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AWARENESS OF YOUNG PEOPLE IN SERBIA OF THE EFFECTS OF CLIMATE CHANGE – A CASE STUDY

Abstract: *Despite the growing public interest and public debates on the topic of climate change, caused primarily by human production and consumption activities, there is a noticeable lack of research on the attitudes and behaviour of young people regarding climate change in the Serbian social context. Although young people are the future of every society and the bearers of development, their awareness and attitudes about climate change and pro-environmental behaviour in the form of reducing negative human impact on the environment have not been sufficiently researched. In this paper, we focused on examining the relationship between young people's awareness of climate change and behaviour in the form of reducing negative impact on the environment in Serbia. The study is based on a survey conducted as part of the project entitled "Youth and Climate Change." We surveyed students of the Faculty of Occupational Safety in Niš with the aim of finding out what they think and feel about climate change and what activities they are ready to do to contribute to reducing the impact of climate change on Serbian society.*

Keywords: youth, climate change, youth awareness of climate change, pro-environmental behaviour

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INTRODUCTION

The main actors in both the existing and future challenges related to climate change, one of the key challenges of humanity, are young people (Steffen et al., 2015). Humanity is already facing the negative consequences of climate change, which is why scientists point to the need for urgent action (e.g. Ripple et al., 2021). Therefore, it is precisely today's generations of young people, as witnesses of the increasing dangers but also as future decision-makers and bearers of agreed-upon changes, who are in the best position to define a long-term collective response to climate change.

On the other hand, young people are also the most sensitive to the inherited decisions and approaches of older generations. Recently, there has been a collective action of young people in Serbia, who have engaged in the fight for environmental preservation through various associations. Despite growing public interest and public debates on the topic of ecology and human-caused climate change, a review of the available literature reveals a lack of research on the environmental attitudes and behaviour of young people, especially in the Serbian context.

There is no significant amount of research on the attitudes of young people in Serbia regarding the impact of climate change. Therefore, in this study, we started from the results of the research conducted in the

region. According to the obtained results (Šimac et al., 2021), the biggest increase in support for environmental protection was recorded among the Central European countries considered (Czech Republic, Hungary, Poland, Slovakia, and Slovenia) over a ten-year period (2008 vs. 2018). Previous research shows that sociodemographic characteristics (except for the level of education in some cases) are generally not relevant sources of differences in environmental attitudes and behaviour (Ančić et al., 2016; Landau et al., 2008; Šimac et al., 2021). Thus, Ančić et al. (2016), based on data from the International Social Survey Programme (ISSP) from 2011 and 2013, confirmed that a higher level of concern and willingness to act in the form of environmental protection, as well as recognition that the increase in temperature is caused by climate change, are important determinants of citizens' willingness to make material sacrifices for the sake of environmental protection. The findings indicate the importance of awareness and information about the negative consequences of climate change as potentially important determinants of pro-environmental behaviour. Of course, it should be noted that attitudes and behaviour regarding climate change and environmental care are intertwined with many other attitudes and dispositions, i.e. contextual characteristics such as values or worldviews at the individual or

societal level, which is confirmed by previous results (Brajdić Vuković, 2014; Brajdić Vuković, Ančić & Domazet, 2020; Kufrin, 2014).

The few studies to date on the environmental and climate attitudes and/or behaviour of young people have mostly been conducted on small convenience samples (Dolenec and Pejnović, 2014; Hadžiselimović, 2015; Lukšić et al., 2019) or as part of bachelor's theses (Cvetković, 2017; Toljan, 2020). Overall, the results show that young people are more or less informed and relatively aware of environmental problems and generally express a willingness to preserve the environment and natural resources (Gvozdanović et al., 2019; Lukšić et al., 2019; Stanić and Buzov, 2009). At the same time, they express a greater preference for simpler and more concrete activities for environmental protection (Hadžiselimović, 2015; Toljan, 2020).

Surveys show that young Europeans are equally or more interested and concerned about climate change than older people. Data from surveys of young people in countries such as Australia, Germany, and the United States (Borgstedt, Christ, and Reusswig, 2010; Thielking et al., 2002; Stevenson et al., 2014), show that women are more concerned about climate change than men. Thus, in some countries, female students self-assess themselves as more aware, while in others, male students do. According to individual research findings in the region, among secondary school students, female students express a more positive attitude towards environmental topics compared to male students (Dolenec and Pejnović, 2014), and female students are somewhat more environmentally aware and inclined to environmentally friendly behaviour than male students (Cvetković, 2017). Similarly, Henn, Sloam, and Nunes (2022), in a more comprehensive analysis of data from the 2017 European Values Study (EVS), found that among young people (aged 18-25) from ten countries, women are more likely to be environmentally active than men. Their findings also confirm the level of education of young people as an important source of differences in environmental activism, pointing to the importance of education for empowering and more intensively involving young people in environmental policies. We can assume that school, as an instrument of socialization, teaching, and upbringing, as in many other spheres of life, plays an important role in encouraging young people to act towards contributing to the fight against climate change.

In Serbian educational programs, climate education does not exist as a separate subject. Also, knowledge about environmental protection in primary school is studied as part of the content of other specialized subjects (e.g. The World Around Us; Nature and Society; Biology). Unlike research on the representation of environmental topics, no research has been conducted in Serbia that would examine in more detail the role of school in the formation of environmental attitudes and behaviour of young people. Thus far, the individual findings indicate that young

people believe that they do not have enough opportunities to learn about environmental protection issues in educational institutions (Gvozdanović et al., 2019).

Research goal and methodology

The research was designed to survey 90 young people aged 15 to 29. All respondents were students of the Faculty of Occupational Safety in Niš. The majority of respondents were from urban areas (77%) (Figure 4). The research was conducted on a unique random sample in a way that ensured reliable data analysis and objective conclusions. More precisely, all students of the Faculty of Occupational Safety had an online survey available, but only some completed it. The survey was conducted via Google Survey. Data was collected in May 2024. A questionnaire with open and closed questions was created for the respondents. The respondents included in the research were guaranteed anonymity, which contributed to obtaining more honest and accurate data. Data entry and data processing were done using SPSS (Statistical Package for Social Sciences) software, which is used for data processing and analysis, with the necessary logical controls.

About the research sample

The aim of the quantitative research is to assess how familiar young people in Serbia are with the topic of *climate change*, emissions of harmful gases, their impact on human health and the environment, and risk factors associated with climate change in the local environment and the country. The results of this research will serve as a basis for determining priorities in this area, i.e. including the opinions of young people in future development and policy-making in the field of climate change. The research was conducted on a sample of 90 students, who can generally be classified as young people up to 29 years of age.

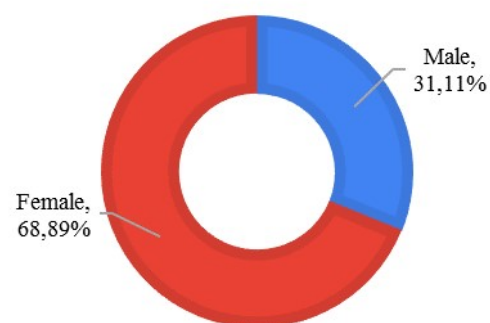


Figure 1. Gender structure (%)

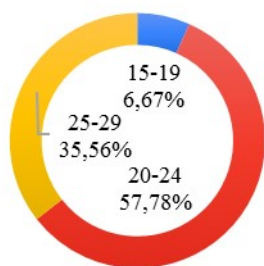


Figure 2. Age structure (%)

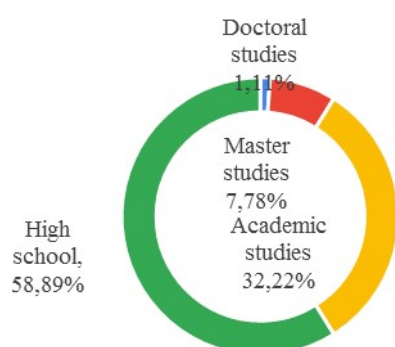


Figure 3. Educational structure (%)

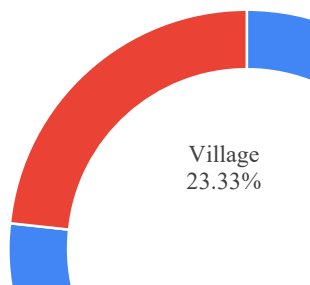


Figure 4. Place of residence of the respondents (%)

In terms of the demographic characteristics of the research sample, specifically its gender structure, slightly more than two-thirds of the respondents are female. More precisely, the sample consists of 68.99% women and 31.11% men. This indicates that there is a higher representation of female students compared to male students in the surveyed sample (Figure 1). The most represented age category is from 20 to 24 years of age (57.78%) (Figure 2). The largest percentage of respondents has completed secondary school (58.89%) (Figure 3), while 76.67% of respondents are city residents (Figure 4).

Presentation and analysis of research results

The research entitled *Attitudes of Youth in Serbia on the Impact of Climate Change* was carried out by a team of researchers from the Faculty of Occupational Safety in Niš, based on the research conducted globally

and in southeastern Europe by the United Nations Development Program (UNDP). The aim of the research was to assess the extent to which the topic of climate change is present among young people in Serbia. In addition, a preliminary assessment was made of key perceptions and awareness of young people of the topic of climate change, emissions of harmful gases, their impact on human health and the environment, the recognition of risk factors associated with climate change in the local environment and the country, the future development of Serbia regarding climate change, etc. Young people in Serbia believe that the impact of climate change is a major problem, which is especially pronounced at the global level (87%). The research showed that young people from urban areas aged 25 to 29 are more aware of the impact of climate change at the national and global level.

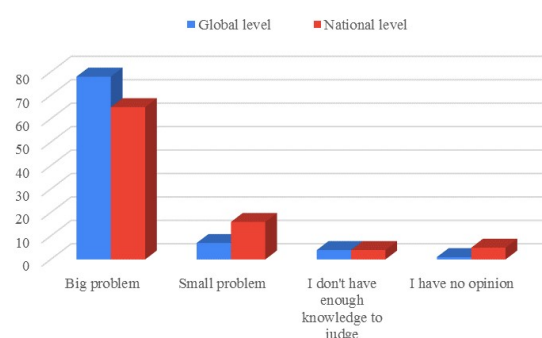


Figure 5. Evaluation of the effects of climate change on the national and global level (%)

The level of awareness of young people of all the consequences of climate change can be assessed as high (more than 70%). They are most familiar with the negative consequences of climate change on plants and animals (97.77%) and the impact on the frequency of extreme weather events (96.66%), while they are least familiar with the negative consequences of erosion (76.66%). Women are more familiar with the consequences of climate change than men, and greater awareness is developed among young people aged 25 to 29 compared to young people aged 15 to 19, or 20 to 24. Observed by type of settlement, young people from urban areas are more familiar with the consequences of climate change than those from rural areas (Figure 6).

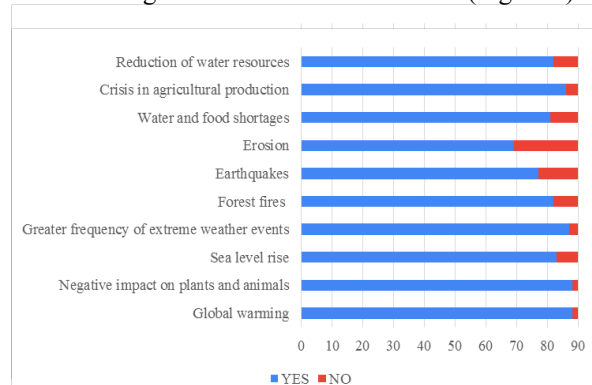


Figure 6. Knowledge about the consequences of climate change (%)

A third of young people feel concerned about climate change (32.22%). Responsibility for environmental protection was shown by 18.99% of young people. Ten percent of young people feel scared and 12.22% feel powerless to change anything (Figure 7).

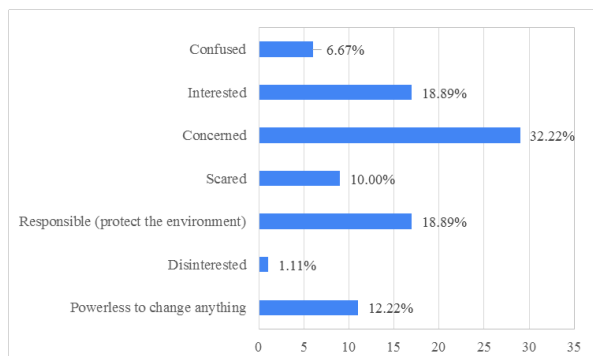


Figure 7. How do you feel about climate change? (%)

Two-thirds of young people identified industry/factories (87.77%) and traffic and air pollution (81.11%) as the main causes of climate change, but uncontrolled waste generation and disposal (48.88%) is not far behind. A small percentage of young people stated that climate change is a natural process (3.33%). Unlike young people from urban areas who recognized uncontrolled waste generation and disposal as the biggest cause of climate change, young people from rural areas believe that industry and factories are some of the main activities contributing to the occurrence of climate change (Figure 8).

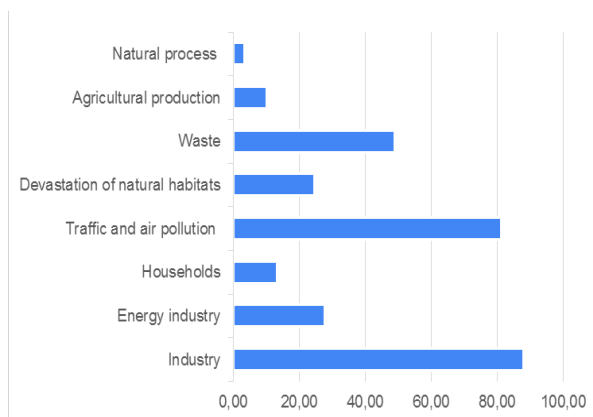


Figure 8. What contributes most to climate change? (%)

More than half of the respondents (68.89%) believe that most young people are unaware that their behaviour can affect climate change, while 11.11% of the respondents believe that young people are not aware of this at all (Figure 9).

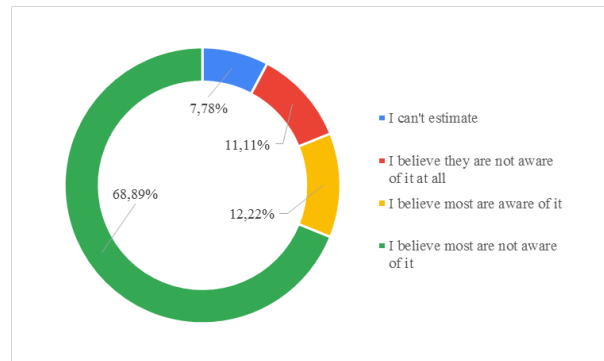


Figure 9. Are young people in Serbia aware that they can influence climate change through their behaviour? (%)

Slightly more than half of the respondents indicated that they were familiar with the UN Framework Convention on Climate Change (UNFCCC) and the Paris Agreement, as well as with Serbia's commitments to reduce greenhouse gas emissions (58.69%). In terms of the respondents' age, older respondents (25 to 29) are more familiar with the UN Convention and the Paris Agreement than younger ones. On the other hand, young people from rural areas are less familiar with the UN Convention and the Paris Agreement, as well as Serbia's commitments, than young people from urban areas (Figures 10 and 11).

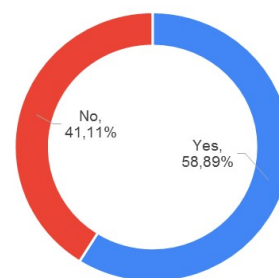


Figure 10. Are you familiar with the UN Framework Convention on Climate Change (UNFCCC) and the Paris Agreement (%)?

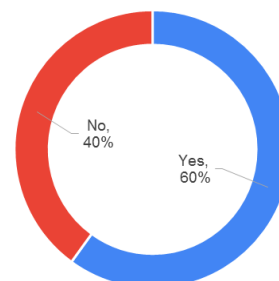


Figure 11. Are you aware of the commitments that Serbia has made (as well as other countries that are signatories to the Paris Agreement) to reduce greenhouse gas emissions (%)?

Of the total number of respondents, as many as 26.67% cannot assess how informed they are about climate change. On the other hand, 58.89% of the respondents believe that they are well informed, while 13.33% believe that they are poorly informed about climate change. More women believe that they are well informed about climate change compared to men, while a greater number of men cannot assess their level of informedness (Figure 12).

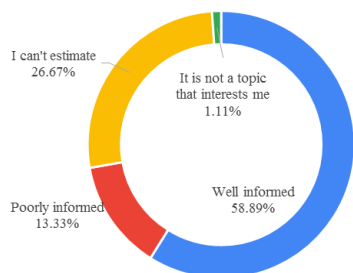


Figure 12. Level of informedness about climate change (%)

Around half of the respondents (51.11%) learned about climate change at university; considering that we surveyed the student population, such results are expected. In addition, 50% of the respondents learned about it through internet portals and websites, while 42.22% of the respondents learned about it through social networks. It was noted that young people listen to the radio or read the daily press very little, so they receive very little information in this way, and there is also a small percentage of those who attend lectures, round tables, and panels on this topic (Figure 13).

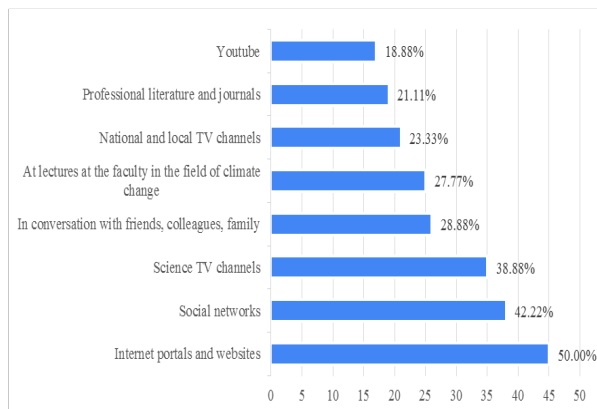


Figure 13. How do you get information about climate change? (%)

Interest in the topic of climate change was expressed by 33.33% of the respondents, as it is very important for them to learn more about this topic. Almost half of the sample (46.67%) stated that they would learn more if they knew that they could contribute to reducing harmful impacts. Interest in this topic is equally represented among young people in both urban and rural areas, while young people aged 15 to 19 showed less interest in receiving more information about climate change compared to older respondents (Figure 14).

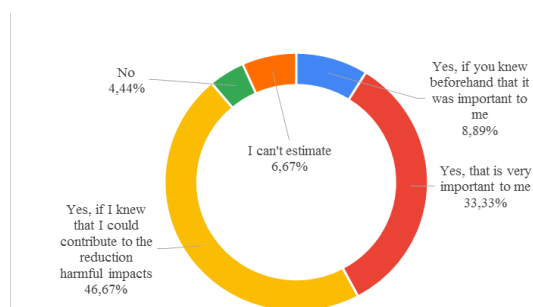


Figure 14. Do you want to learn more about climate change? (%)

Almost one in two respondents rates their awareness of the impacts of climate change as “sufficient” at all levels. Around 20% of the respondents state that they do not have enough knowledge about the impacts of climate change at all levels (Figure 15).

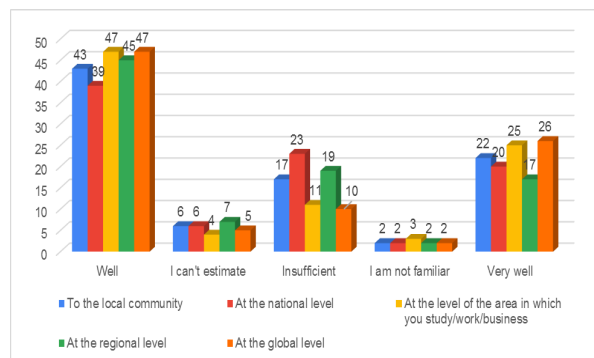


Figure 15. Are you aware of the impact of climate change (%)

Young people are generally equally pessimistic about climate change in the near and distant future, but they are more concerned about the far future (Figure 16).

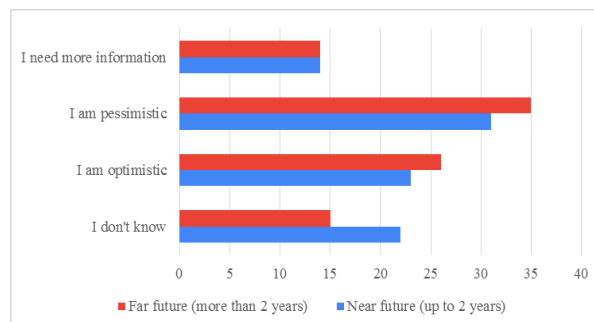


Figure 16. In the context of climate change, how do you view the near and far future? (%)

Young people in Serbia believe that climate change has a significant impact on the health and lives of people in general (over 75%) (Figure 17). The largest number of respondents, more precisely 80 out of 90 respondents, said that climate change has a significant impact on the health and lives of older people.

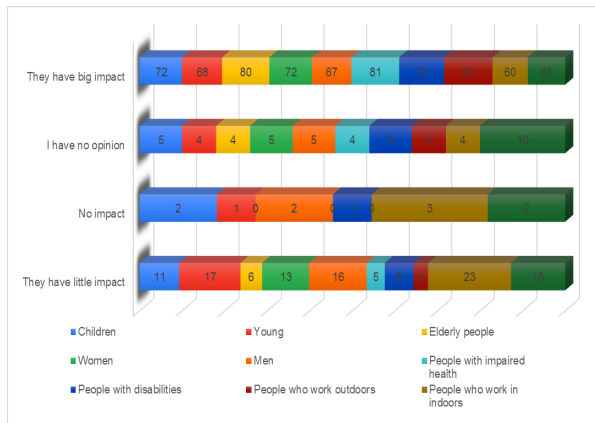


Figure 17. Impact of climate change on health and life (%)

The largest percentage of respondents (88.66%) believe that the state is responsible for the problems arising as a result of climate change, followed by the local community (68.88%) (Figure 18).

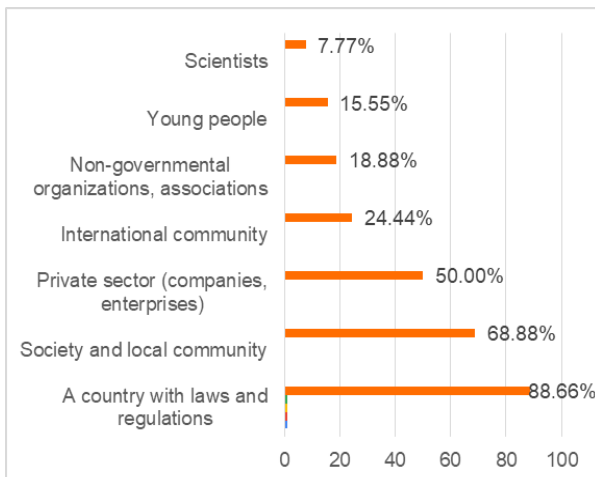


Figure 18. Who is responsible for the problems caused by climate change? (%)

The survey showed that young people are insufficiently familiar with climate change mitigation activities at all levels (35%) (Figure 19).

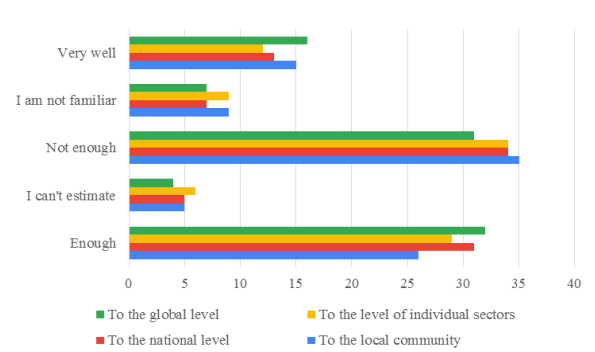


Figure 19. Awareness of activities in the field of climate change mitigation (%)

Among the respondents of all ages, there is a great willingness to change their lifestyle habits in order to protect the environment or reduce human impact on climate change.

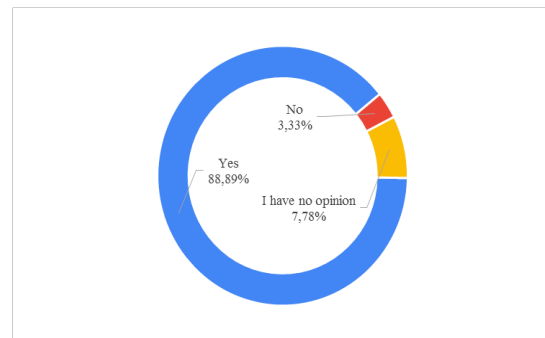


Figure 20. Are you willing to change your lifestyle to reduce the negative impact of humans on the environment? (%)

The largest number of respondents, more precisely 57 out of a total of 90 respondents, stated that they walk every day, 21 respondents use public transportation, while 19 respondents stated that they buy environmentally friendly products every day (Figure 21).

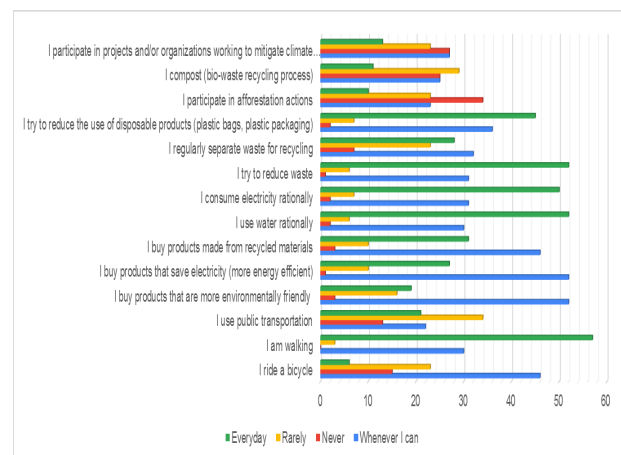


Figure 21. What do you do every day to mitigate the negative impact of humans on the environment? (%)

Concerning the priorities that Serbia should adopt in order to better adapt to climate change, the respondents believe that they should include the following: protecting nature and integrating climate change issues into all sectoral policies, investing in renewable energy sources, improving energy efficiency, and better managing biodiversity (Figure 22).

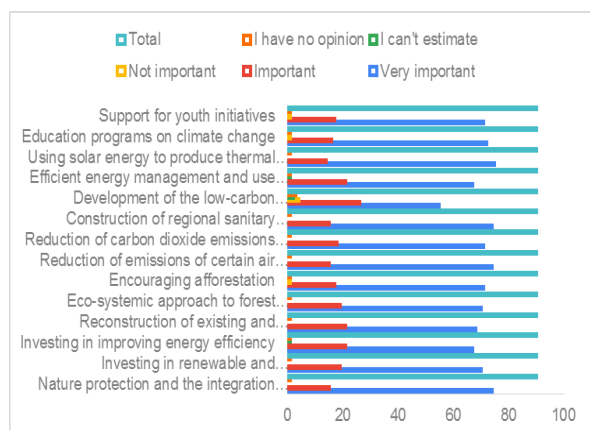


Figure 22. What priorities should Serbia adopt to better adapt to climate change? (%)

CONCLUSION

Based on the results of the research *Attitudes of Youth in Serbia on the Impact of Climate Change*, it can be concluded that young people have some knowledge about climate change and its impacts. Based on the research conducted and the analysis of the results obtained, several relevant conclusions can be drawn. The prevailing opinion among young people is that climate change is a very serious problem on a global level. Likewise, in Serbia, more than two-thirds of the respondents believe that climate change is a problem. Young people's awareness of the consequences of climate change is at a high level. They most often cited negative impacts on plants and animals, frequent weather-induced disasters, rising sea levels, and forest fires as possible effects or consequences of climate change. Young people of all age categories share the opinion that industries/factories, traffic, and uncontrolled waste generation and disposal are the main causes of climate change. More than half of young people are unaware that their behaviour can affect climate change. Young people in Serbia are familiar with the UN Framework Convention on Climate Change (UNFCCC) and the Paris Agreement, as well as with Serbia's obligations to reduce greenhouse gas emissions. More than half of young people believe that they are informed about climate change. The most suitable way to acquire new knowledge and information about climate change is the Internet, social networks, and scientific TV channels, as well as educational institutions. Women are more interested in learning about climate change than men, especially if they know in advance that they can contribute to reducing its harmful effects. The dominant view is that climate change has a significant impact on people's health and lives, which is especially pronounced among older people. Young people believe that the state is most responsible for solving problems arising as a result of climate change. The contribution of young people to environmental protection is reflected in daily walking instead of using motor vehicle transport, reducing waste, and using environmentally friendly products. Young people

believe that it is very important for Serbia to choose its priorities regarding climate change, the most prominent of which are the following: nature protection and integration of climate change issues into all sectoral policies, investment in renewable energy sources, improvement of energy efficiency, and better management of biodiversity.

The results of this research should be taken with caution, given the type and size of the sample. However, despite these methodological shortcomings, the research provided a wealth of information about the attitudes and values of young people in determining their attitude towards the most significant problem of the 21st century – climate change.

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