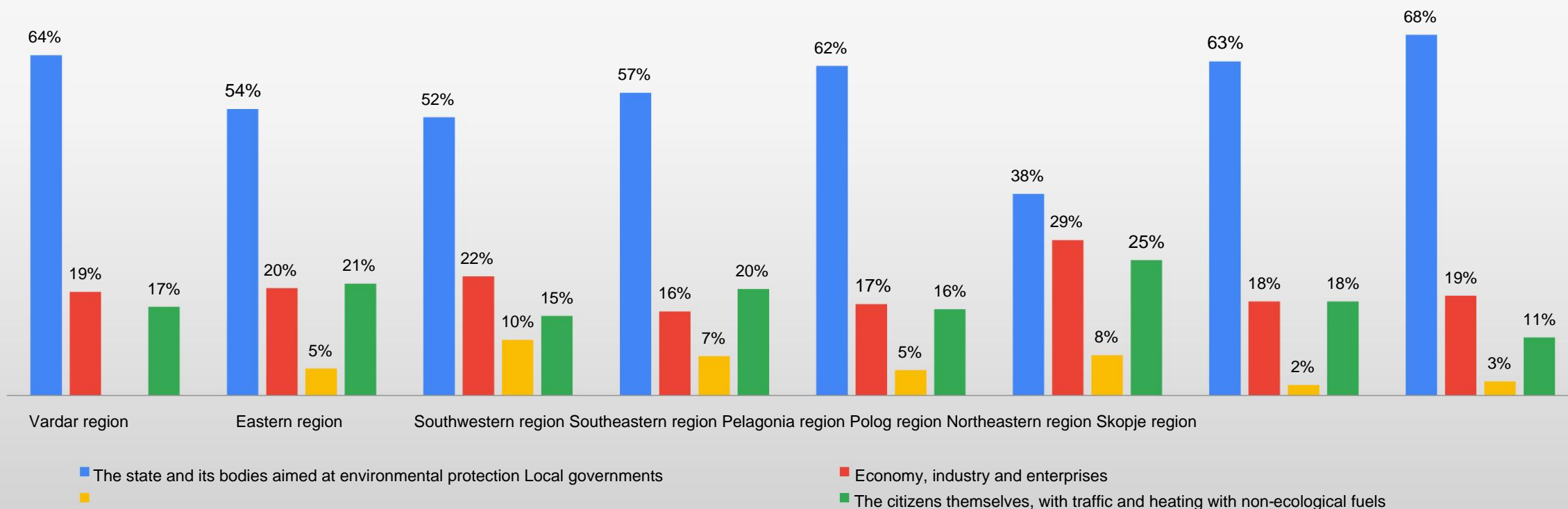


- Yes, I personally have health consequences
- Yes, I know at least one person who has health problems from polluted air
- No
- I don't know/I can't say.



8.32 In your opinion, to what extent are the following actors responsible for air pollution?

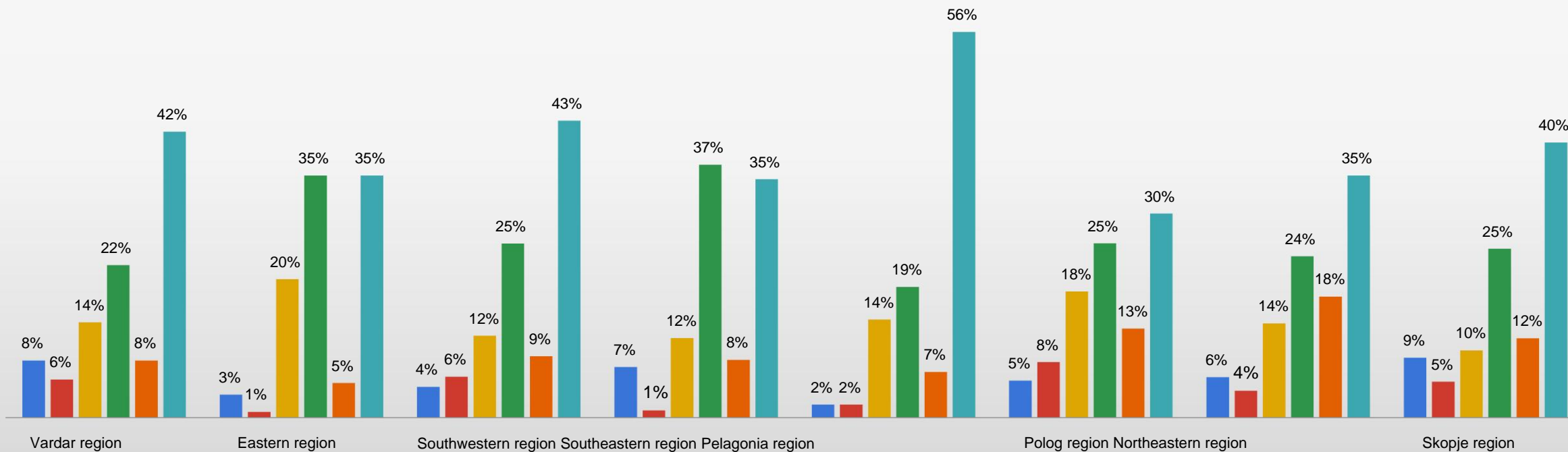
Dominantly, respondents place responsibility with the state and the authorities responsible for the environment. This opinion is most pronounced in the Skopje region (68%). Interestingly, there is no significant difference in the number of respondents who indicated the economy that is, the industry as responsible, in relation to those surveyed whose view is that responsibility lies with the citizens themselves with their actions and habits.





8.33 What would you personally change to improve the quality of the air?

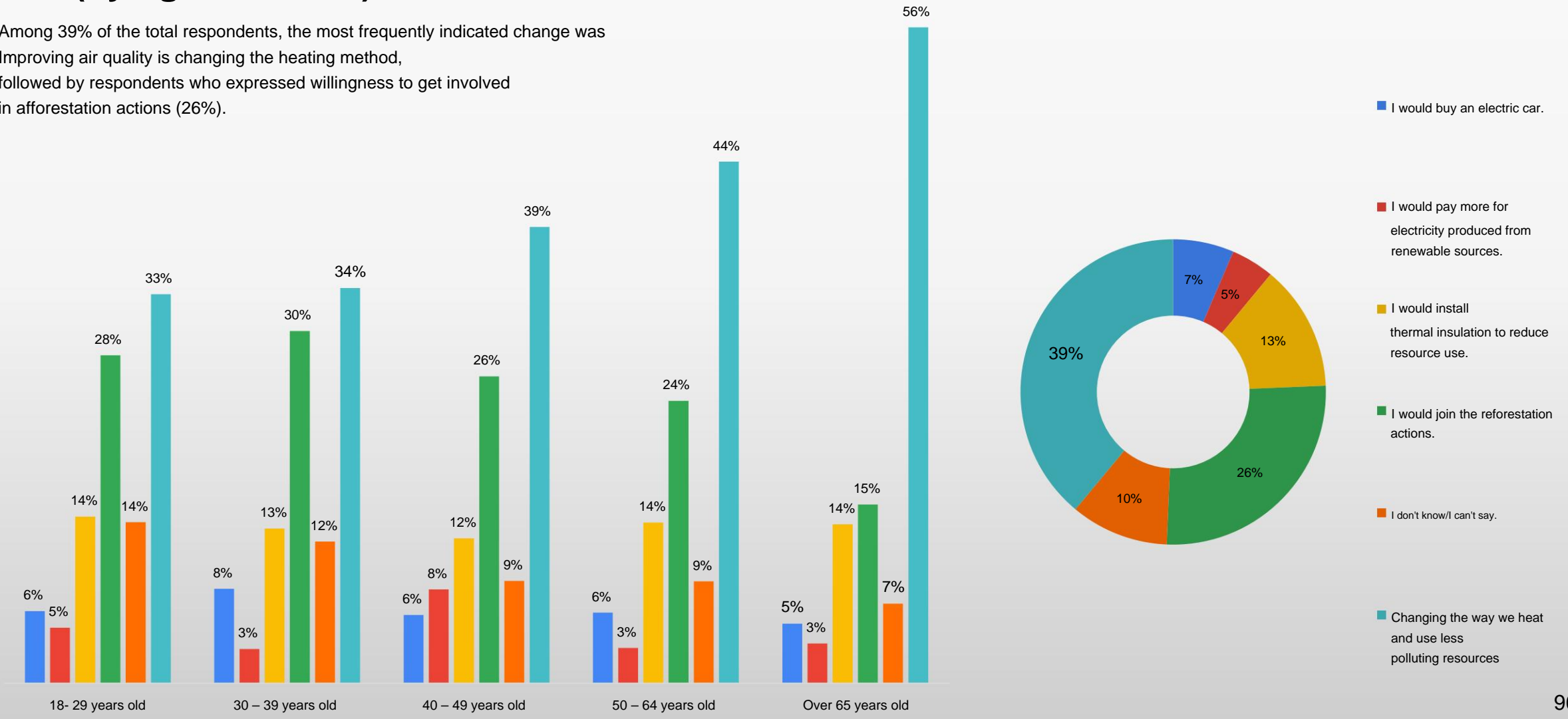
The most frequently cited change to improve air quality among those surveyed in all regions is the change in the way they heating, followed by those surveyed who expressed willingness to engage in reforestation actions. Less than 10% of Those surveyed in all planning regions are opting to buy an electric car and pay more for renewable energy sources.



- I would buy an electric car.
- I would pay more for electricity produced from renewable sources.
- I would install thermal insulation to reduce resource use.
- I would join the reforestation actions.
- I don't know/I can't say.
- Changing the way we heat and use less polluting resources

8.34. What would you personally change to improve the quality of air? (by age and total)

Among 39% of the total respondents, the most frequently indicated change was Improving air quality is changing the heating method, followed by respondents who expressed willingness to get involved in afforestation actions (26%).





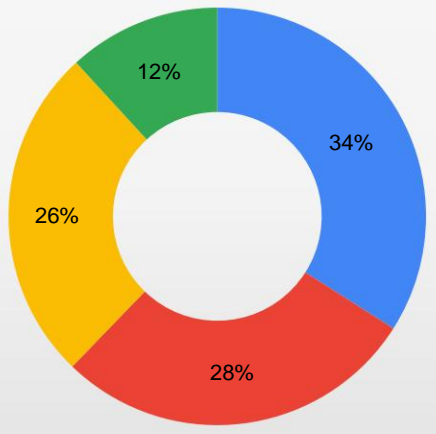
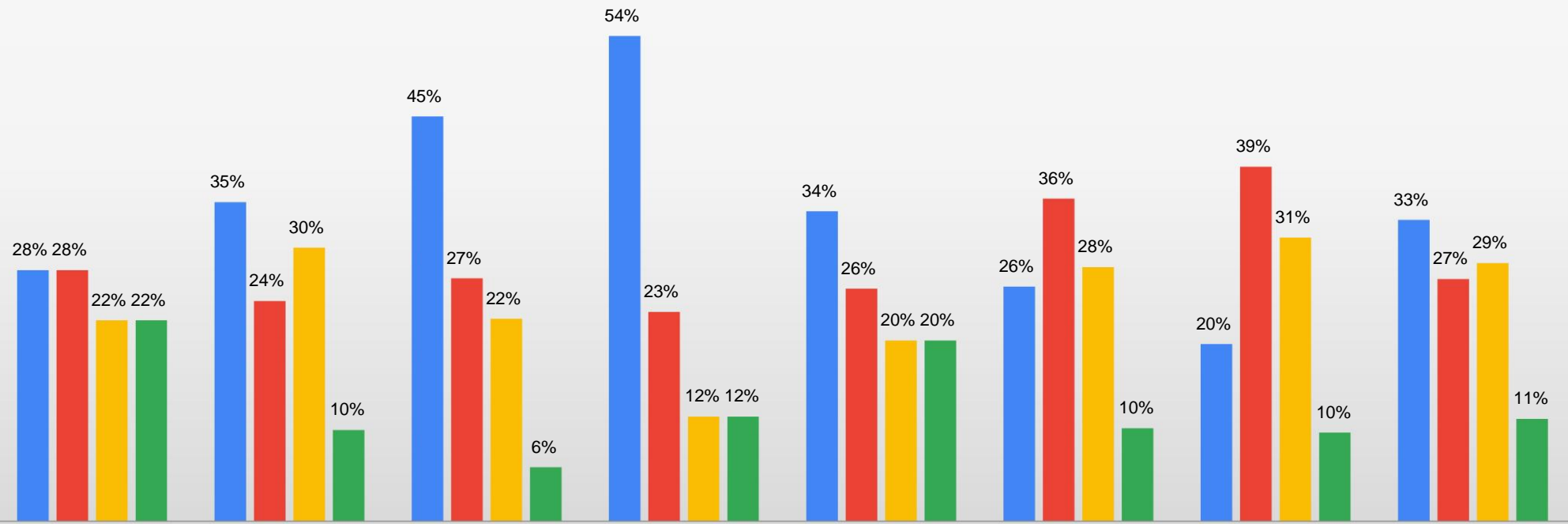
9. Circular economy, waste and recycling

- Only 34% of respondents know what a circular economy is. Knowledge is highest among people with higher education (48%) and lowest among people with primary education (7%).
- Half of the respondents (50%) do not separate their waste. The main requirement for separation is the provision of separate bins (mostly supported by respondents over 50 years of age).
- Respondents demand that the state provide conditions for selection and recycling, with priority for containers and discounts for utility services.
- Glass packaging is more acceptable in urban areas (28%), while plastic has the least support (4%).
- 65% of respondents do not pay attention to whether products are made from recycled materials.
- Young people (18-29 years old) are the least interested in sorting and recycling, while older age groups (40-64 years old) show the greatest interest in recycled products (32%).



9.1. Do you know what Circular Economy is? (by region and total)

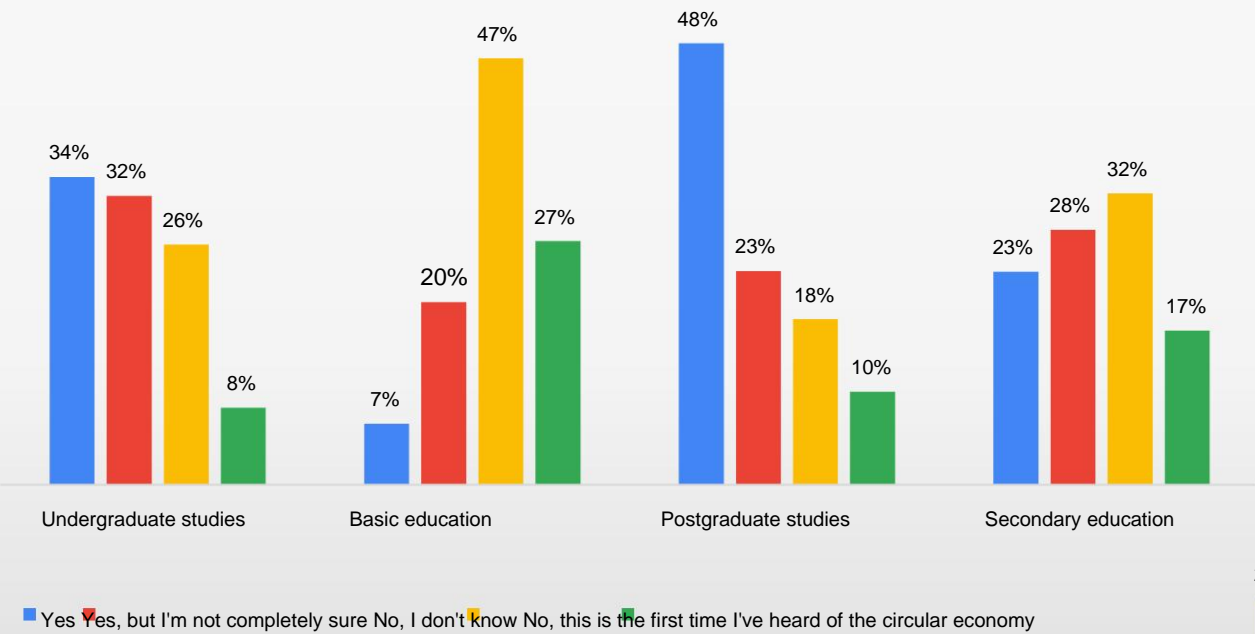
One third (34%) of respondents know what a circular economy is, but there are also citizens who are not completely sure (28%). A significant 26% stated that they do not know what a circular economy is. Only 12% stated that this is the first time they are hearing about the term circular economy.



Legend: ■ Yes ■ Yes, but I'm not completely sure. ■ No, I don't know. ■ No, this is the first time I've heard of the circular economy.

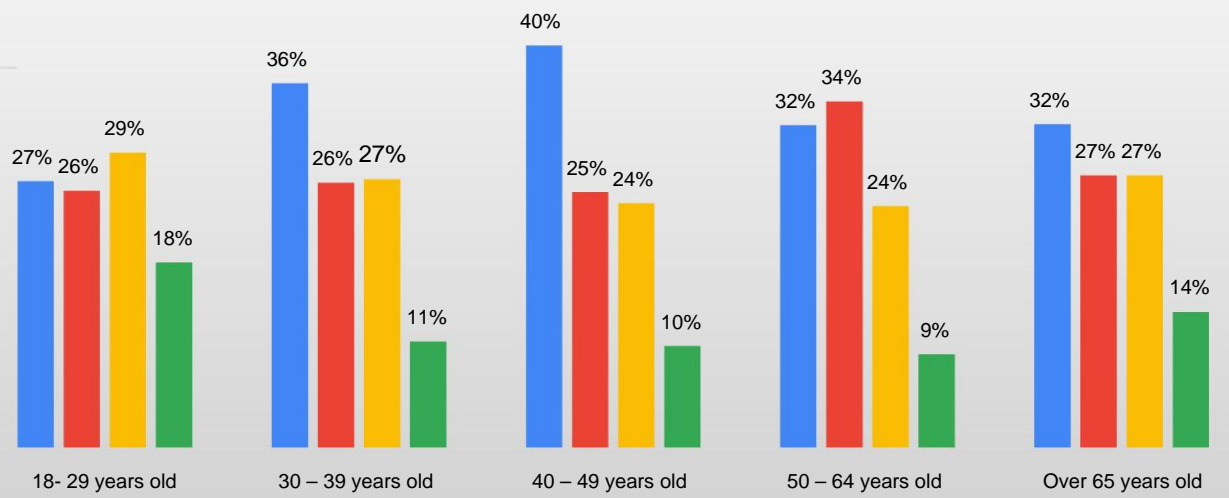


9.2. Do you know what a Circular Economy is? (by education and age)



Knowledge of the concept of circular economy has significantly increased varies according to the level of education. With a higher level of education, knowledge about the circular economy is growing, which points to the need for its introduction into educational systems programs at lower levels. The highest awareness, with 48% who they fully understand what a circular economy is, they are in the group with postgraduate studies. Lowest knowledge with only 7% knowing what is a circular economy, while 27% of those who first Everyone with an elementary education hears about it.

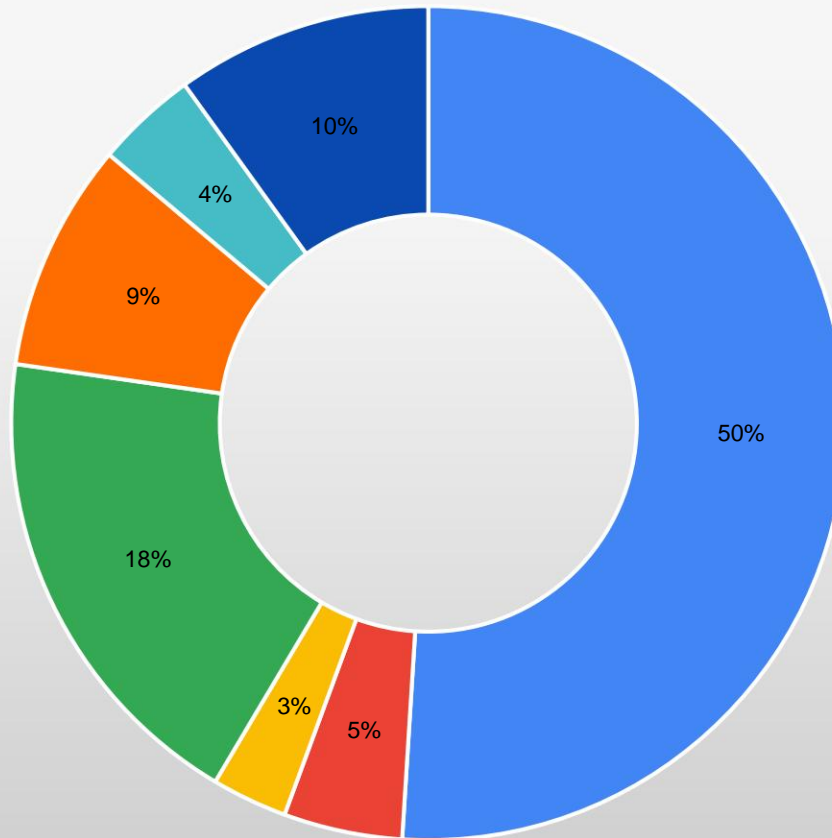
The term circular economy is most familiar to adults. group 40-49 years old. The young (18-29) and the oldest (over 65) have the lowest percentage of knowledge, which indicates a need for additional education, especially among the younger generations.





9.3 What do you do with waste?

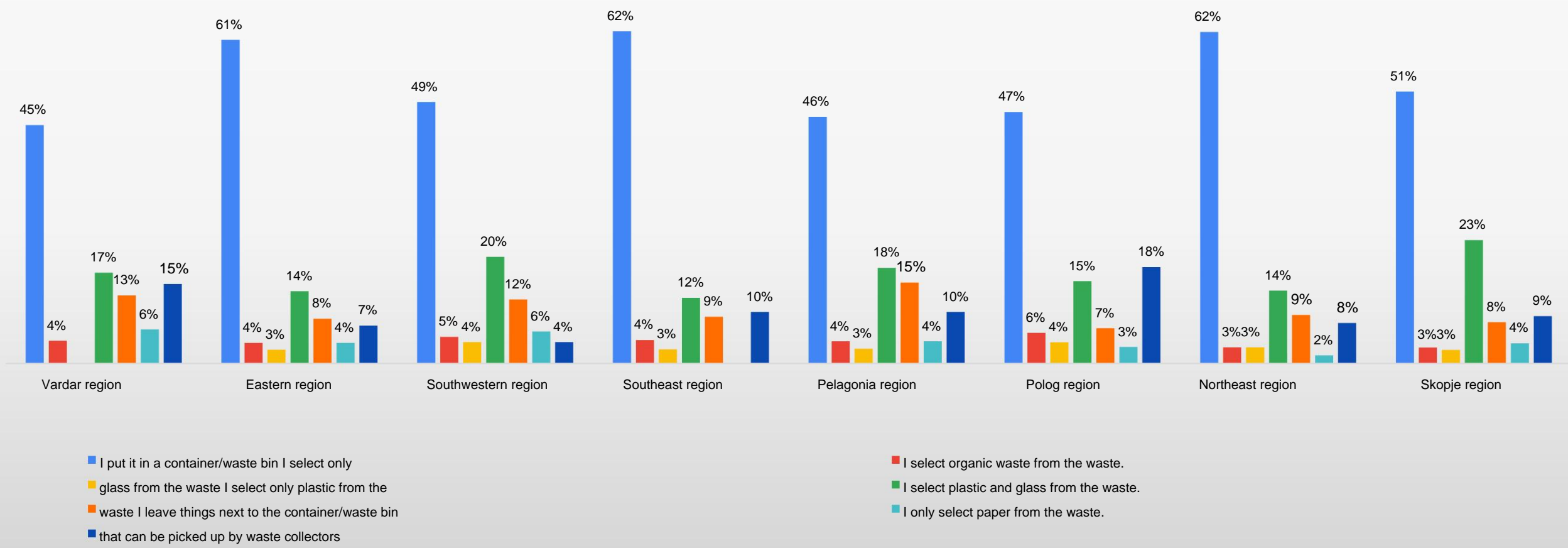
Half (50%) of the respondents do not separate their waste, i.e. they stated that they dispose of their waste in a container or waste bin. Only 18% of citizens responded that they separate plastic and glass.



- I put it in a container/waste bin.
- I select organic waste from the waste.
- I only select glass from the waste.
- I select plastic and glass from the waste.
- I only select plastic from the waste.
- I only select paper from the waste.
- I leave things next to the trash container/bin that can be picked up by waste collectors.



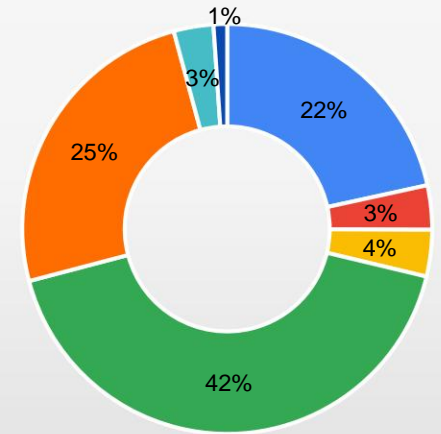
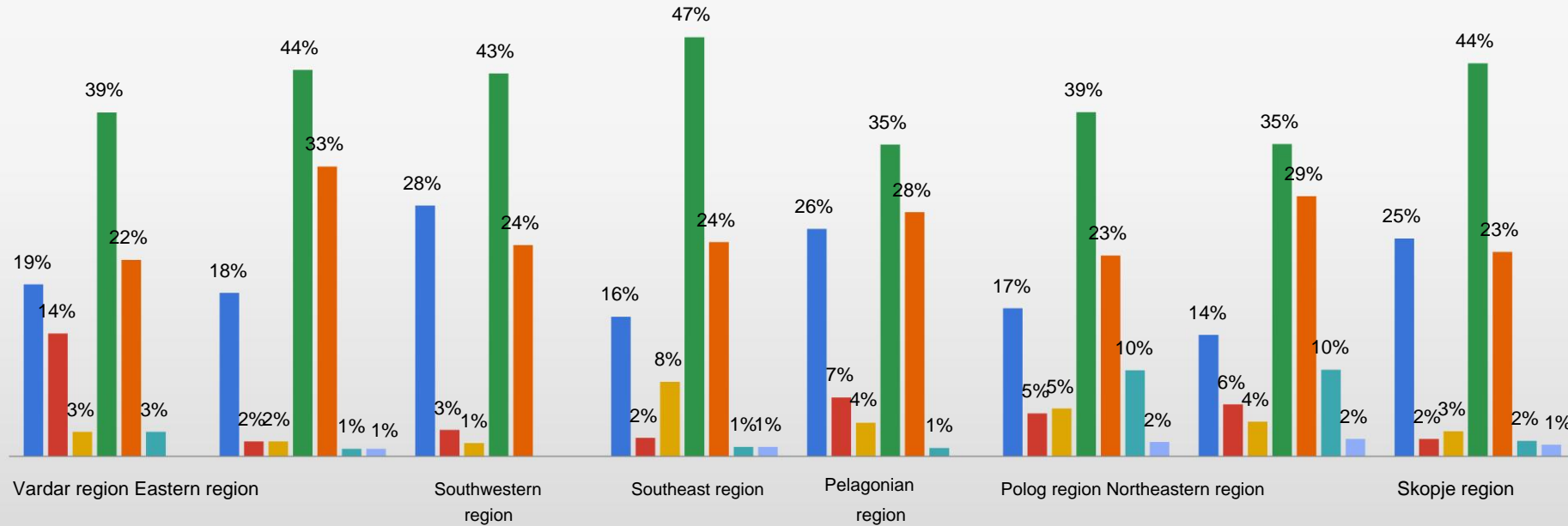
9.4. What do you do with the waste?





9.5. Under what conditions would you select waste? (by region and total)

As a condition that will enable waste sorting, the majority of respondents in all regions point to the provision of special bins/containers for each household. Interestingly, monetization of waste at market prices is not a frequently chosen option among surveyed in all planning regions

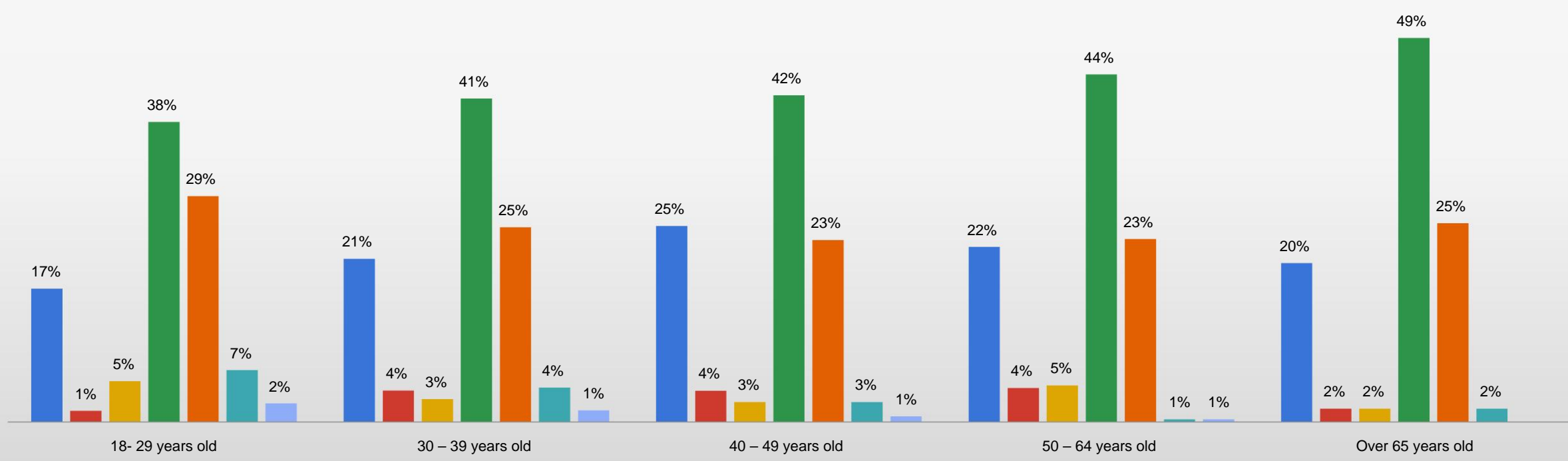


- I'm already sorting the waste.
- If I could monetize waste at market prices
- If people in my environment also started sorting their waste
- If I have separate waste bins/containers in my household or community
- If I could be sure that the waste would be recycled, that is, that it would not end up in a landfill
- I don't know/I can't say.
- I don't want to sort the waste.



9.6. Under what conditions would you select waste?

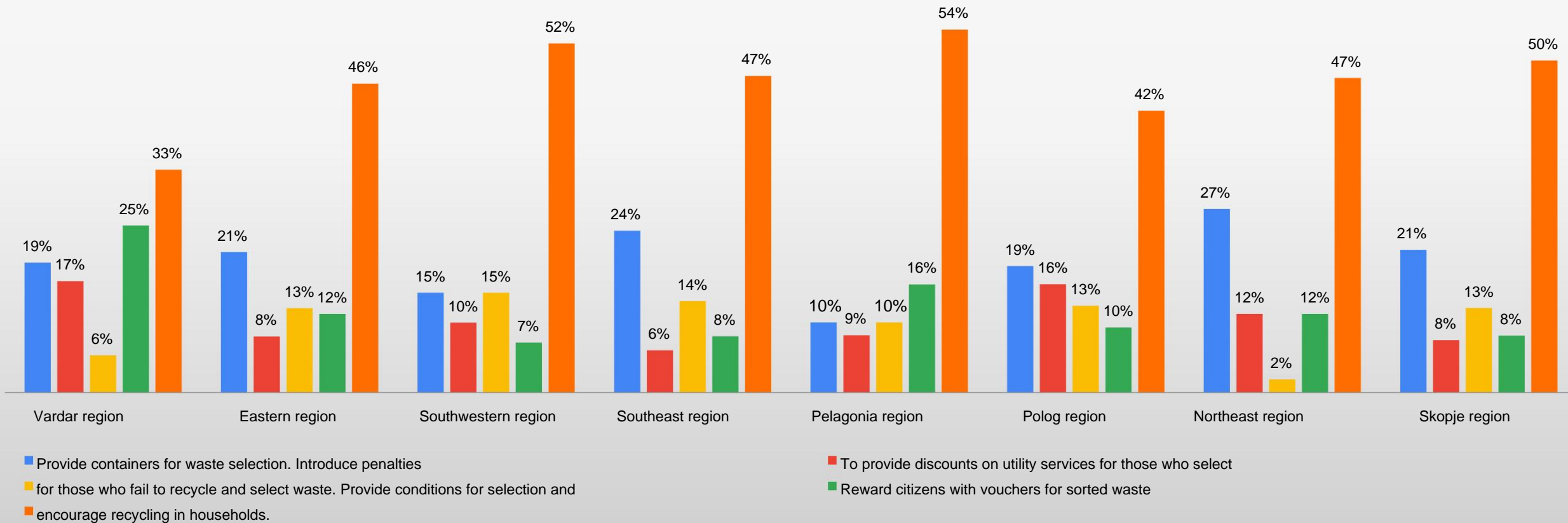
Older generations over 65 years old (49%) and 50-64 years old (44%) are most motivated if they have special bins or containers available for waste. This factor is least significant for 18-29 year olds (38%). Young people (18-29 years old) have the highest percentage of indecision (7%) and are the least willing to sort waste (17%). Interest in waste monetization is low across all age groups, suggesting that this aspect would not be the main motivator for change.



- I already sort my waste
- If I could monetize waste at market prices
- my environment also started sorting their waste
- If I have separate waste bins/containers in my household or community
- be recycled, i.e. that it would not end up in a landfill
- I don't know/can't say
- I don't want to sort the waste.

9.7. What should the state do to encourage citizens to do they sort and recycle waste?

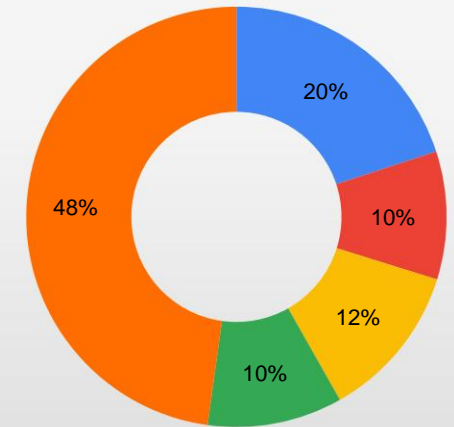
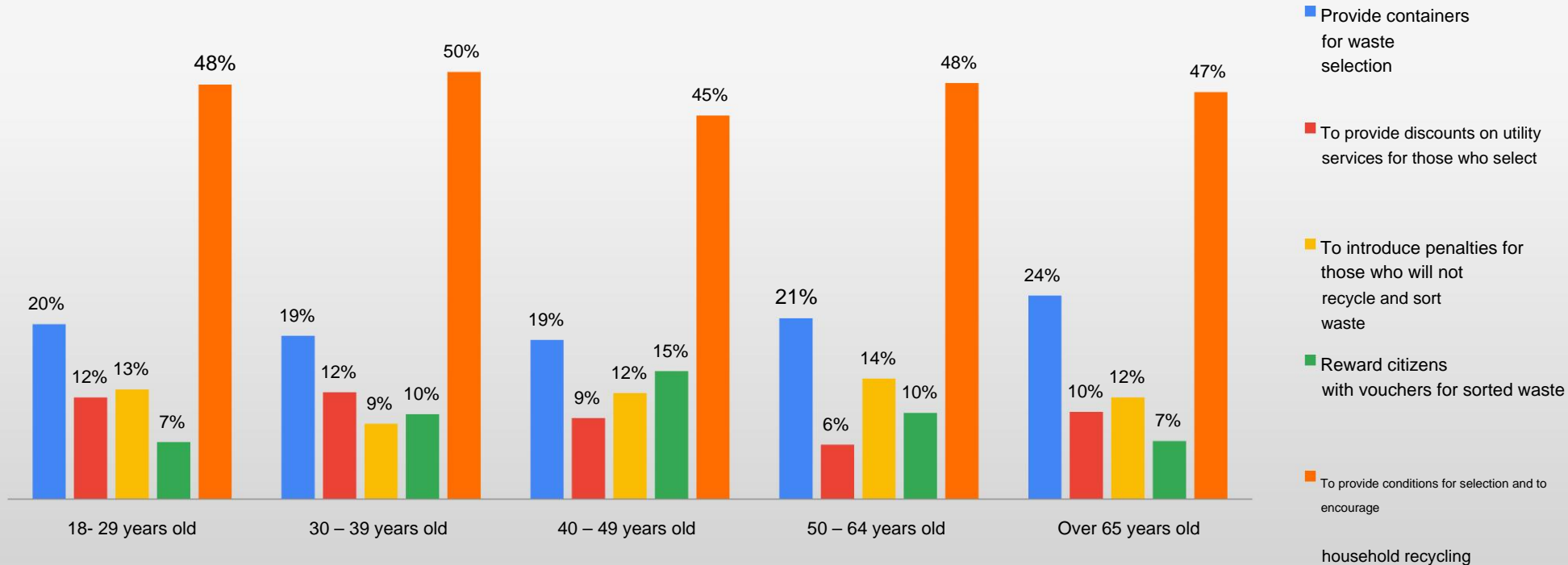
Providing conditions for selection and recycling is the most frequently chosen option among respondents in all regions, among the measures which should be undertaken by the state to encourage waste selection/recycling.





9.8. What should the state do to encourage citizens to do they sort and recycle waste? (by age and total)

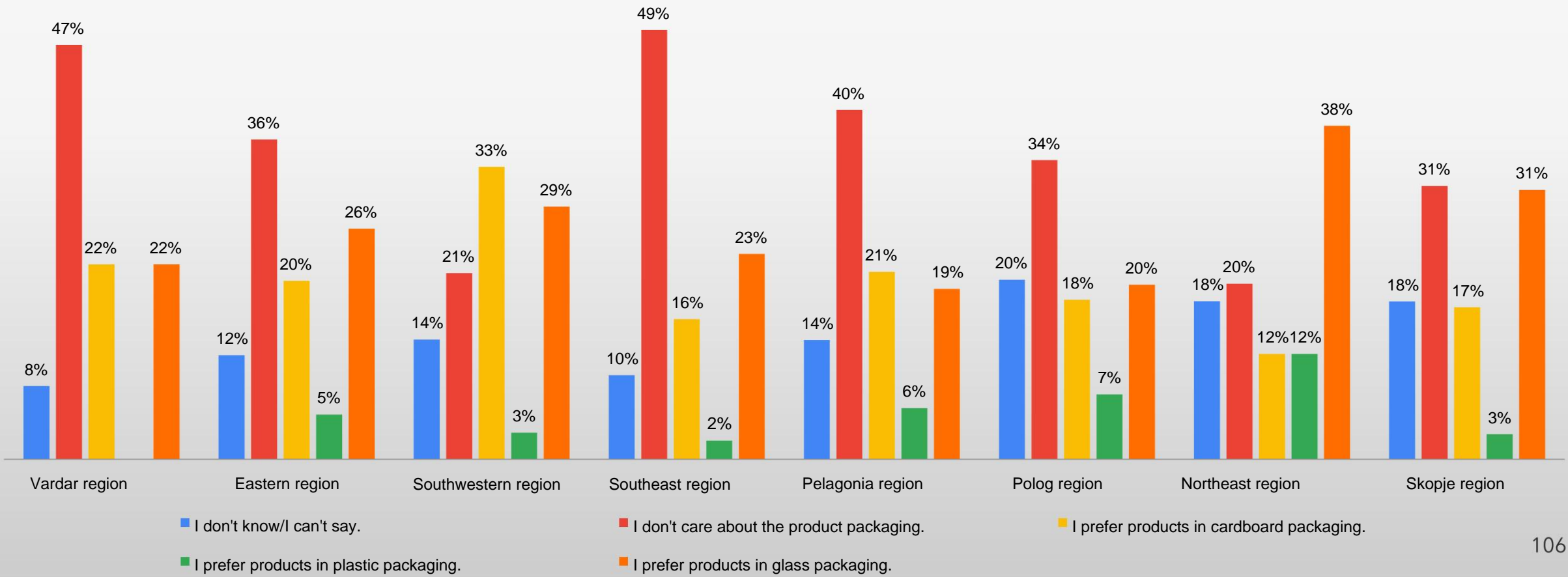
Most respondents from all age groups demand that the state provide conditions for selection and encourage recycling. Providing recycling containers is the second most important priority for 24% of those over 65, 21% of those 50-64. Discounts on utility services have highest support among 18-39 with 12%. Penalties for non-selection are most supported among 50-64 (14%) and 18-29 (13%). Voucher rewards are popular among 40-49 (15%).





9.9. When you buy products, do you pay attention to the packaging they come in? find?

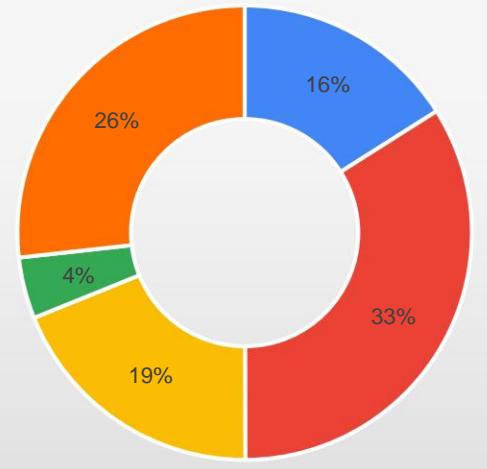
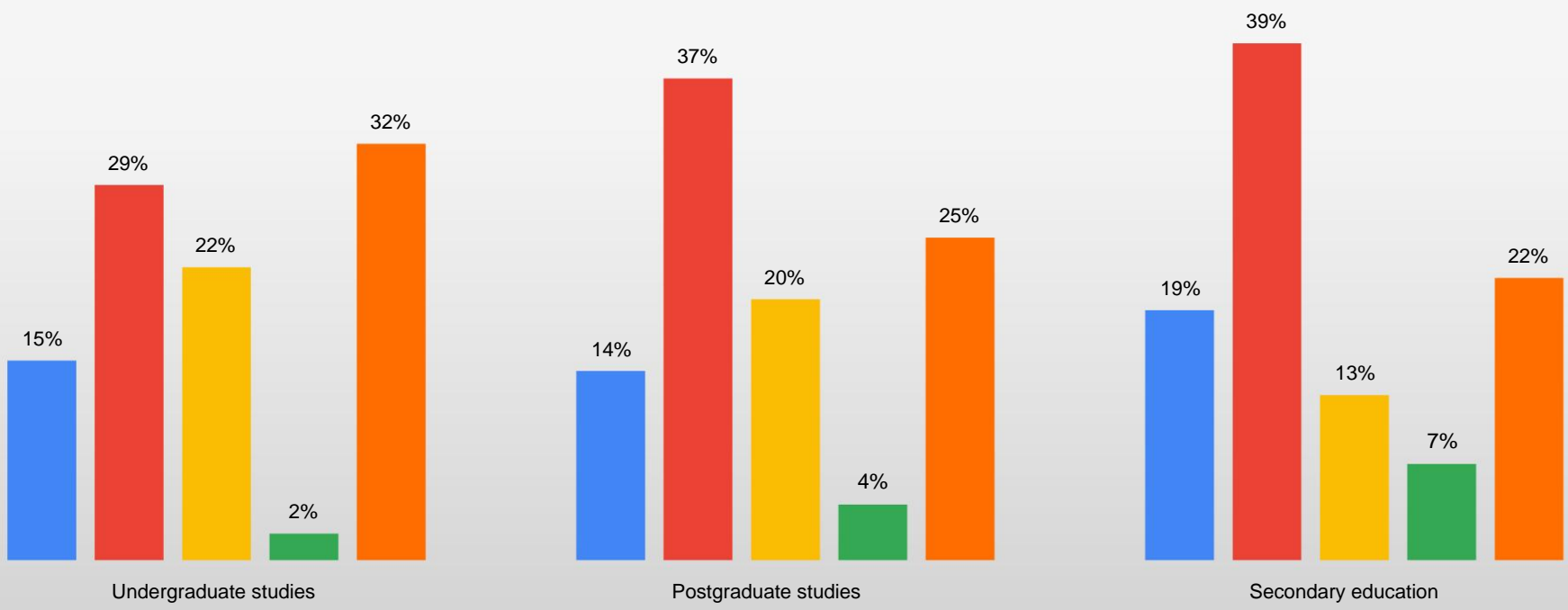
Only in the Northeast region, the largest number of respondents responded that they prefer products in glass packaging, while the majority of respondents in all other planning regions do not consider product packaging important. Interestingly, Paper is chosen over plastic as an option in all planning regions.





9.10. When you buy products, do you pay attention to the packaging they come in? (by education and total)

33% of the total number of respondents answered that it does not matter to them what kind of packaging the product is in and 26% prefer glass packaging. Education does not affect the type of packaging, i.e. the answers are similar across all types of education.

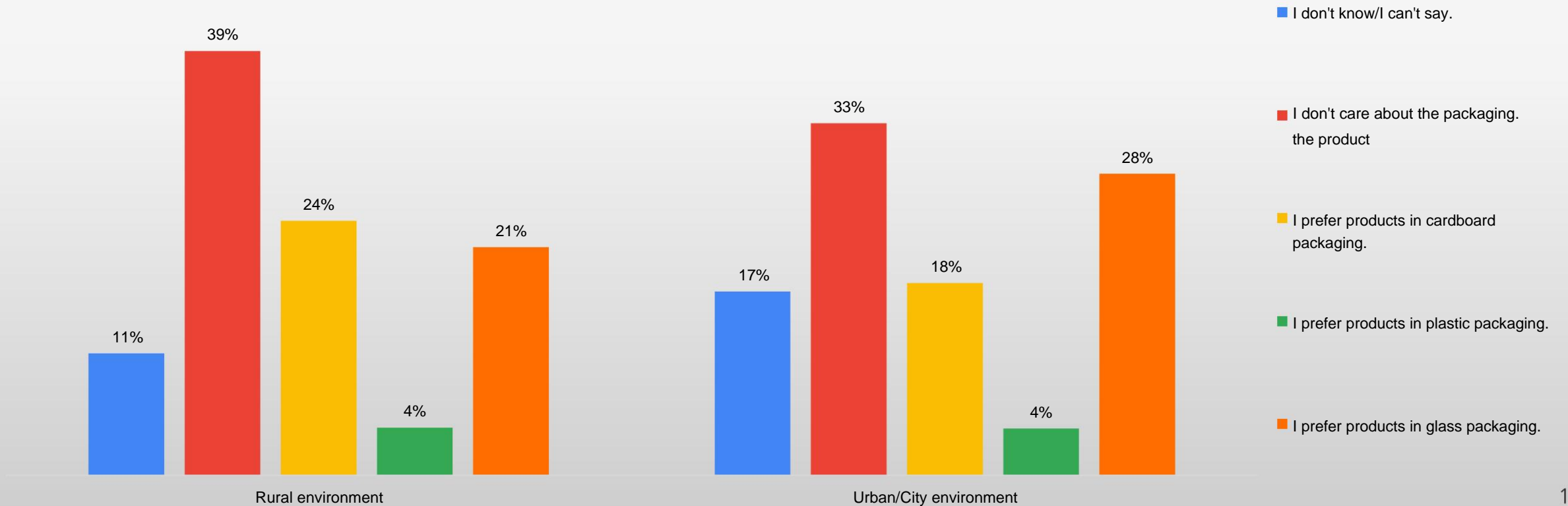


- I don't know/I can't say.
- I don't care about the product packaging.
- I prefer products in cardboard packaging.
- I prefer products in plastic packaging.
- I prefer products in glass packaging.



9.11. When you buy products, do you pay attention to the packaging they come in? find?

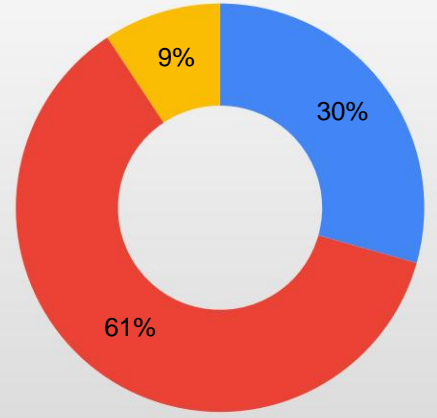
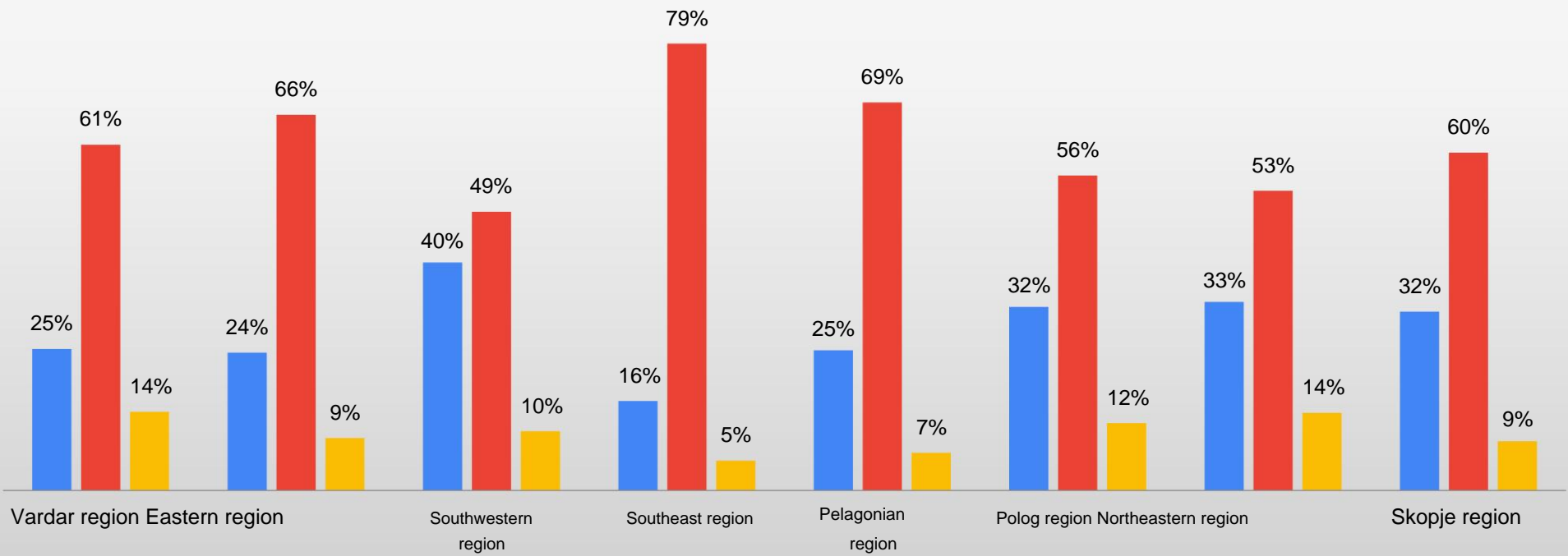
Respondents from rural and urban areas show similar attitudes towards packaging, with the majority not using it. consider packaging important (38% rural, 33% urban). However, in urban areas, glass packaging (28%) is more acceptable compared to rural (21%). Cardboard boxes are more popular in rural areas (24%) than in urban areas (18%). Plastic packaging has minimal support in both environments (4%).





9.12 Do you prefer to buy products made from recycled materials? materials? (by region and total)

A significant majority of those surveyed in all regions do not pay attention to whether the products they buy are made from recycled materials. The majority of respondents who choose products from recycled materials are located in the Southwest region, and the smallest in the Southeast region.



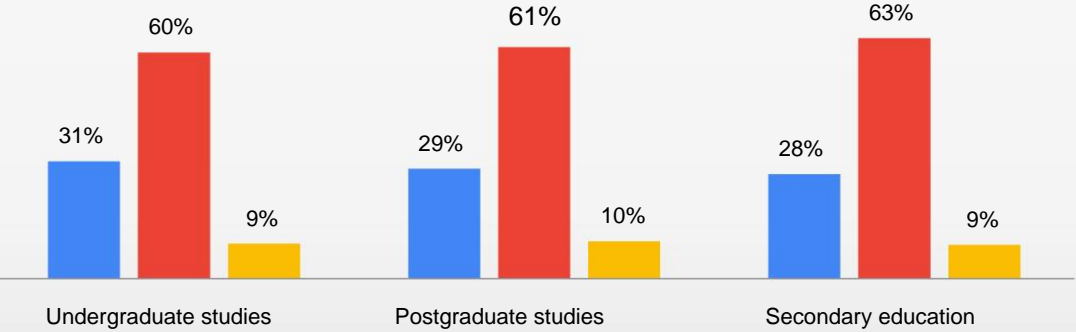
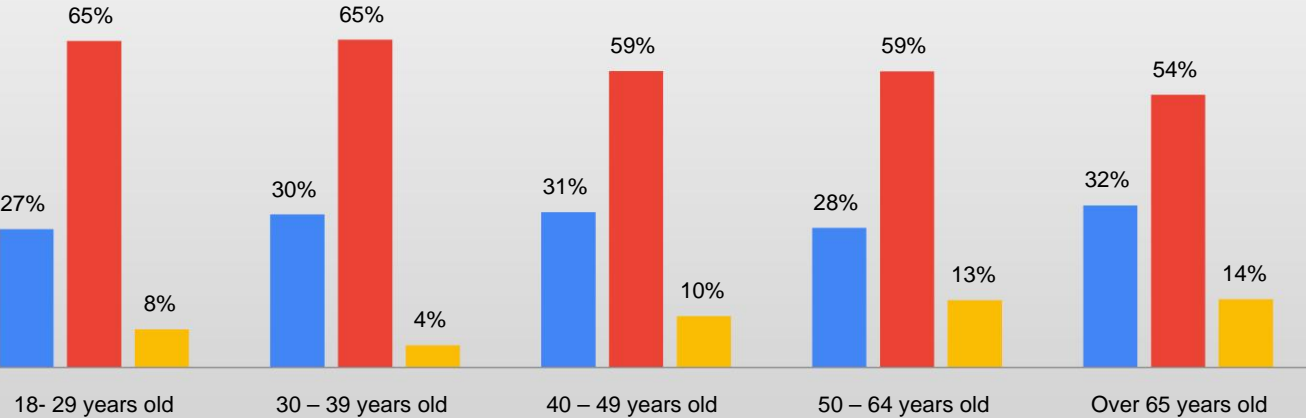
■ I choose products made from recycled materials. ■ I'm not paying attention. ■ I prefer products made from non-recycled materials.



9.13. Do you prefer to buy products made from recycled materials? (by education and age)

- I choose products made from recycled materials.
- I'm not paying attention.
- I prefer products made from non-recycled materials.

In all groups, respondents who "do not pay attention" dominate. attention" to whether products are made from recycled materials materials, with the highest percentage among those with secondary education (63%).

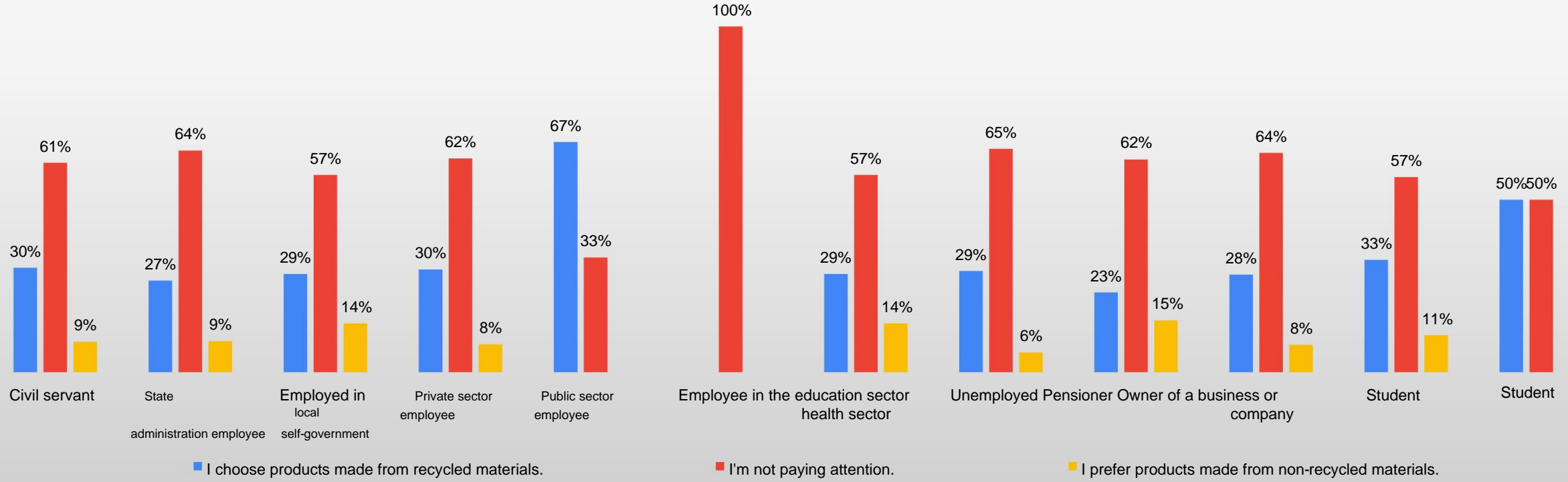


Respondents generally show low awareness or interest in buying recycled products materials, with a predominance of those who "don't pay attention" (65% in the age groups 18-39, 59% in the 40-64 and 54% over 65). The percentage of those who choose products from recycled materials is moderately high in older groups, 32% (over 65 years) and 31% (40-49 years). Preference remains significantly low percentage in all age categories.



9.14. Do you prefer to buy products made from recycled materials?

Regarding the purchase of products made from recycled materials, the highest awareness is observed among employees in the public sector (67% of choose such products), while in the education sector no one chooses products made from recycled materials, and 100% state that do not pay attention. Among the other groups, the percentage of those who choose recycled products is similar and ranges between 23% (pensioners) and 33% (students). Most often, people "don't pay attention", with a predominance in groups such as state employees administration (64%), business owners (64%) and retirees (62%).



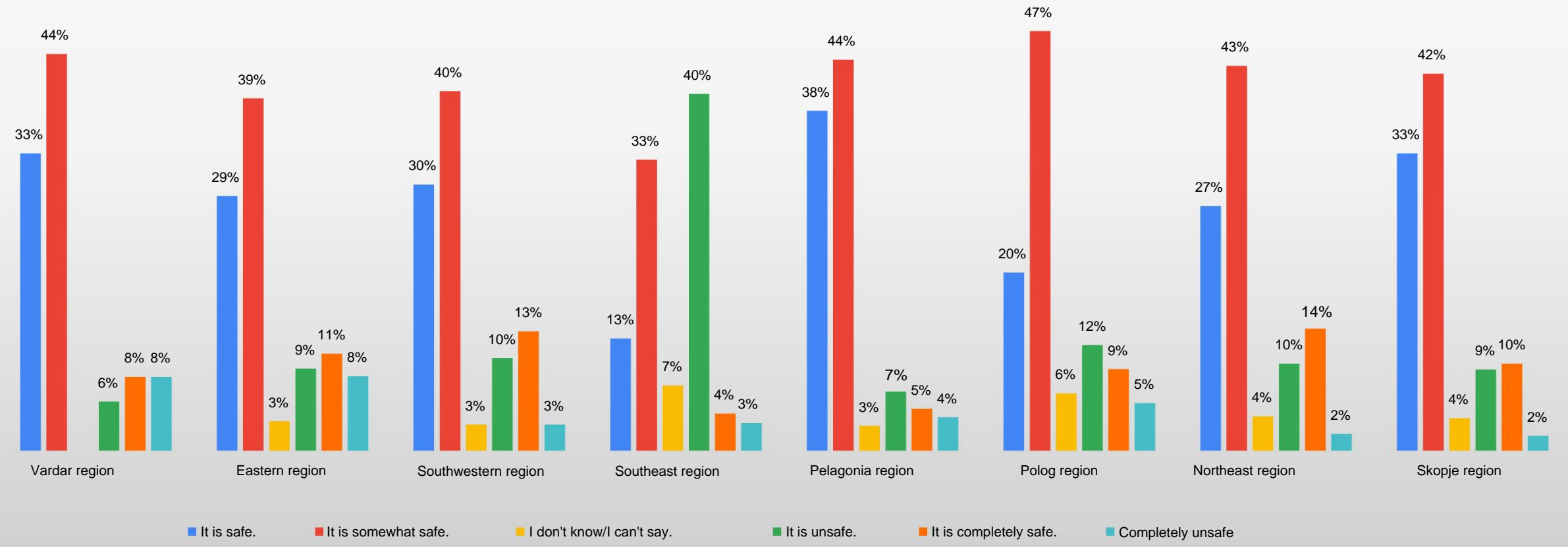
10. Drinking water

- Only about a third of respondents believe that drinking water is completely safe. The highest percentage of respondents who consider water unsafe is in the Southeast region (40%).
- Citizens, government, and industry are identified as being most responsible for poor water quality.
- Pollution of rivers and soils with pesticides and other pollutants are major causes of potential future problems.
- City water supply is the main source of drinking water (86% in the Skopje region), while bottled water is most common in the Southeast region (22%).
- The majority of respondents are not willing to pay more for better water quality.



10.1. Do you think that the water you drink is generally safe and suitable for use?

Only about a third of respondents in all planning regions believe that drinking water is safe. The share is much higher of respondents in all regions who responded that it is somewhat safe. In the Southeast region, the majority of respondents say that the water is unsafe (40%).

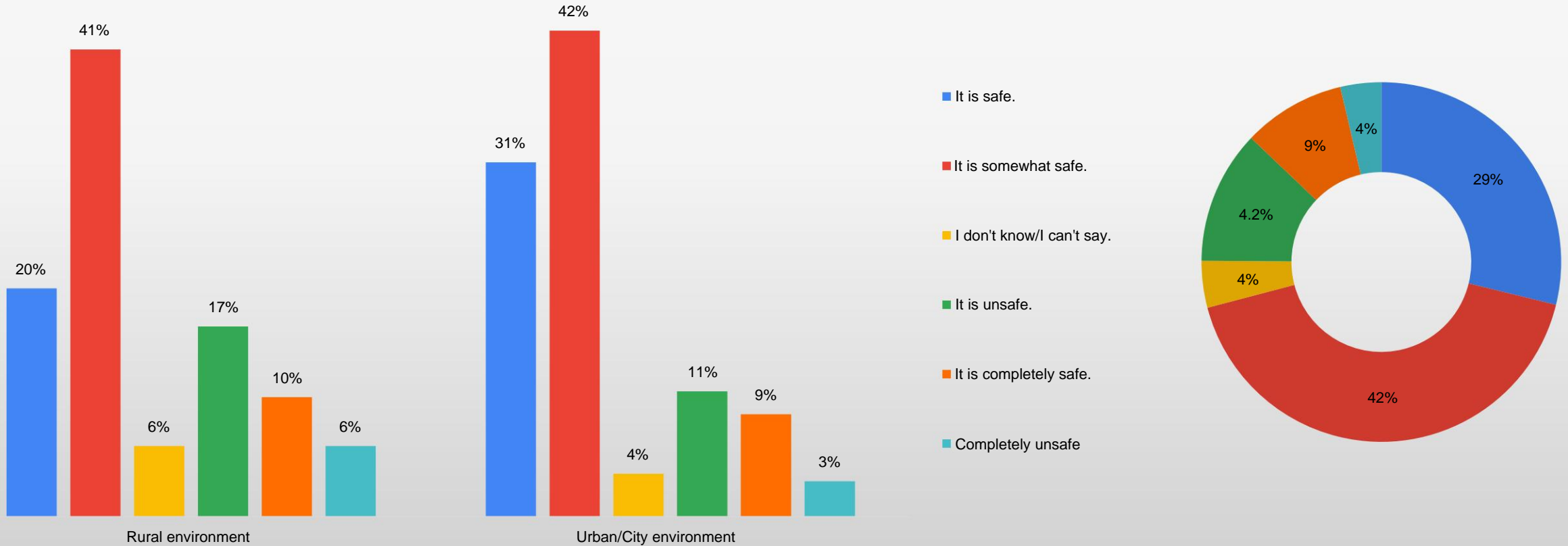




10.2 Do you think that the water you drink is generally safe and suitable for use? (by place of residence and total) Both among respondents

from rural and urban areas, the dominant view

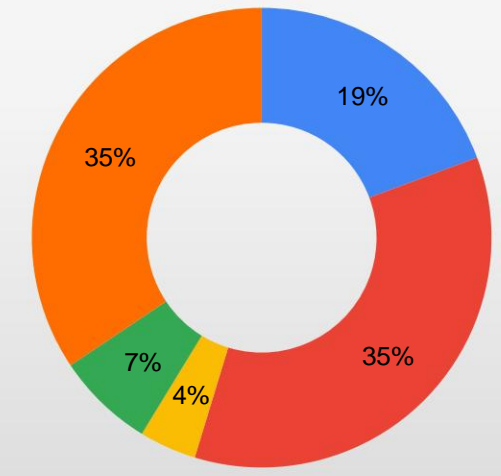
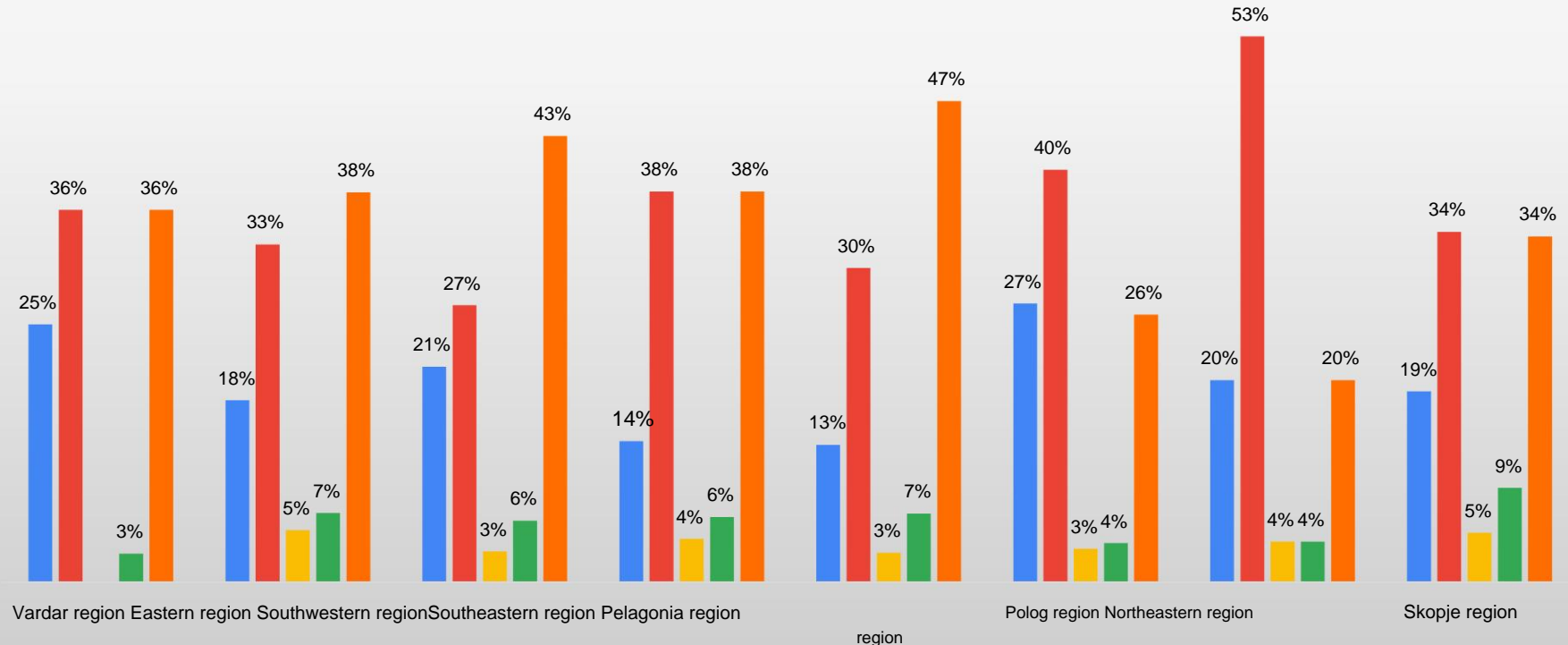
is that the water is not completely safe (41%). Also, for 42% of the total respondents, it is somewhat safe.



10.3. In your opinion, how much of the following actors are responsible for the poor quality of drinking water?

- The general public, due to their use of transportation and environmental unpleasant heating fuels (by region and total)

The general public is cited as extremely responsible for the quality of drinking water by the majority of respondents in all surveys. planning regions, except in the East and North-East. In these two regions, the answer “very responsible” dominates, as a milder form.



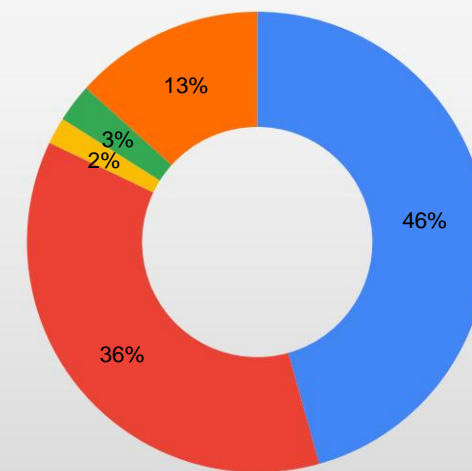
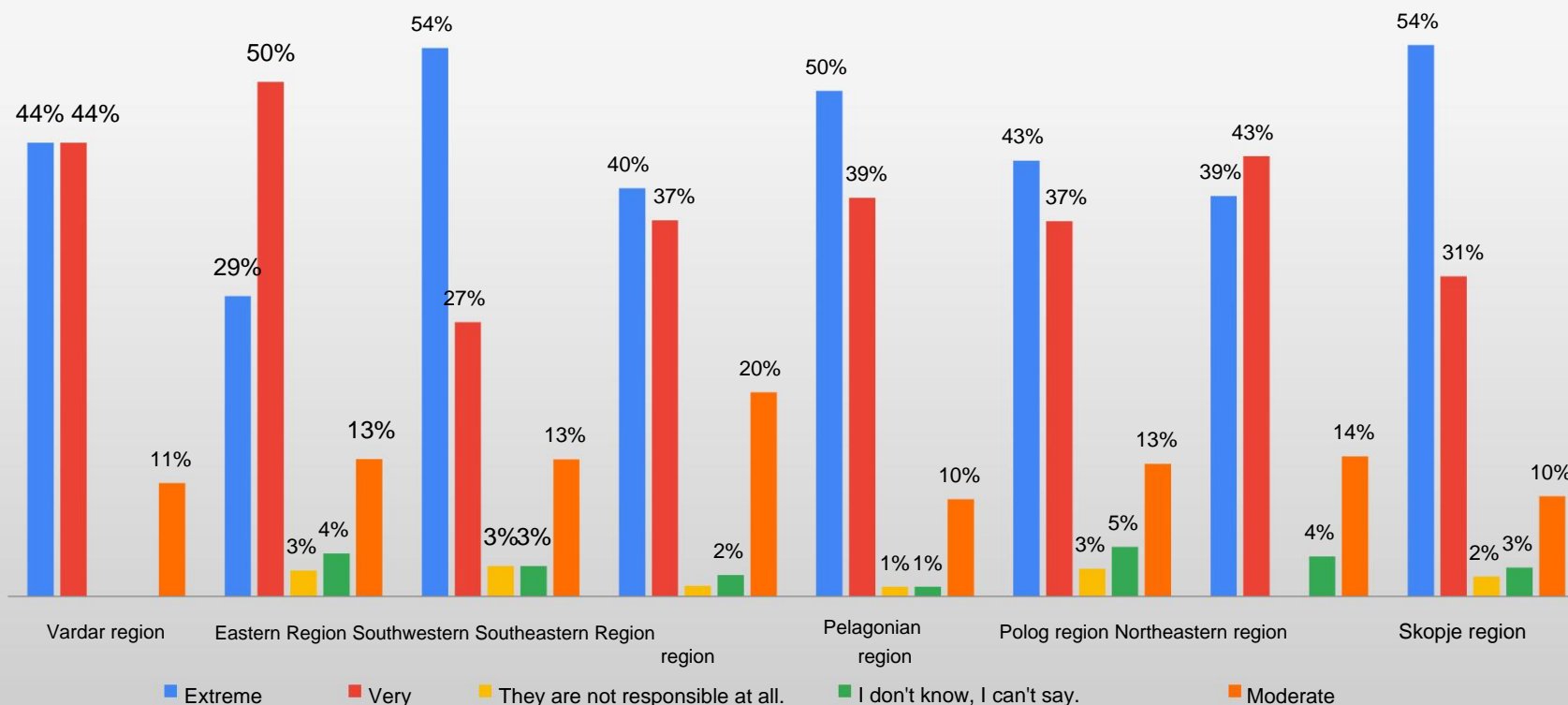
- Extreme
- Very
- They are not responsible at all.
- I don't know, I can't say.
- Moderate



10.4. In your opinion, how much of the following actors are responsible for the poor quality of drinking water?

- Government and authorities responsible for environmental protection (by region and total)

The government and environmental protection authorities are also cited as being extremely responsible in the majority of cases. respondents in all planning regions except the East, North-East and Vardar regions. In these three regions, it is dominated by the "very responsible" option, i.e. the milder form.

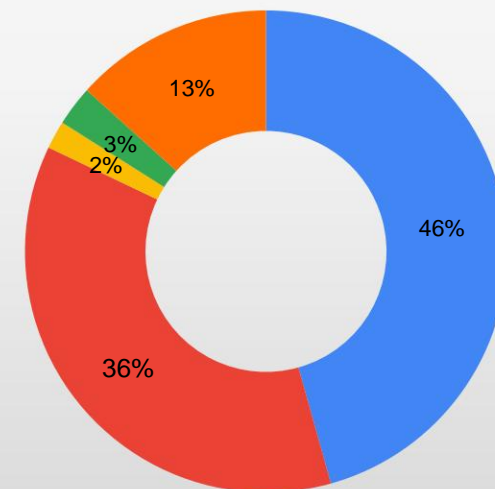
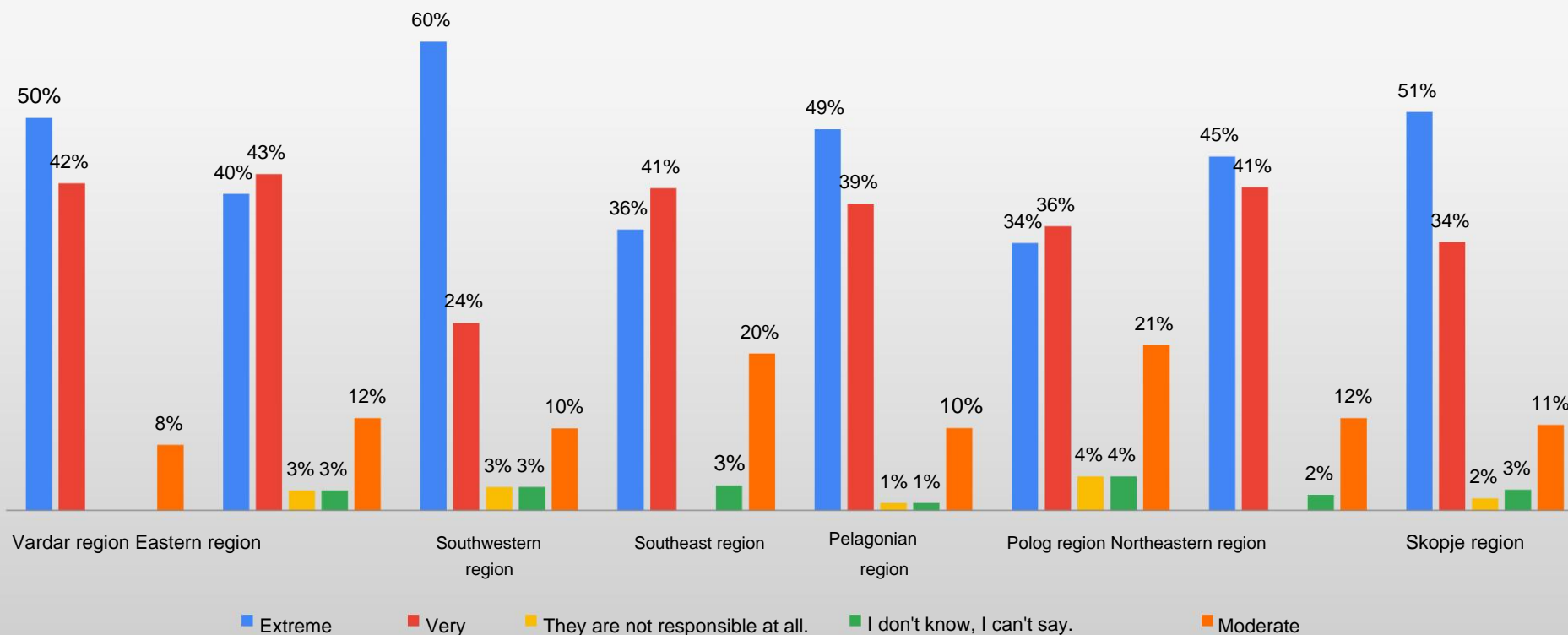




10.5. In your opinion, how much of the following actors are responsible for the poor quality of drinking water?

- Local authorities (cities/cities and municipalities) (by region and total)

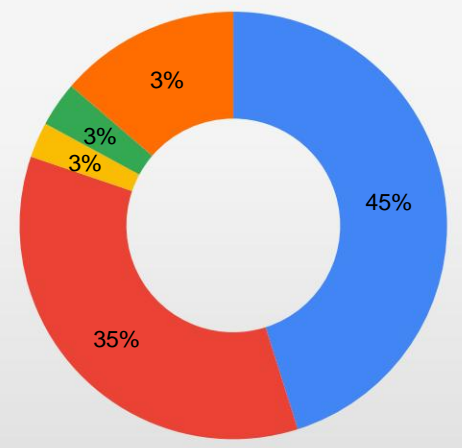
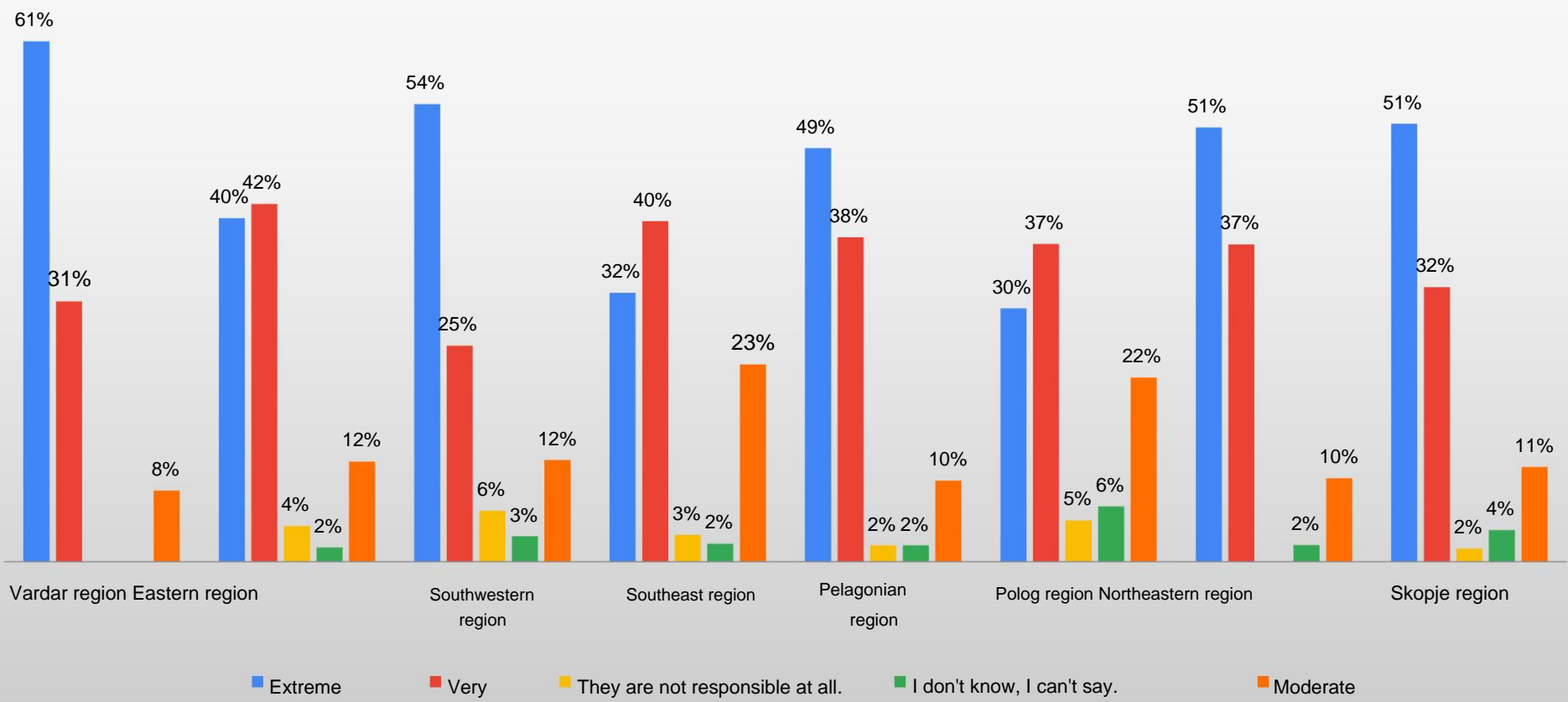
Local authorities are also identified as extremely and very responsible by the majority of respondents in all planning regions. The strictest in The respondents in the Southwestern and Skopje regions were the most tolerant towards local authorities. According to the answers given, the most tolerant towards local authorities were the respondents in the Polog region.



10.6. In your opinion, how much of the following actors are responsible for the poor quality of drinking water?

- Industry and businesses (by region and total)

In almost all regions, especially in the Vardar region, this category of actors is indicated as extremely responsible for the aforementioned condition.

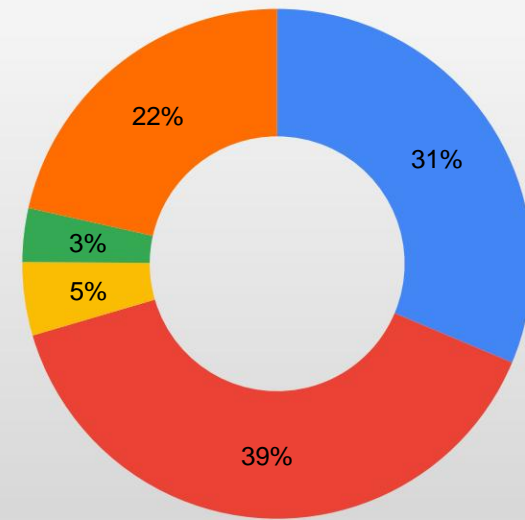
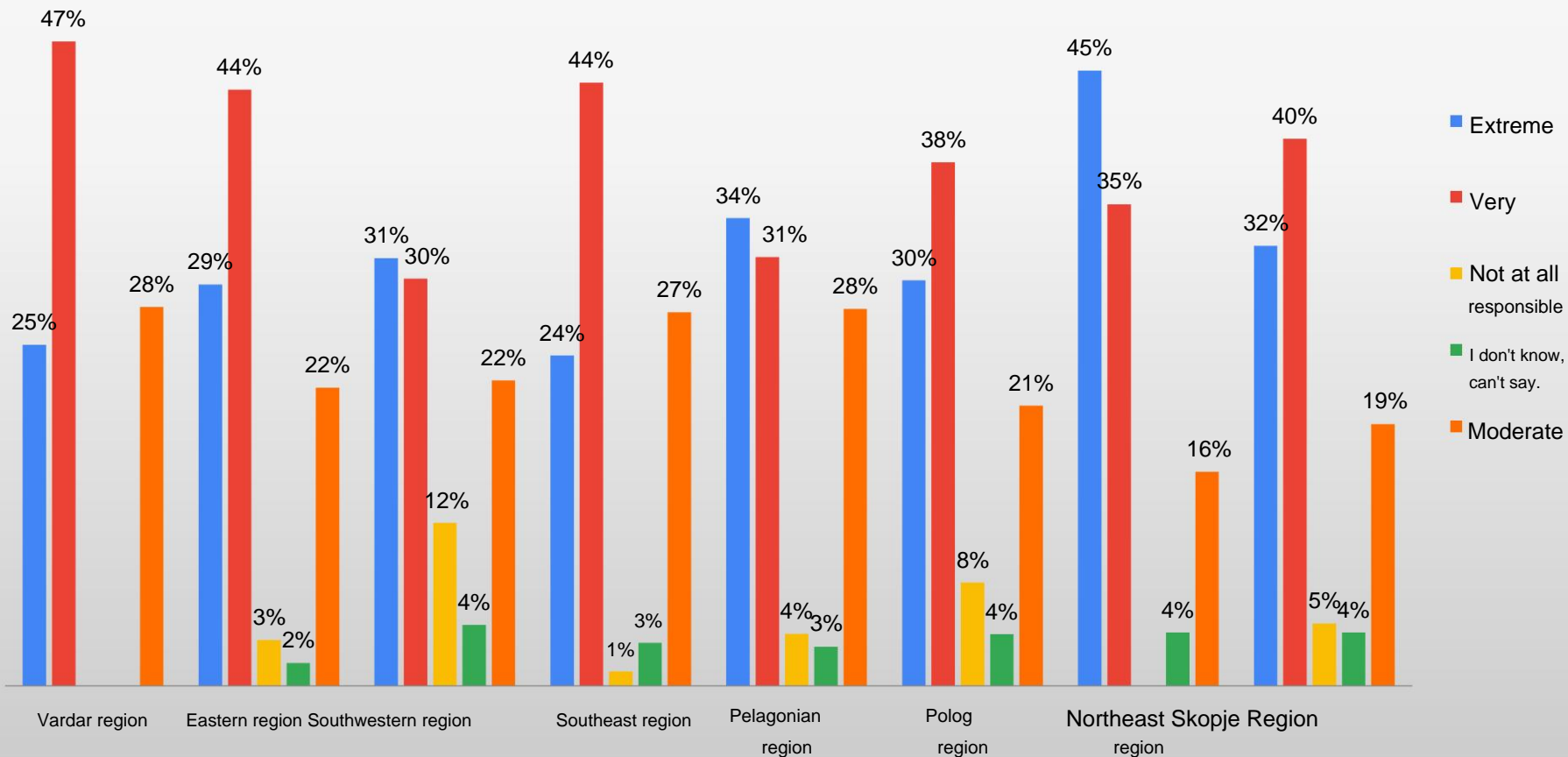




10.7. In your opinion, how much of the following actors are responsible for the poor quality of drinking water?

- Citizens (by region and total)

Citizens are indicated as either extremely or very responsible for the quality of drinking water in all planning regions, and It is interesting to point out that the share of these two selected answers is fairly equal in most regions.

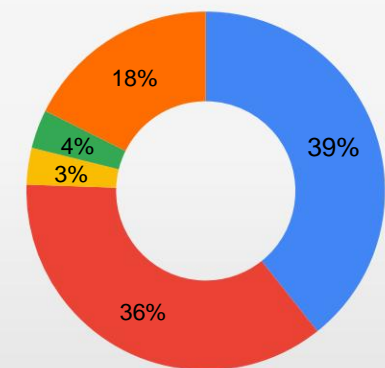
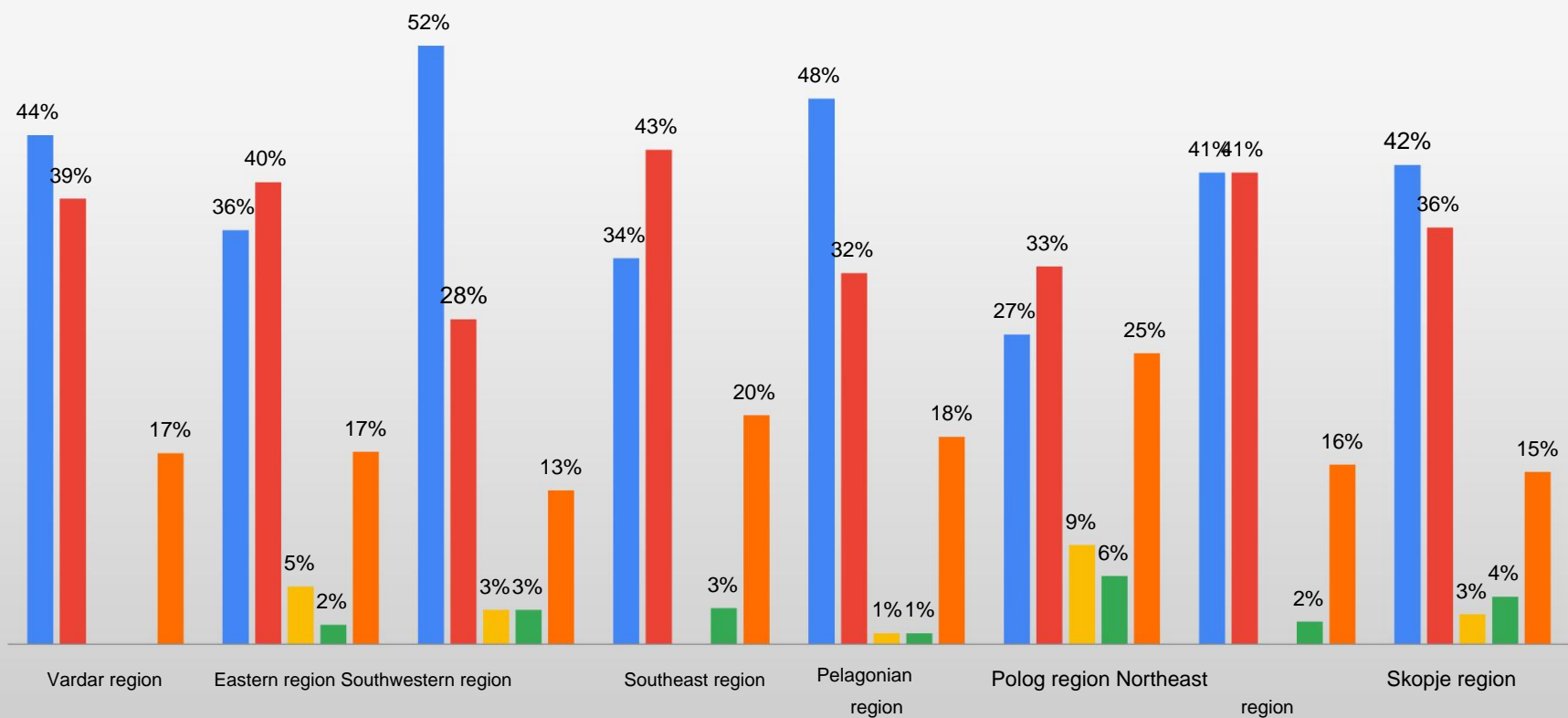




10.8. In your opinion, how much of the following actors are responsible for the poor quality of drinking water?

- Local self-government units (by region and total)

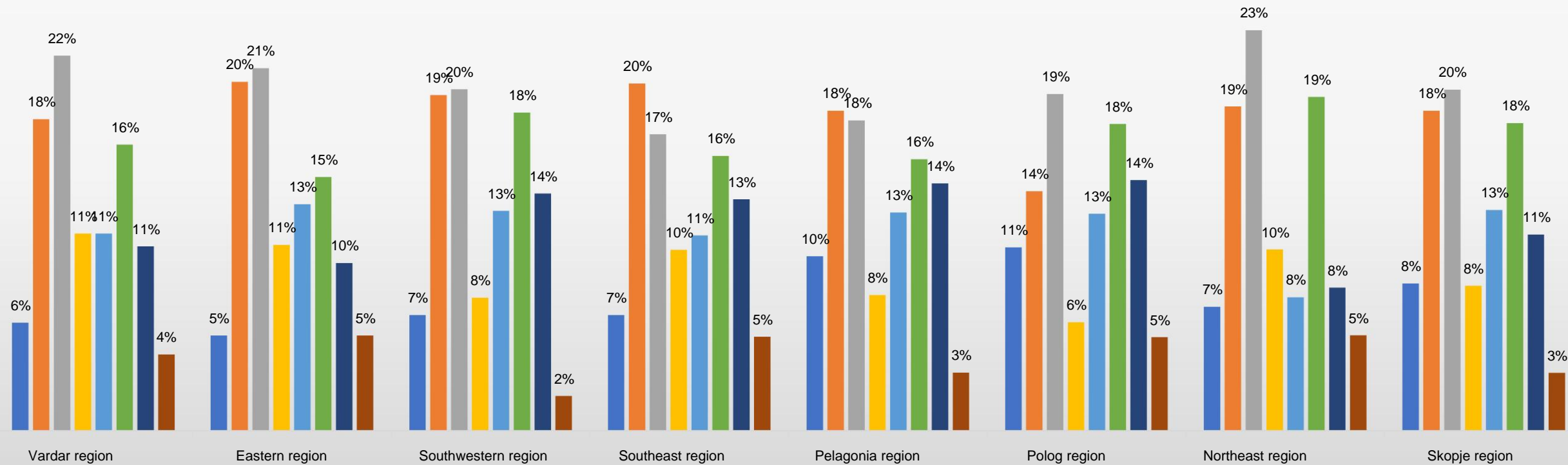
Except in the Southwestern and Pelagonia regions, where the dominant view is that local self-government is extremely responsible, in all other planning regions, respondents mainly stated that local self-government is very responsible for the drinking water situation.



- Extreme
- Very
- They are not responsible at all.
- I don't know, I can't say.
- Moderate

10.9. Problems with drinking water will continue or occur in Macedonia because of?

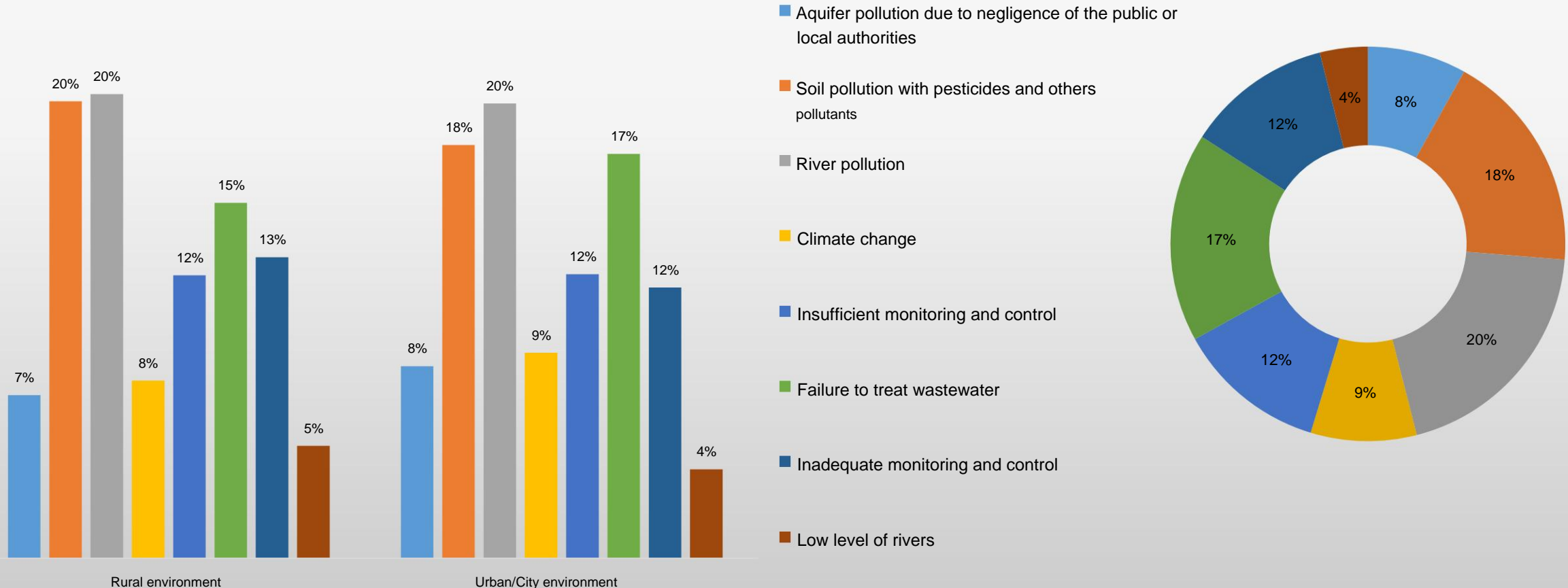
Pollution of rivers and soil contamination with pesticides and other pollutants are the two main reasons chosen by the majority of respondents in all planning regions, due to which problems with drinking water will continue to exist in Macedonia. The share of respondents who recognize the problem of untreated wastewater as a cause is also significant.



- Aquifer pollution due to negligence of the public or local authorities
- Soil contamination with pesticides and other pollutants
- River pollution
- Climate change
- Insufficient monitoring and control
- Failure to treat wastewater
- Inadequate monitoring and control
- Low level of rivers

10.10. Will drinking water problems continue or arise in Macedonia due to? (by place of residence and total)

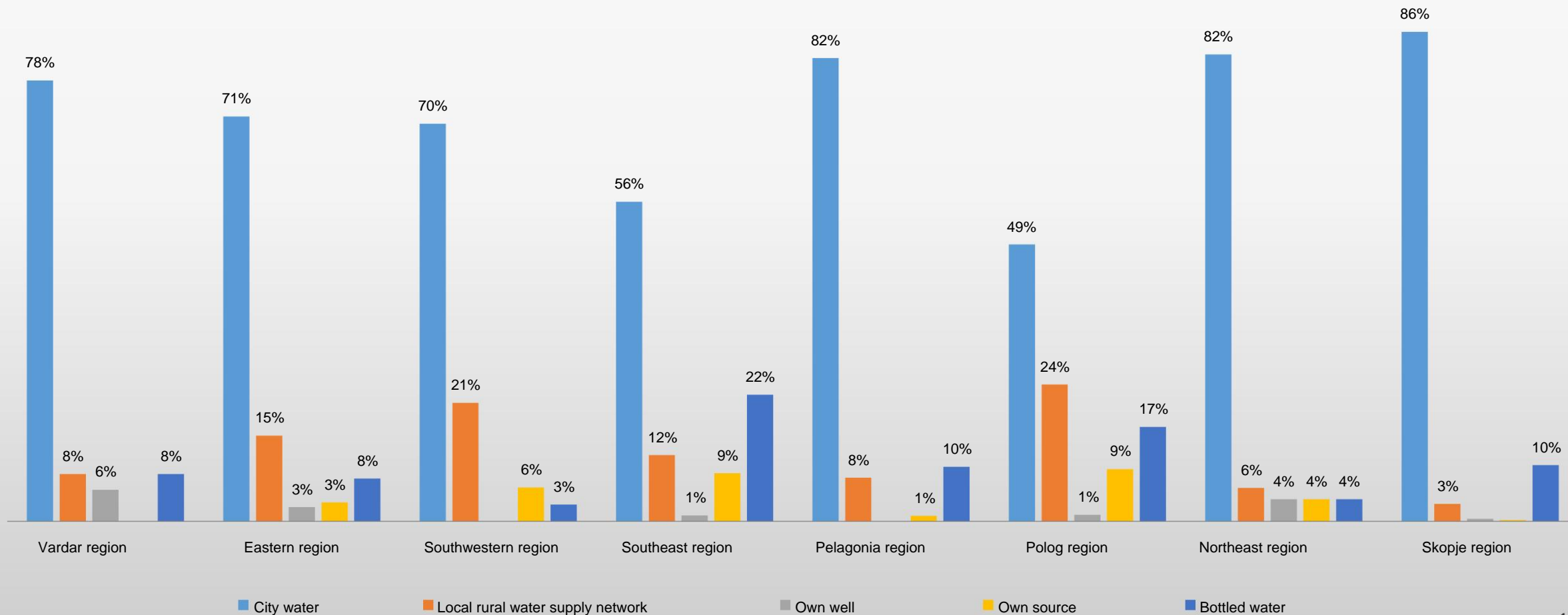
The main factors contributing to drinking water problems in Macedonia are river pollution (20% in both rural and urban areas), soil pollution with pesticides and other pollutants (20% in rural areas and 18% in urban areas), and the lack of adequate measures for wastewater treatment (15% in rural areas and 17% in urban areas).





10.11. How do you get the water you use for your daily needs?

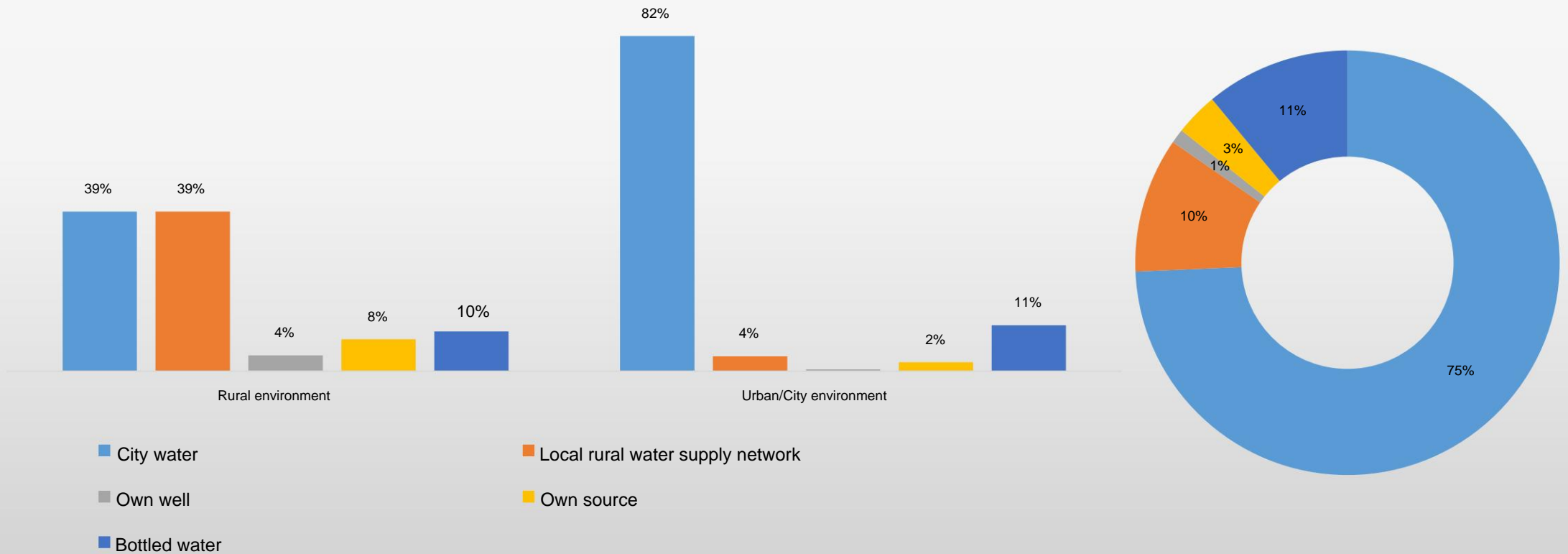
A significant majority of respondents in all planning regions use drinking water through the city water supply. This share is highest in the Skopje region (86%) and lowest in the Polog region (49%). In the Polog region, a significant share falls on the local rural water supply network (24%). In the Southeast region, the share of respondents (22%) who stated that they use bottled water for drinking is the highest among all planning regions.





10.12. How do you get the water you use for your daily needs? (by place of residence and total)

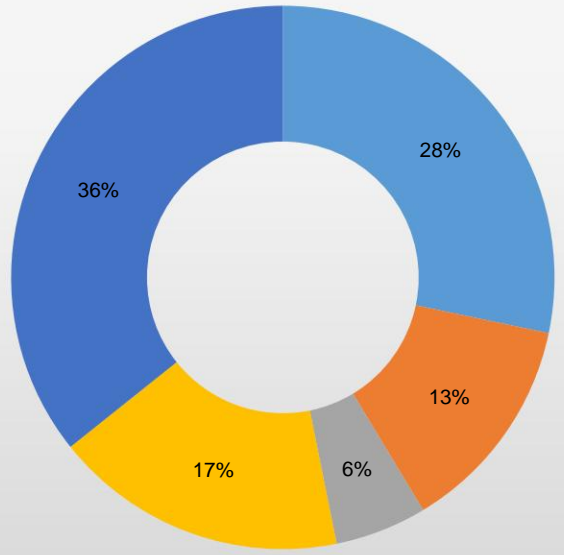
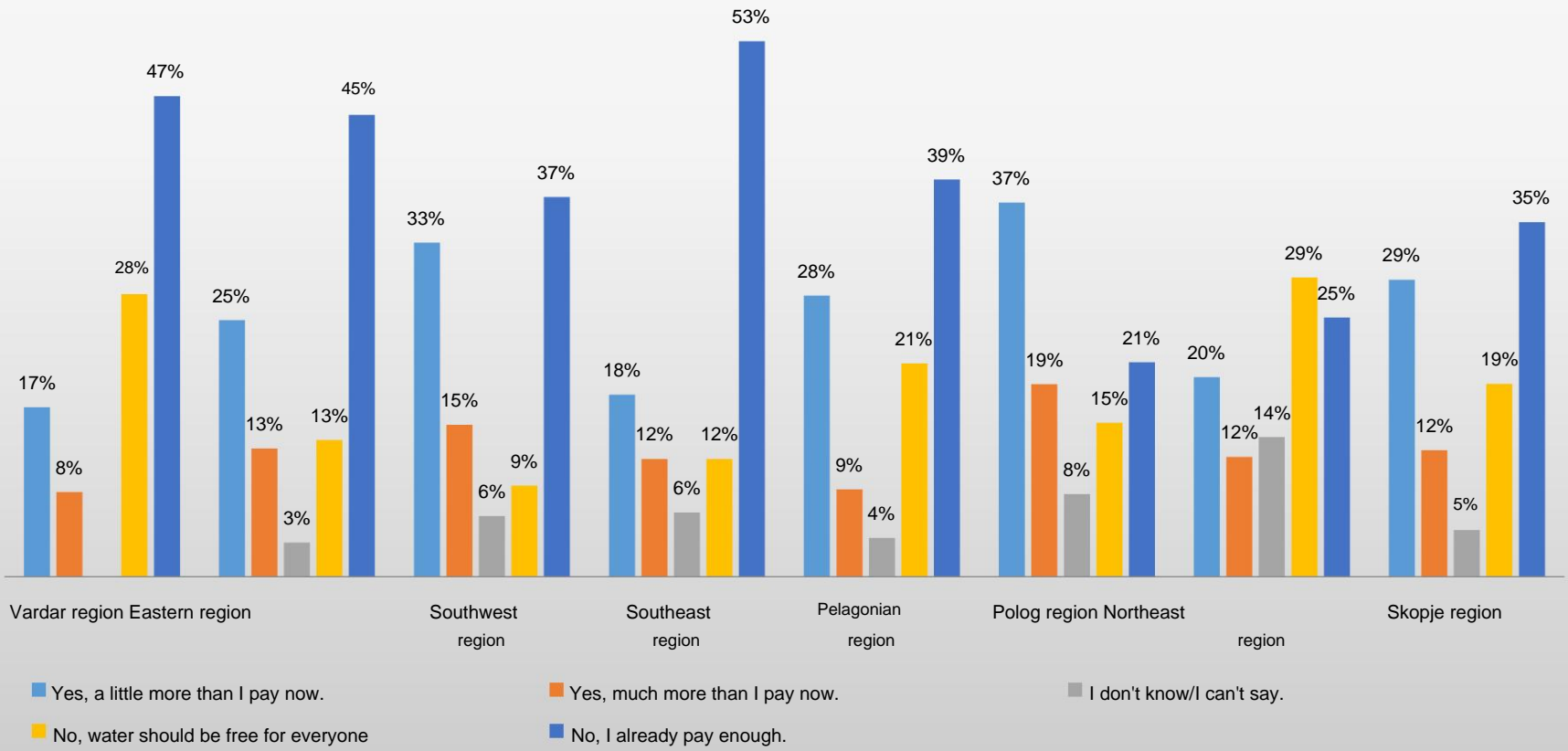
In rural areas, city water and the local rural water supply network are equally used (39% each), while 12% rely on their own springs and wells. In urban areas, the use of city water dominates (82%), indicating better infrastructure coverage. It is noteworthy that in both areas a relatively similar percentage of the population (around 10%-11%) uses bottled water, which may indicate distrust in the quality of public water supply systems.





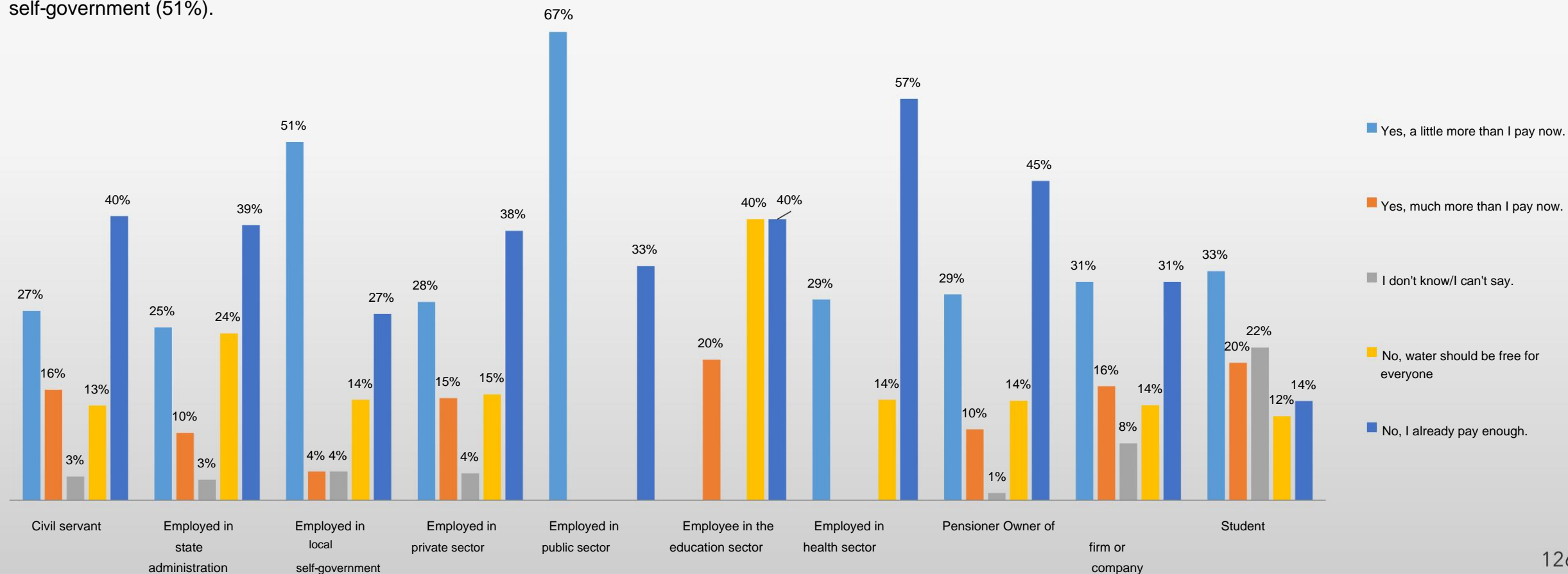
10.13. Would you be willing to pay extra for the water you use if it was clean and suitable for use without additional filtration on your part? (by region and total)

The majority of respondents in all planning regions, except in Polog, are not willing to pay extra for better quality drinking water. In the North-East and Vardar regions, a significant percentage of respondents hold the view that water should be free for everyone. The majority of respondents in the South-East region believe that they already pay enough.



10.14. Would you be willing to pay extra for the water you use? use if it is clean and suitable for use without additional filtration on your part?

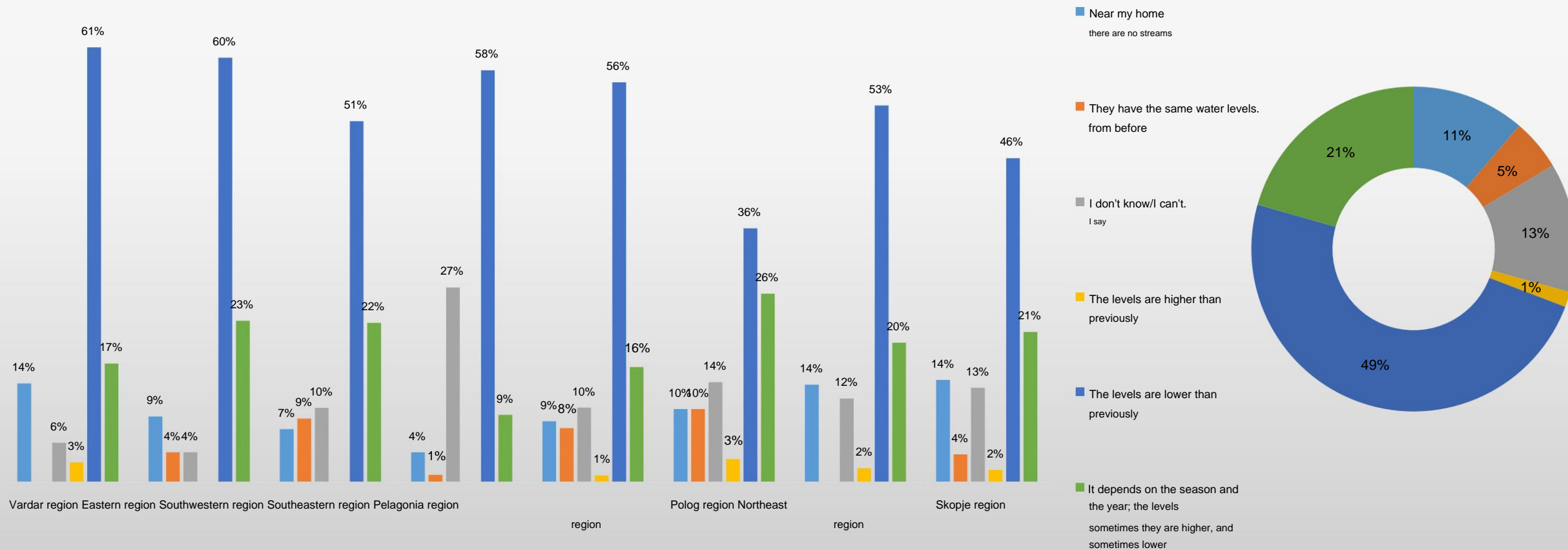
According to the survey, the majority of respondents from all groups would not want to pay extra for clean and suitable water, and have the opinion that they already pay enough. This is especially pronounced among employees in the healthcare sector (57%) and retirees (45%). On the other hand, There are categories that show a willingness for a moderate price increase, such as employees in the state sector (67%) and local self-government (51%).





10.15. In your opinion, are the rivers and streams near your home now do they have the same water level throughout the year as they did 15 to 20 years ago? (by region and in total)

A significant portion of respondents in all planning regions believe that the levels of rivers and streams near their residences are lower than before. The Vardar region has the highest share of respondents who share this opinion.





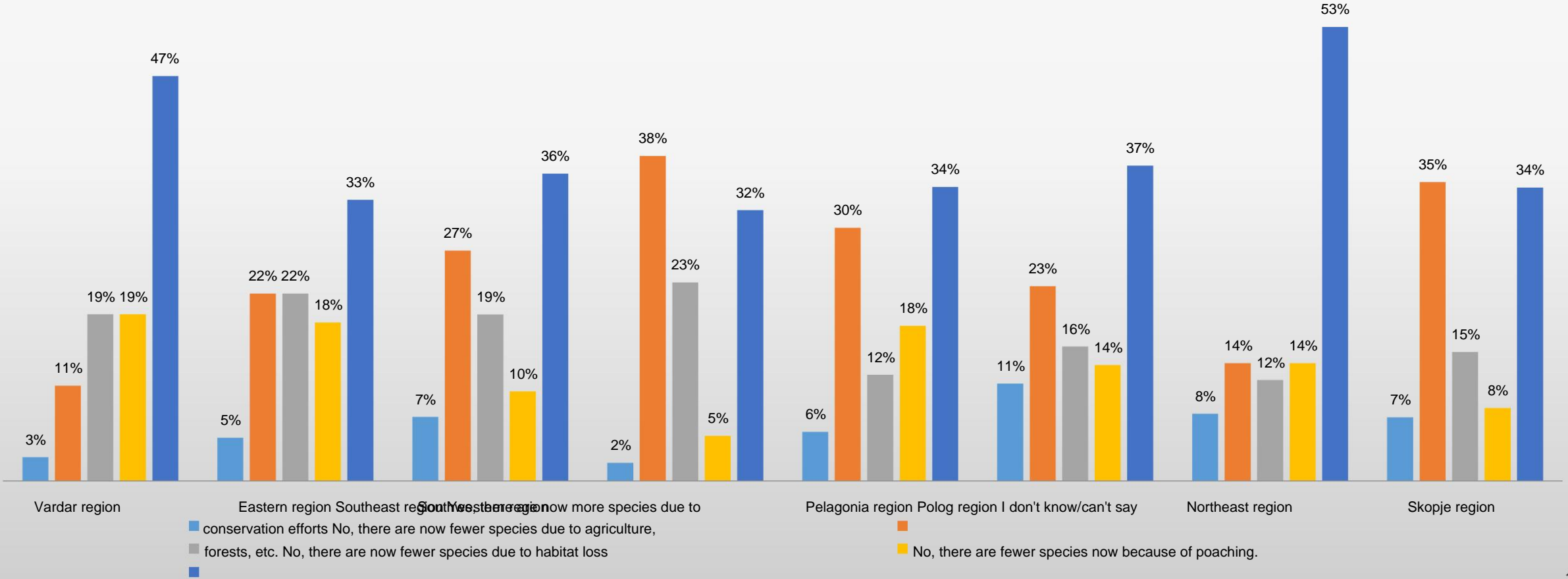
11. Biodiversity

- The majority of respondents believe that the number of wild animal species has decreased due to the destruction of natural habitats and the impact of agriculture.
- However, there are those who believe that the number of species has increased due to numerous conservation efforts.
- The perception is the same among all age groups, except for the youngest population, which mostly says it has no knowledge regarding this issue.
- Human activities are the ones that have the most negative impact on biodiversity, according to the majority of respondents (53%).



11.1 In your opinion, are there more species of wild animals in Macedonia now than when you were a child?

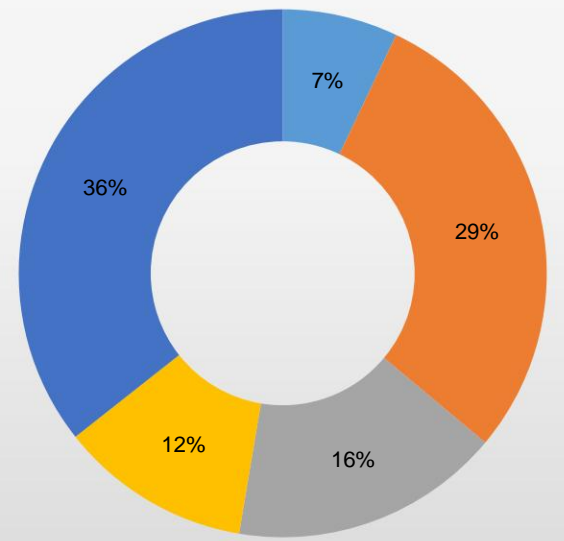
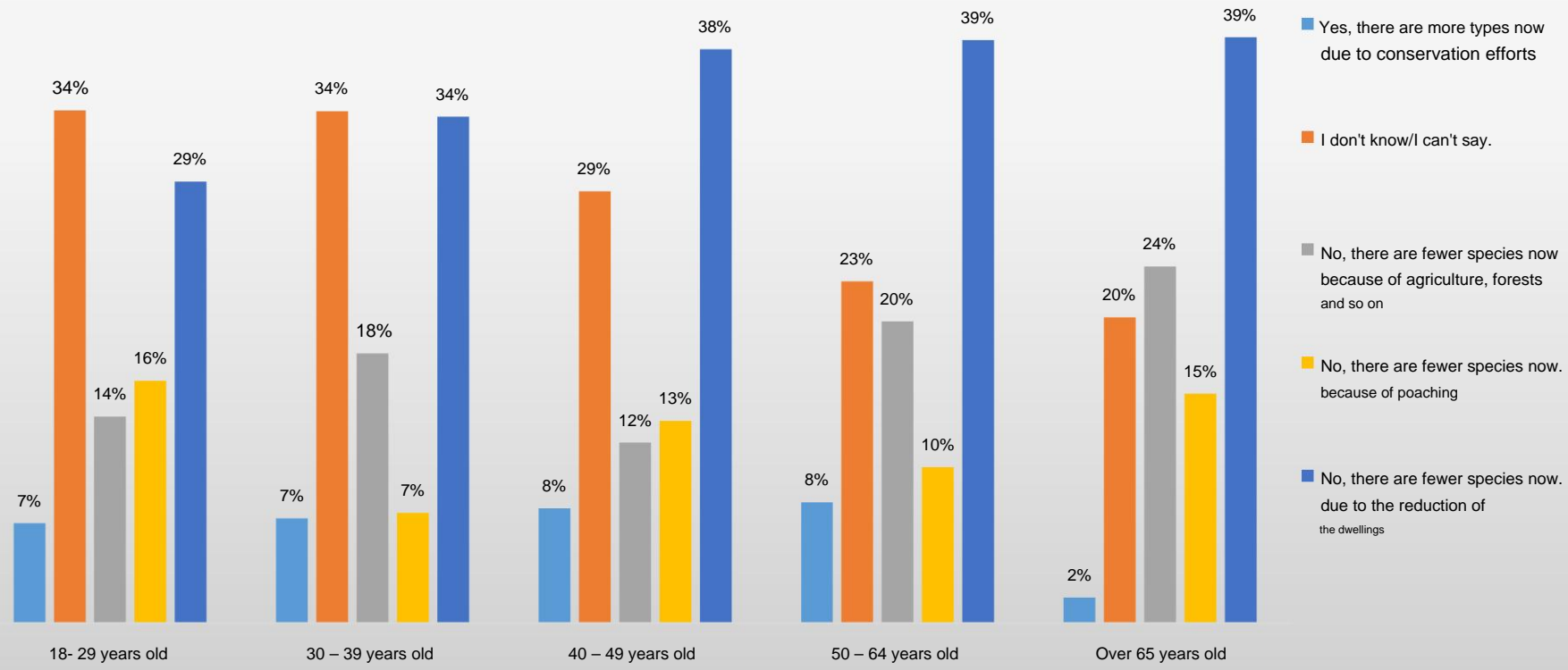
The majority of respondents from all planning regions except Vardar and Northeast believe that there are fewer species today due to the reduction of habitats. In the two regions mentioned, respondents most often stated that they could not express an opinion or give an assessment on this issue. In last place in all regions is the group of respondents who believe that there are more species now due to efforts to preserve them.





11.2. In your opinion, are there more species of wild animals in Macedonia now than when you were a child? (by age and total)

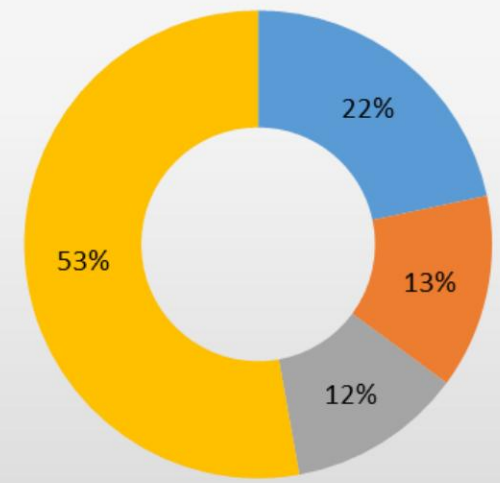
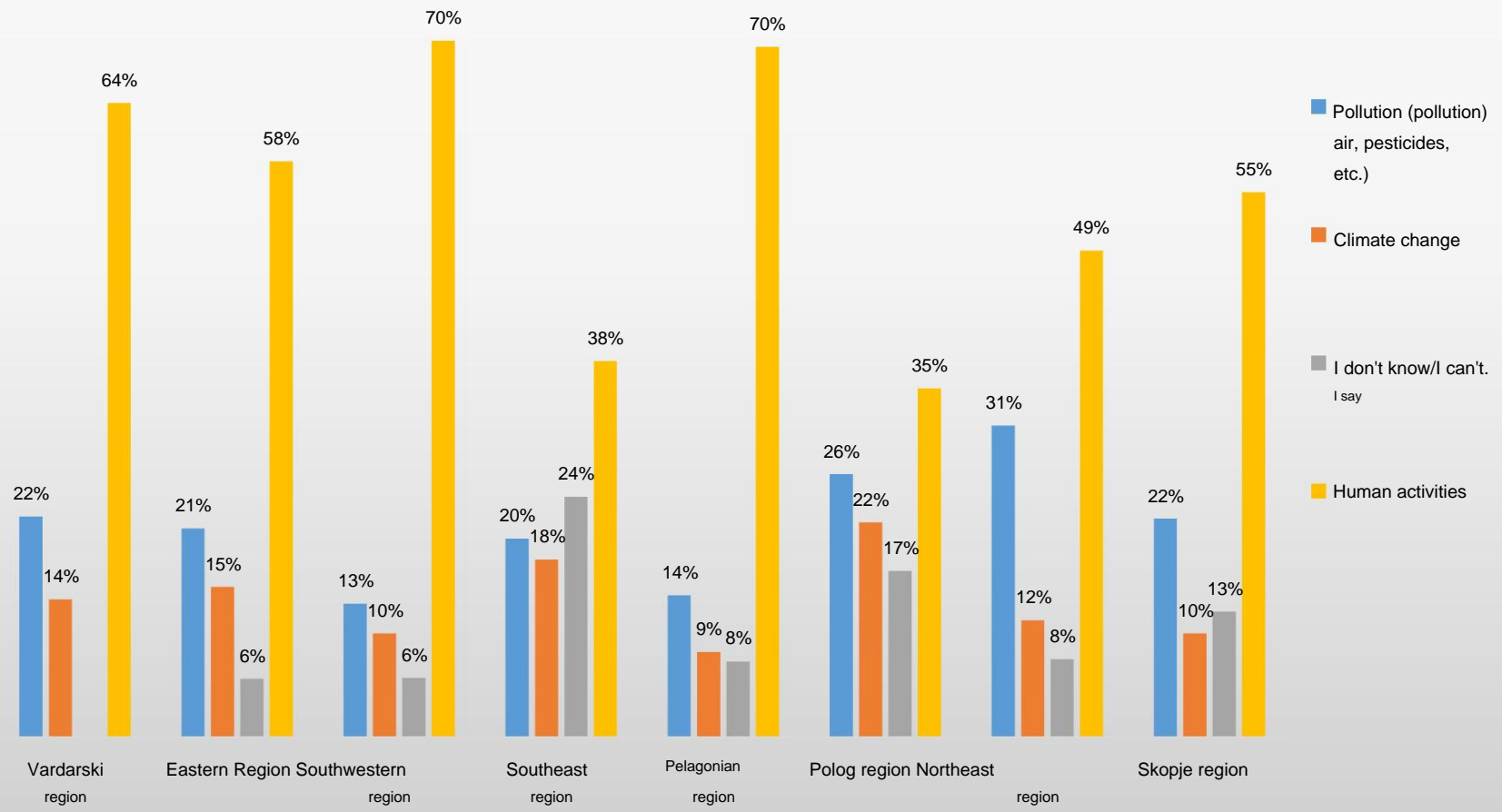
The results indicate that the majority of respondents from all age groups believe that the number of wild animal species in Macedonia has decreased. The most common reasons for this are the reduction of natural habitats (29% to 39%) and the negative impact of agriculture and forestry (10% to 24%).





11.3. In your opinion, what most affects species in Macedonia? (by region and total)

A significant majority in all planning regions points to human activity as the reason on which the survival of species depends. This is followed by pollution as the second most important reason in all regions except the Southeast.





12. Sustainable food production

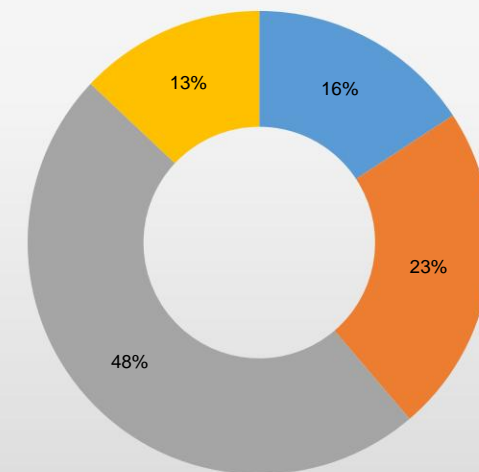
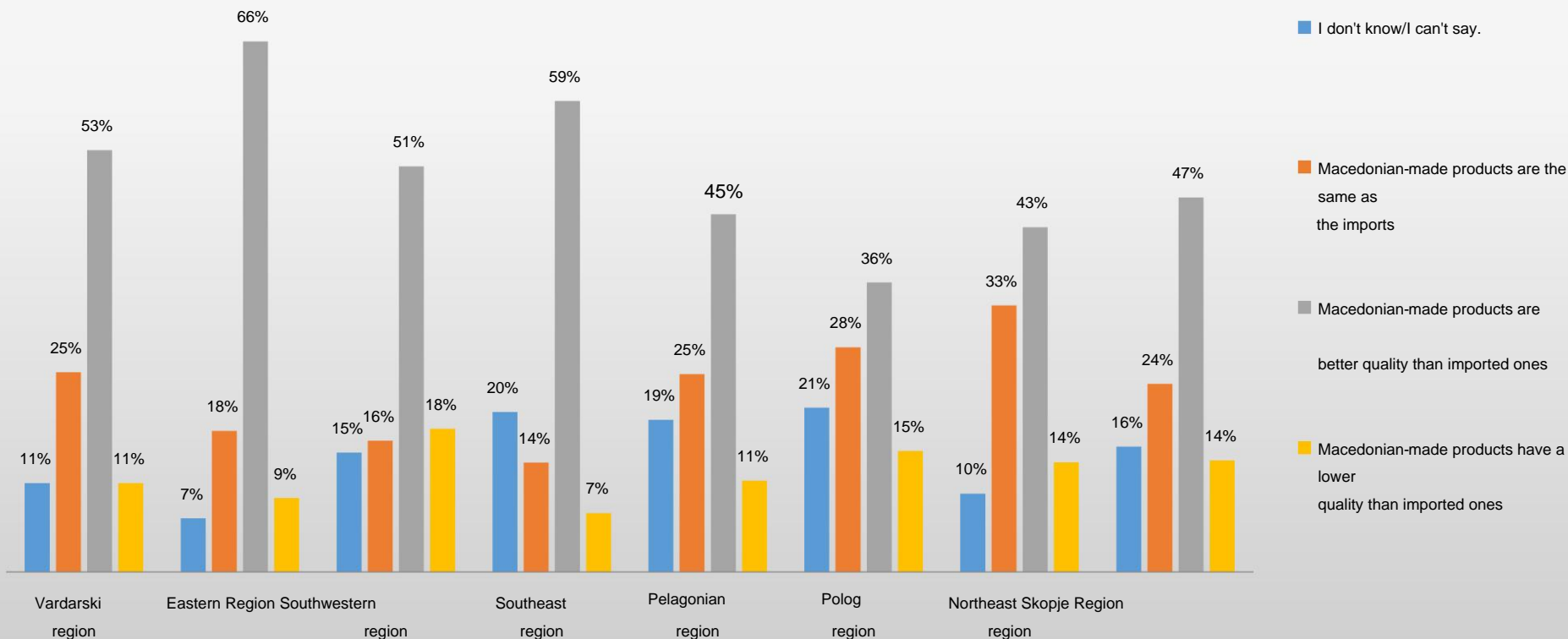
- Macedonian products are considered to be of higher quality than imported ones (48%), especially in the Eastern region (66%).
- Respondents buy fruits and vegetables equally from markets and supermarkets. Markets are most preferred in the Pelagonia and Eastern regions.
- Although the prevailing view is that domestic producers care about quality, one third of respondents believe that care is insufficient.
- Respondents are willing to pay more for healthier and organic products, except in the Northeast and Southeast regions.



12.1. How would you rate food produced in Macedonia compared to imported food?

(by region and total)

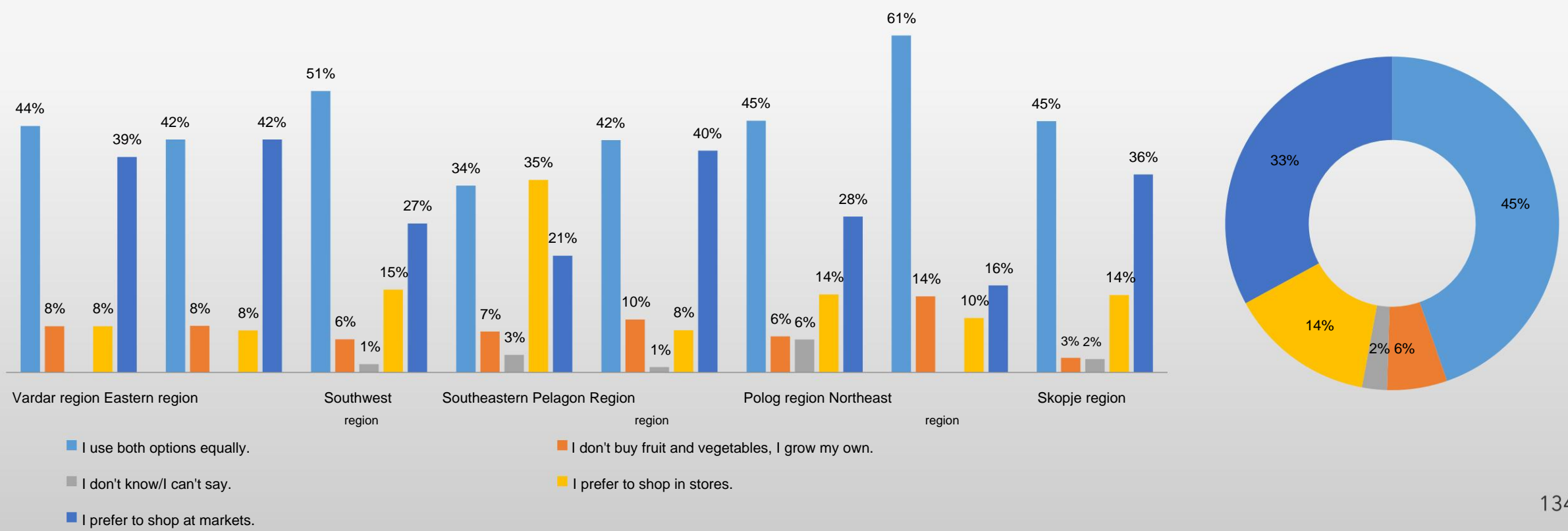
The majority of respondents in all planning regions indicated that food products of Macedonian origin are of better quality than imported ones. Such responses are most numerous in the Eastern region and least numerous in the Polog region. This is followed by the opinion that both domestic and imported products have the same quality, except in the Southeast region where the second place is taken by the group of respondents who cannot express their opinion on this issue



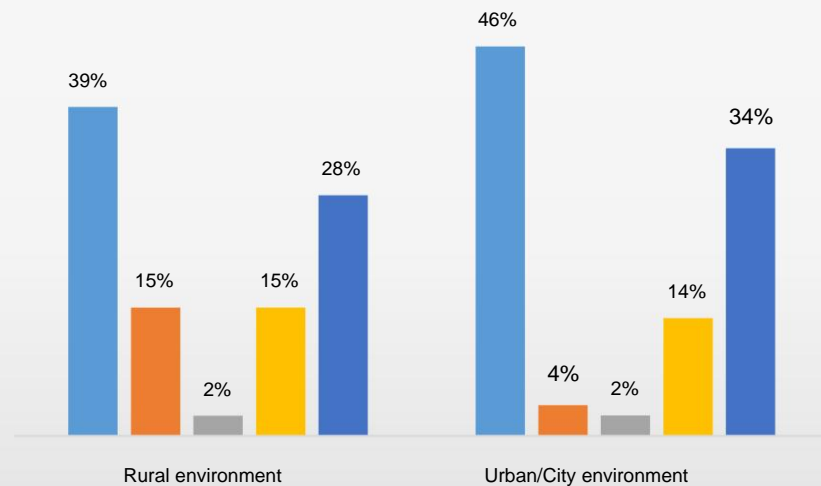


12.2. Do you prefer to buy fruits and vegetables at farmers' markets or in stores or supermarkets/hypermarkets? (by region and total)

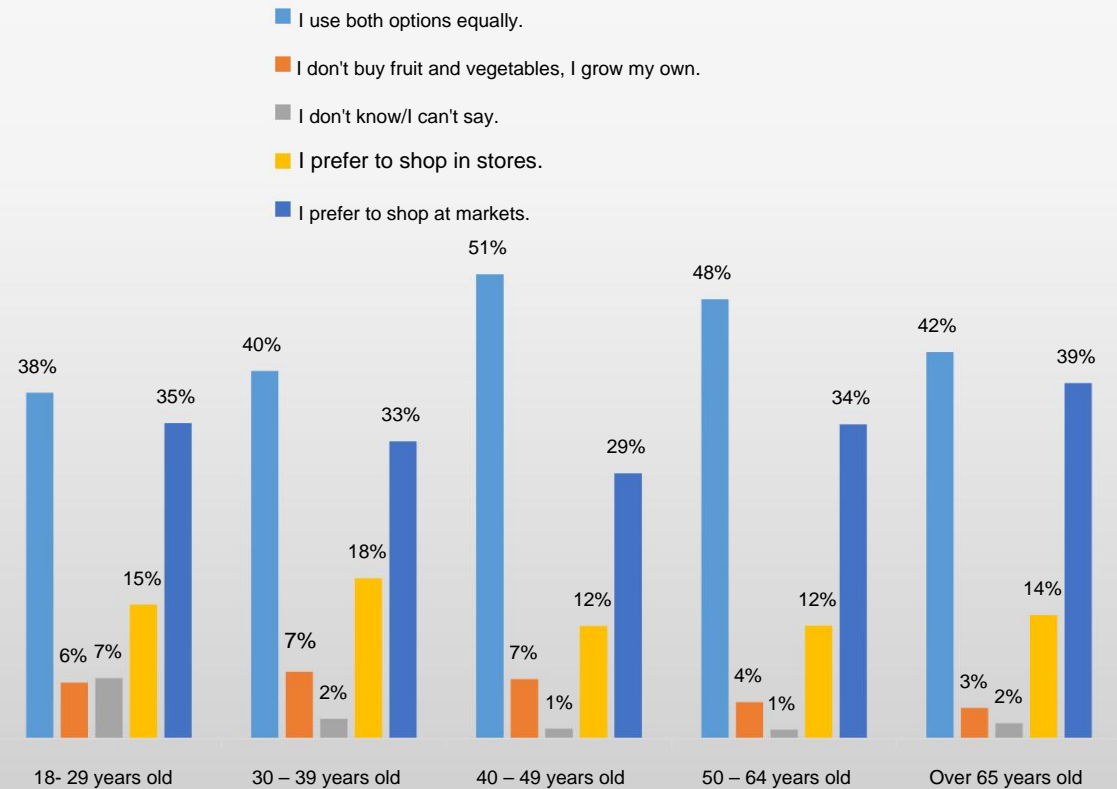
In all planning regions, the majority stated that they equally practice buying from farmers and supermarkets for the listed products. The Southeast region is the only one where the choice to buy in stores is in second place, while the Pelagonija and East regions have the highest share of respondents who prefer to shop at markets as a second option.



12.3. Do you prefer to buy fruits and vegetables at farmers' markets or in stores or supermarkets/hypermarkets? (by place of residence and age)

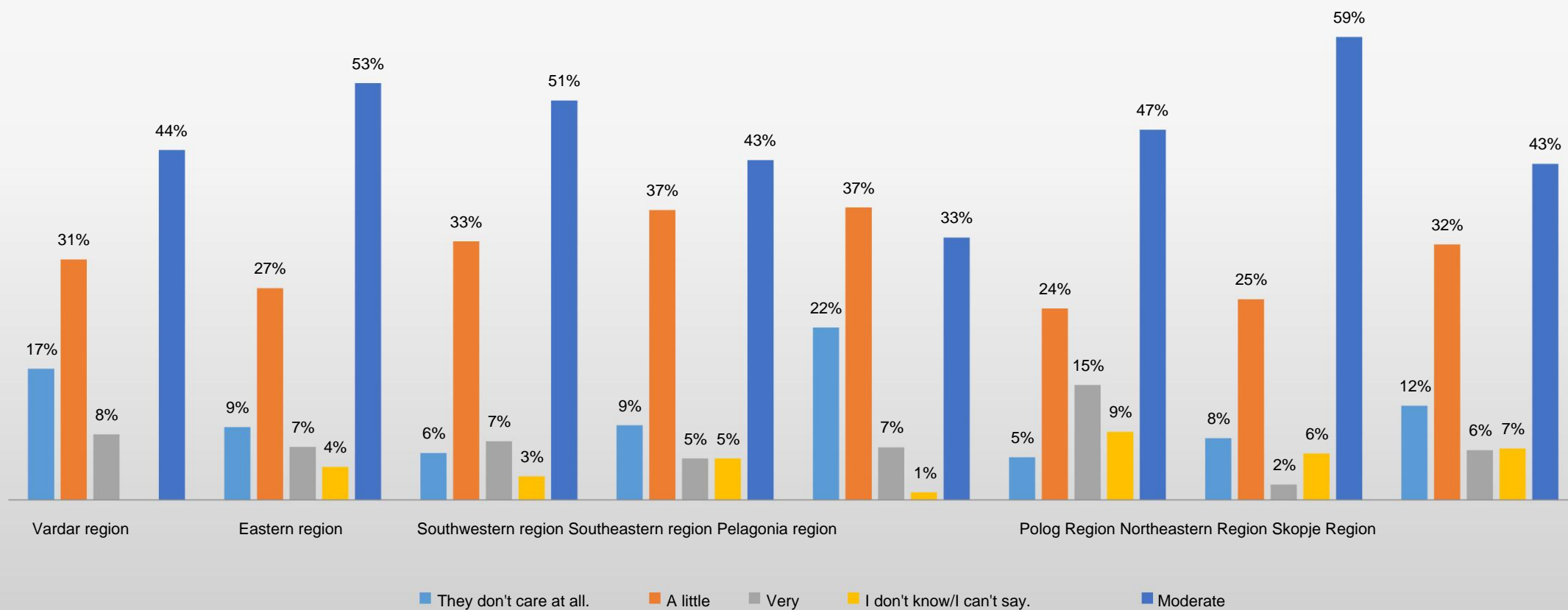


Preferences for where to buy fruit and vegetables do not differ between rural and urban respondents, nor do they differ across age groups. Both options prevail everywhere, with the exception of a significantly higher percentage of respondents in rural areas who responded that they grow their own fruit and vegetables.



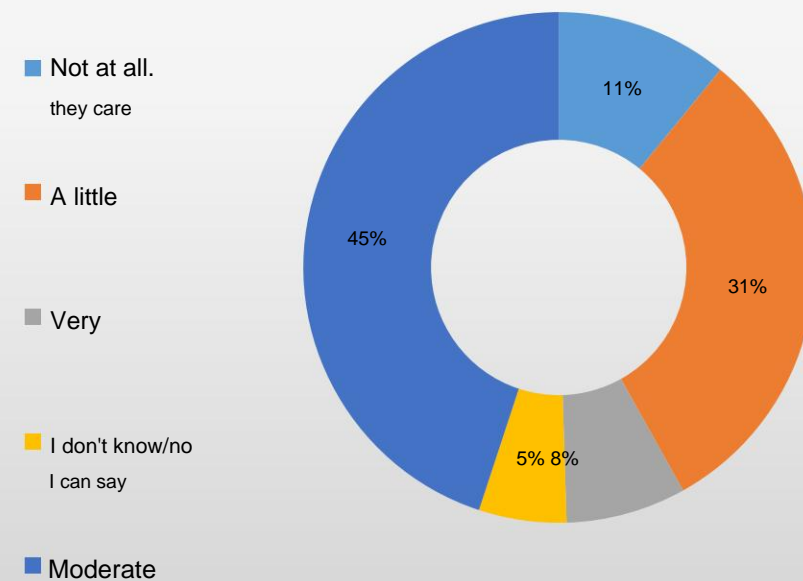
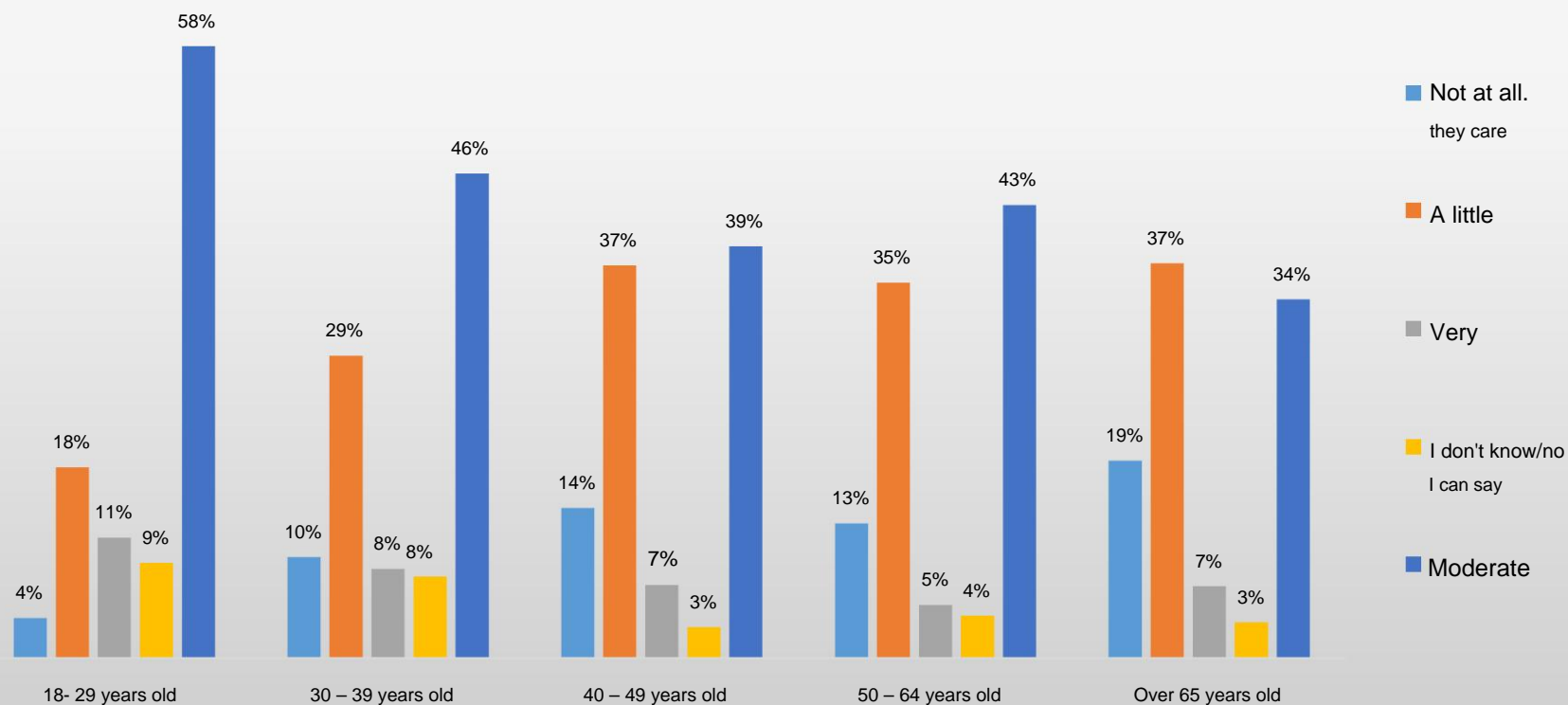
12.4. In your opinion, to what extent do Macedonian food producers ensure that their food is safe for consumption?

The dominant view is that domestic food producers care about its quality, but the fact that about a third of respondents in all planning regions believe that domestic producers care little about quality is worrying.



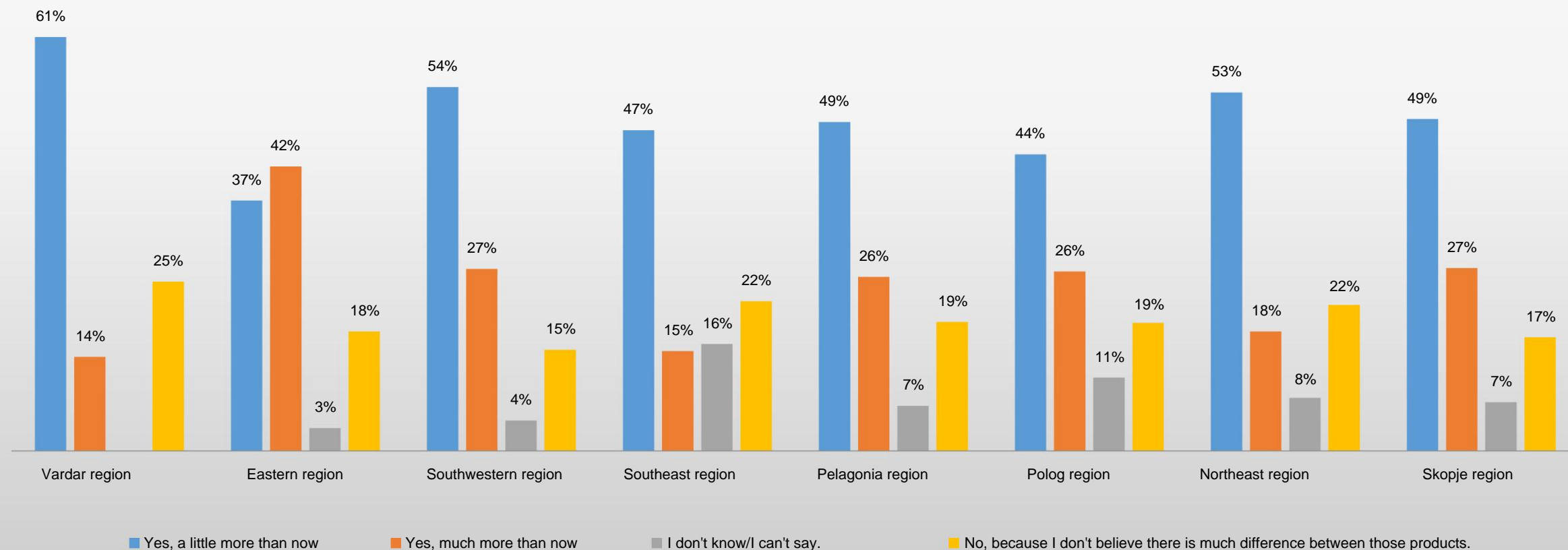
12.5. In your opinion, to what extent do Macedonian food producers ensure that their food is safe for consumption? (by age and total)

The largest percentage of the total respondents (45%) is of the opinion that there is moderate concern for safety, and a significant percentage is among the age groups over 40 who believe that Macedonian producers care little about food being safe for consumption.



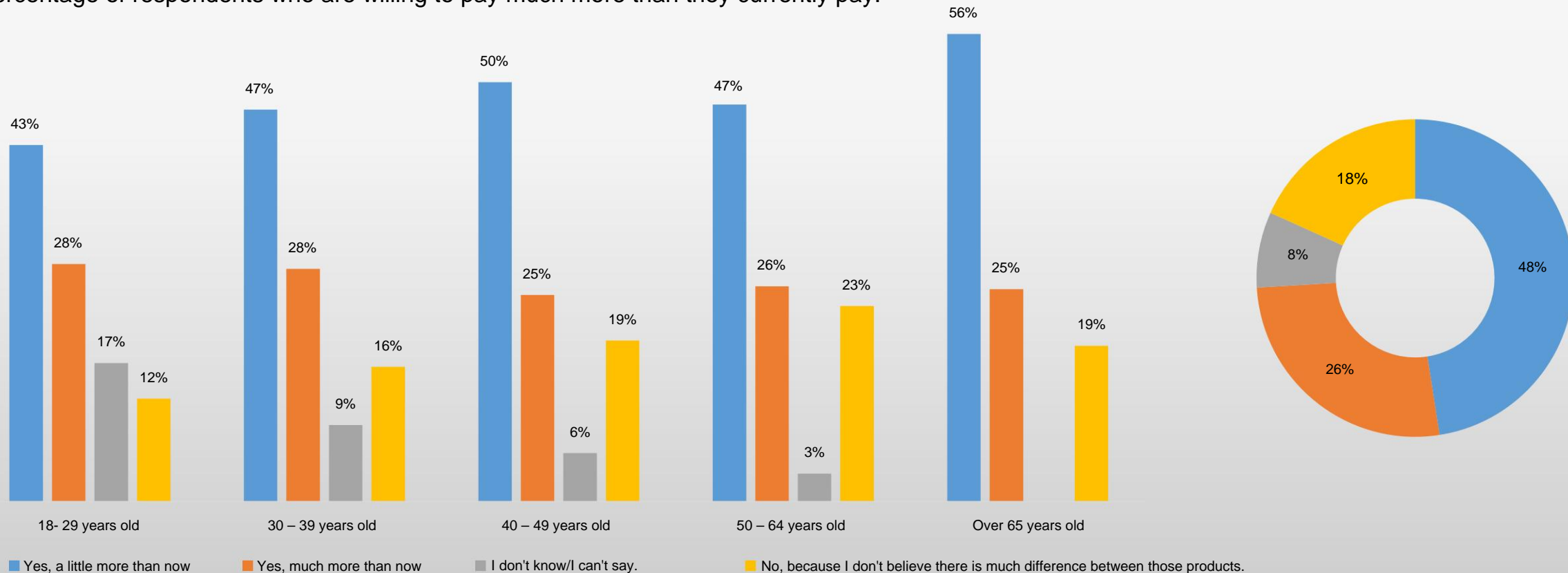
12.6. Would you be willing to pay more for a product that you know is healthier and more reliable than one that is not?

All respondents generally prefer to pay a little more than they have been doing so far for a better quality of a certain product. Only in the Eastern region, the largest number of respondents responded that they are willing to pay much more for a better quality product.



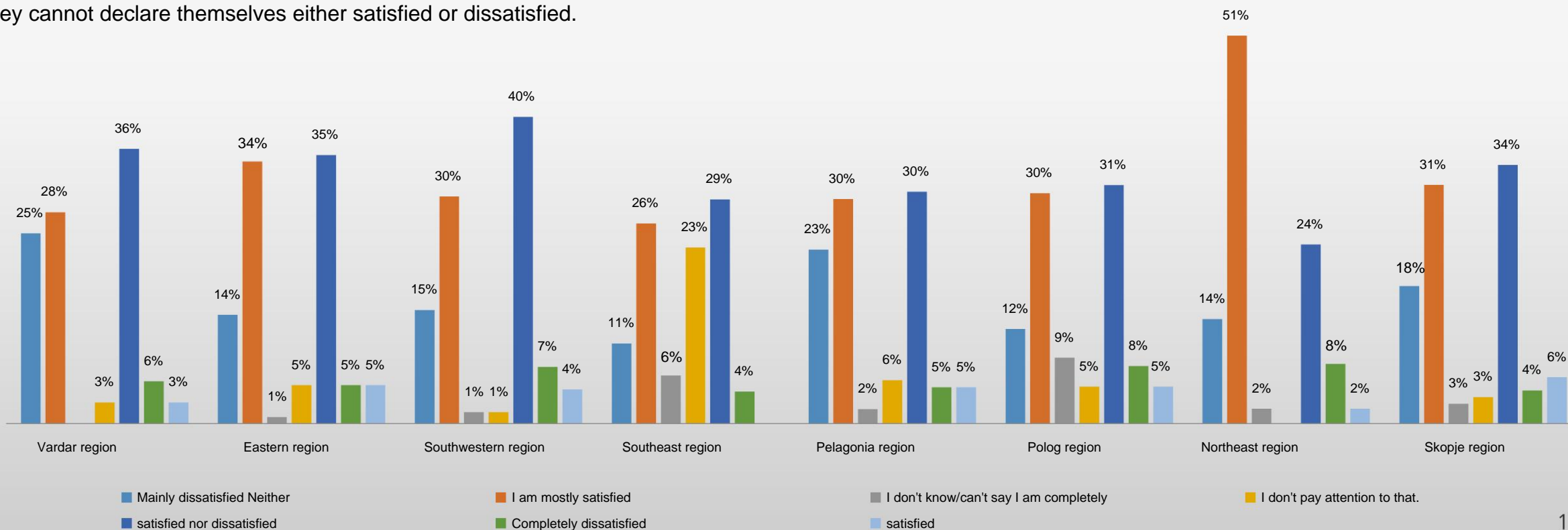
12.7. Would you be willing to pay more for a product that you know is healthier and more reliable than one that is not? (by age and total)

Across all age groups, it is noticeable that the majority is willing to pay a little more than they currently do, but there is also a significant percentage of respondents who are willing to pay much more than they currently pay.



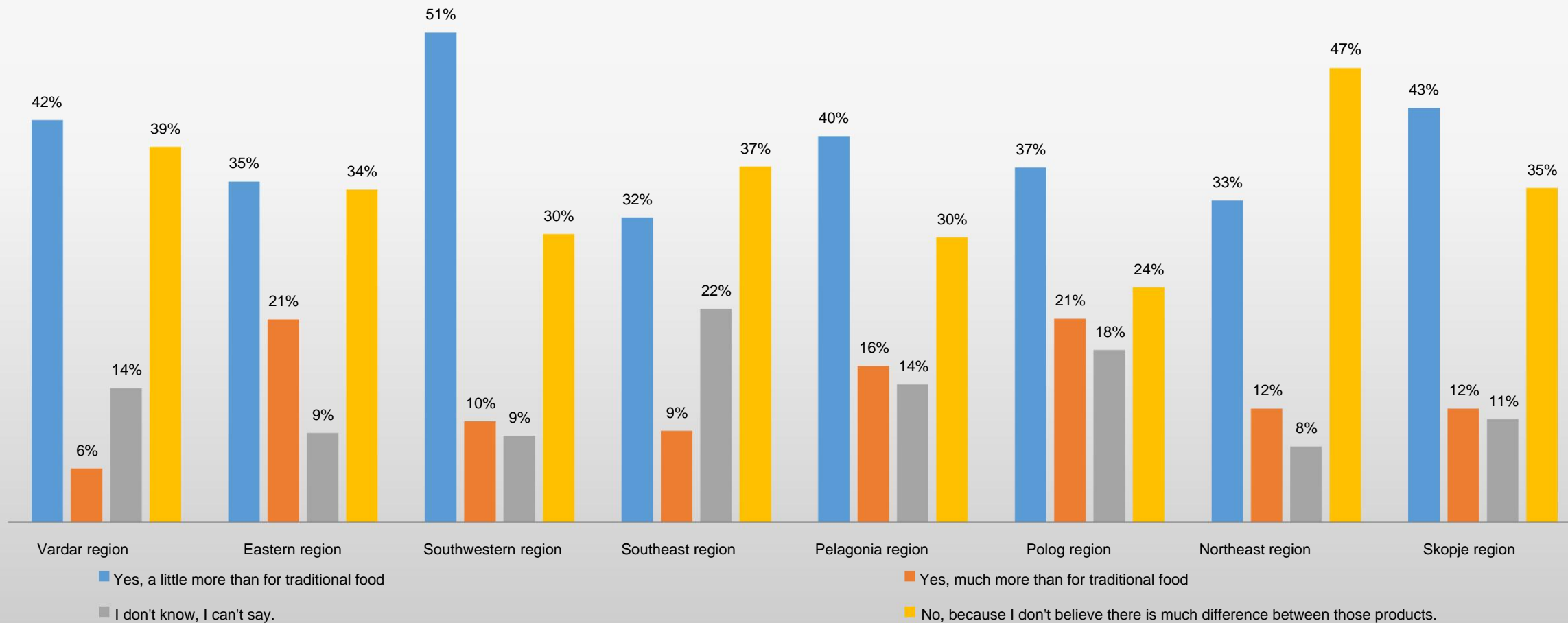
12.8. Are you satisfied with the amount of information you receive when buying food (nutritional value, ingredients, expiration date, origin, etc.)?

The responses show that more work needs to be done to improve consumer information regarding nutritional content, value, ingredients, expiration date and other data on food products. Only in the Northeast region, the majority respondents responded that they are mostly satisfied with the information they receive, and a large proportion of respondents in all planning regions cannot declare themselves either satisfied or dissatisfied.



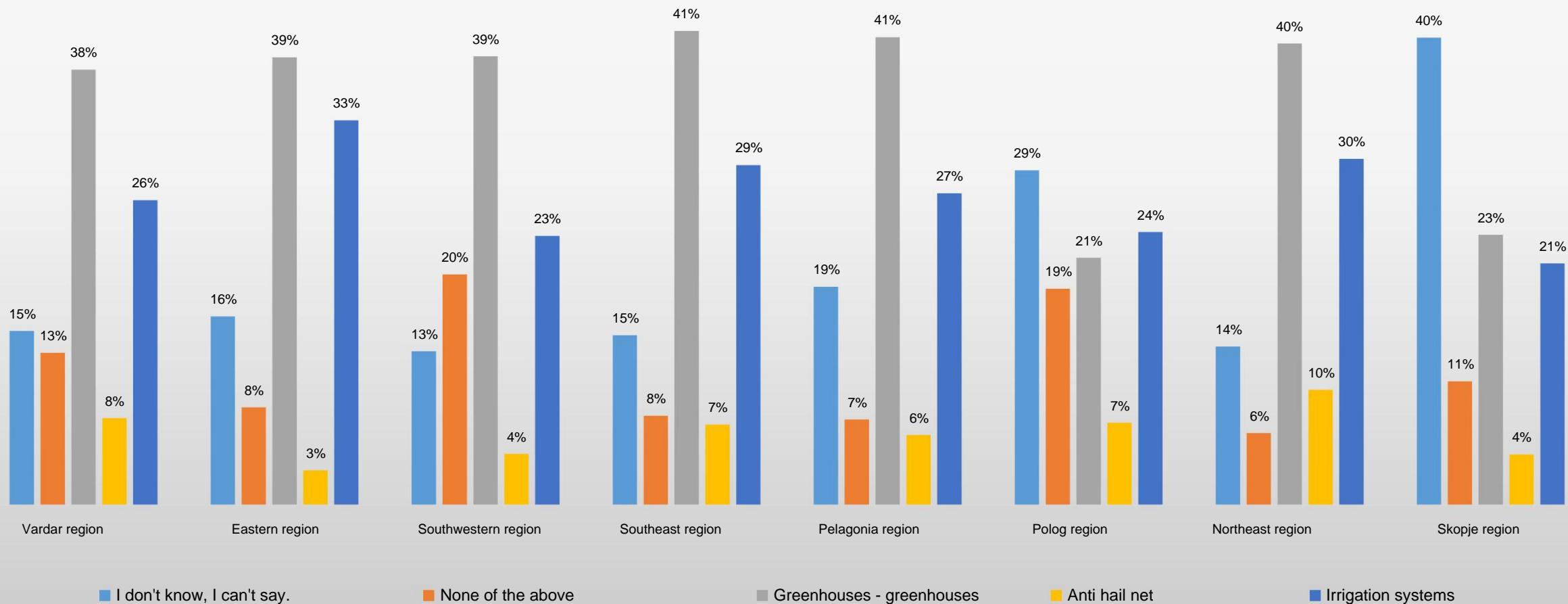
12.9. Would you be willing to pay more for organic than conventional food?

The majority of respondents in all planning regions except the Northeast and Southeast are willing to pay more for organic food.



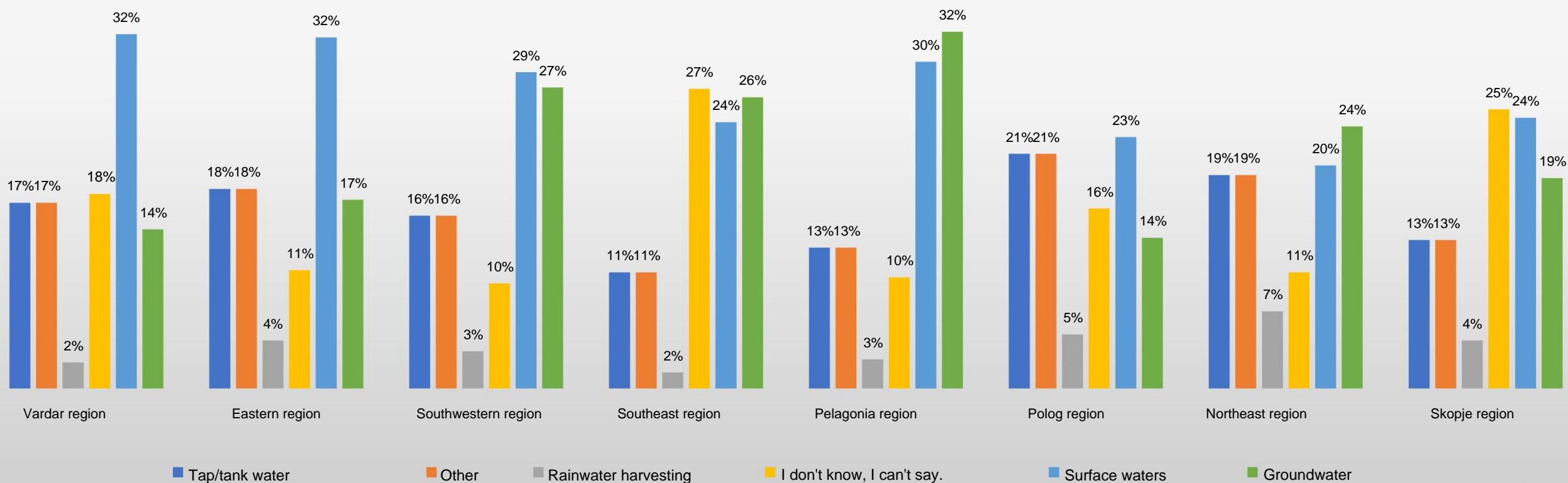
12.10 Have you heard of food producers in your village who have made/built any of the following?

Most often, respondents have heard about the construction of greenhouses in their/nearby villages. Only in the Skopje region, the most common choice is that they cannot answer the question. Next comes irrigation systems, and the least frequently chosen answer is anti-hail networks.



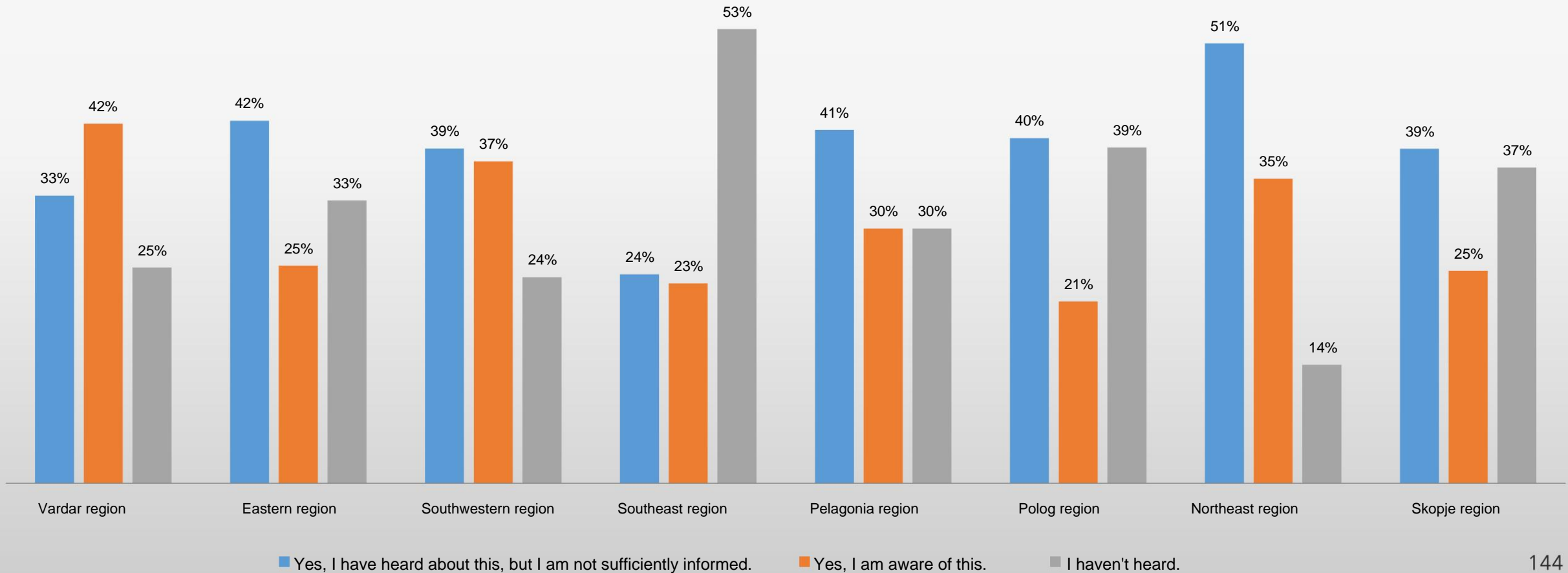
12.11. According to your knowledge, what water sources do farmers use for irrigation?

In terms of awareness of the irrigation methods used by farmers, surface waters are most commonly used in all planning regions, while groundwater is most commonly used in the Pelagonia and Northeast regions. In all regions, rainwater harvesting is the last option.



12.12. Have you heard about a decline in the quantity or quality of groundwater in the past ten years?

Most of the respondents have not heard about the quality and quantity of groundwater or are not sufficiently informed. However, in the Northeast and Southwest regions, more than a third of those surveyed stated that they are aware of this problem.



13. Conclusion

This research confirms the main challenges and priorities in the implementation of the Green Agenda for the Western Balkans in North Macedonia. **The results show that citizens have a high awareness of the importance of environmental protection, but at the same time concern about the effectiveness of institutions in dealing with environmental problems.** A large part of the respondents recognize that climate change, air, water and soil pollution, as well as deforestation, are key threats to the environment. The research notes that **there is general support for sustainable economic development that would not endanger the environment.** Citizens believe that **the state should take a more active role in solving environmental problems, through stricter regulations, increased penalties for polluters and better implementation of laws.** However, **there is distrust in how funds for environmental policies are allocated, which affects citizens' willingness to pay more for energy or infrastructure solutions with a smaller negative environmental footprint.** The results also indicate that citizens have relatively good knowledge of the Green Agenda, but additional efforts are needed for its better communication and implementation. Understanding of the concept of sustainable development increases with age, indicating the need for a stronger focus on education among younger generations. In terms of energy, the research confirms that traditional heating methods, such as wood, still dominate in certain regions, although there is interest in alternative and more environmentally friendly solutions if the state provides subsidies. **Further activities should be aimed at improving access to financial mechanisms for energy efficiency and renewable energy sources.** The research shows that **continuous investment is necessary in strengthening institutions, building administrative capacities, improving transparency mechanisms and public participation in environmental decision-making.** Only through cooperation between state institutions, civil society, academia and the business community will North Macedonia be able to accelerate its transition to a sustainable, carbon-neutral society.

This analysis represents a significant contribution to the process of implementing the Green Agenda for the Western Balkans, providing insight into the attitudes, priorities and needs of citizens. It can serve as a basis for creating more effective policies and measures for environmental protection, which will be accepted and supported by the public.