

YOUTH ATTITUDES TO NATURE AND CLIMATE CHANGE: EVIDENCE FROM EUROPEAN SOCIAL SURVEY

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Abstract

In the discourse of social sciences, more and more attention is paid to the analysis of nature as a value and the problems of climate change. However, in the context of sustainable development, the attitude of different generations towards nature and climate change is important. Although the youth as a social group is seen as the future generation, it is noticeable that not many studies are conducted in Lithuania, where the opinion of the youth and their responsibility for changes in nature and climate change processes are evaluated. Accordingly, the aim of the research – to determine whether nature and climate change are important to youth in Lithuania. Data from European Social Survey (ESS) Round 10 (2021) were used. Logical analysis and synthesis, comparison method, statistical data analysis were applied, Pearson correlation coefficient was calculated. The research results revealed that youth sufficiently perceive nature as a value and see climate change as a problem that must be not only observed but also solved.

Keywords: *youth, attitude towards nature, climate change, European Social Survey.*

JEL Codes: *J13, R11, Q56, C83.*

Introduction

Scientists increasingly recognize that the current young generation has an interest in their future lives. According to the concept of sustainable development, ensuring the wellbeing of future generations is a big challenge that today's generation is trying to solve by preparing various documents, making various decisions related to nature protection and prevention for the future. Various countries recognize that the climate is changing because of the way people live these days, especially in richer, economically developed countries (European Commission, 2009).

Although people's everyday individual thoughts about nature protection are often isolated, when thinking about specific social groups, their opinion becomes much more important and must be taken into account. Therefore, young people's speech, attitude towards nature and its preservation is not only important for the expression of the country's democracy, but can become an important

factor, which makes it worthwhile to carry out research in this area more often according to specialized age groups. According to the report of the Ministry of the Environment of the Republic of Lithuania on the threats posed by climate change to human health (Lietuvos Respublikos..., 2014), young people are identified as the most vulnerable/sensitive group in the population. Since the majority of the representatives of this group are minors, it is understandable that adults should take care of their wellbeing. Scientific works reveal that there is a predominance of research that evaluates the attitude of adults towards nature and climate change, while the attitude of young people is missed (Eurobarometer, 2009; Weber, 2010; Lee et al., 2020). In the context of climate and environmental changes, youth as a social group is considered to be vulnerable. The vulnerability of the youth is based on the fact that the opinion of the youth is not listened to enough, the current youth represent the future generation whose

lives are conditionally determined by the current decisions related to the mitigation of climate change. Children and young people are a particularly important age group, because for society to grow in the area of ecological awareness, targeted ecological education, starting from an early age, is very important (Kavaliauskaitė, Leščinskaitė, 2019). Younger generations still insufficiently integrated into science-policy and decision-making arenas in general (Lim et al., 2017; Rana et al., 2020). As Lee et al. (2020) stated, youth voices on climate change, nature or general environment have never been more important as it is noticed in today scientific research. Researchers found that scientifically accurate knowledge generally increased with age, although misconceptions persisted across the age range. Taddicken et al. (2018) in their research suggested that researchers should consider what to measure and how while speaking about what people know about climate change, because discussions about climate change often reflect uncertainty. Also, conducting research related to young people's attitudes towards nature and climate change is one of the ways to get to know young people and their values and attitudes towards nature and climate change. Directional activities that develop a young person's personal, social and educational competences are closely related to values cultivated from childhood. Engaging young people to the discussions related to changes of climate and nature they can contribute in finding new ways how to mitigate the existing and progressing climate and nature problems. This means that the voice, opinion disclosed by young generation can be valuable as showing their position on this challenging topic.

Scientists pay attention and analyse various aspects related youth attitudes and engagement in perceiving nature protection and climate change as crucial topic. Poortinga et al. (2019) pointed out that both local values and worldviews as factors influence cross-cultural differences in climate change awareness and engagement of youth. Following the mentioned authors, this is called like youth participation in

environmental politics. Accordingly, attitudes to nature as a value or care for nature become more and more important for youth as representatives of the future life. Rana et al. (2020) emphasized that engaging young people in nature based activities – it gives them the opportunity to shape their future, because they can feel the value of nature by positive experiences. Bowers et al. (2021) analysed youth direct associations between time in nature, connection to nature. Their research results showed significant associations between nature-based experiences and positive for youth development. The authors noted that youth can access and enjoy the diverse benefits by nature and nature-based recreation opportunities.

Prendergast et al. (2021) analysed youth attitudes and participation in climate protests as it shows some attitude to changing environment. Their international research revealed that youth who agreed with the statement 'living in harmony with nature and animals' – it was important for their wellbeing, were also more likely to strike than their peers. Moreover even 85 percent of all young protestors in this study agreed that climate change was a serious issue. The research explored that youth engaging in climate action should be analysed both following local contexts and international comparisons, it effects their perceptions on climate change solutions and environmental concerns (Martyn and Dimitra, 2019; Prendergast et al., 2021). Other researchers focused on territorial differences of wellbeing and climate change interface (Vaznonienė and Vaznonis, 2021), analysed people's socio-economic characteristics and their perception of nature as a value (Wojewódzka-Wiewiórska et al., 2022) or nature as positive factor for youth development (Gifford and Nilsson, 2014; Bowers et al. (2021), etc. As it was stated by Warren (2019), youth as future generation possibly will be more affected by a failure to deal with climate change. This implies that concerns about living environment, life style in these days is very important for the future. It is not easy for young people to understand what was done in the past for the protection of nature, but what

they hear now, see on television, while traveling, studying - they are well aware of what consequences are possible in the future and that the climate change will not disappear immediately, but it progresses.

According to mention above the *research problem* is formulated – does youth perceive nature and climate changes as a value? *The aim of the research* – to determine whether nature and climate change are important to youth in Lithuania. *The research object* – youth attitude towards nature and climate change.

The results of the conducted research are important in a scientific sense, as they allow to expand knowledge about young people's attitude towards climate change and nature as a value; from the practical point of view, the relevance of the study is manifested in the fact that there is an opportunity to explore the tools, activities etc. needed to educate young people in the context of environmental protection.

Research methodology

Data from European Social Survey Round 10 (2021) Core module about climate change were used to analyse and present the research results. In general, the questions aimed disclosing how people understand climate change, changes occurring in nature, what are their beliefs about the causes and effects of climate change are asked and important of various social groups. This research is based on the questions used in the ESS survey, which reveal the subjective views and perceptions of young people on how they value nature and climate change. According to the laws and youth policy in Lithuania, youth is perceived from 14 to 29 years old, but according to ESS methodology it is 15-29 years old group. The sample size was formed under the ESS sampling methodology (European Social Survey, 2022). The sample was 233 young respondents or 14 percent from total sample for Lithuania (N=1659).

The subjective approach allows each respondent to express his personal perception

of nature and climate change, shows in general how young people as a social group evaluate the changes taking place in nature due to climate change. Such questions related to the topic were taken into account ((European Social Survey, 2020):

- How worried are you about climate change?
- To what extent do you feel a personal responsibility to try to reduce climate change?
- Do you think that climate change is caused by natural processes, human activity, or both?
- Now imagine that large numbers of people limited their energy use. How likely do you think it is that this would reduce climate change?
- And how likely do you think it is that governments in enough countries will take action that reduces climate change?
- Now I will briefly describe some people. Please listen to each description and tell me how much each person is or is not like you (He/she strongly believes that people should care for nature. Looking after the environment is important to him/her).

Logical analysis and synthesis, comparison methods were applied, statistical data analysis was performed, Pearson correlation coefficient calculated. The research results were analyzed using Ms Excel and the IBM SPSS Statistics 27 program packages and presented graphically in the form of graphs and tables.

Research results

The variety of theoretical approaches has revealed that young people in various countries are becoming more and more active in their efforts to contribute to nature protection and climate change mitigation. Therefore, it is important to know and understand how the mentioned problems are evaluated by the youth of Lithuania.

After analyzing the data on youth attitudes to nature and climate change, the

following results were obtained. Descriptive statistics (Table 1) reveals that the number of respondents who answered to separate

questions was different what effected means and other indicators.

Table 1. General descriptive statistics (own calculation)

Questions	Mean	Std. Deviation	N
How worried are you about climate change?	3,19	0,974	1603
To what extent do you feel a personal responsibility to try to reduce climate change?	6,09	2,656	1579
Do you think that climate change is caused by natural processes, human activity, or both?	2,52	1,182	1624
Now imagine that large numbers of people limited their energy use. How likely do you think it is that this would reduce climate change?	2,47	0,723	529
How likely do you think it is that large numbers of people will actually limit their energy use to try to reduce climate change?	2,18	0,649	526
And how likely do you think it is that governments in enough countries will take action that reduces climate change?	2,35	0,717	519
How likely do you think it is that large numbers of people will actually limit their energy use to try to reduce climate change?	2,71	1,602	546

The given several questions related to the analysed topic enable to see what is the subjective youth attitudes on nature and climate change. Firstly, the general opinion about climate change revealed that even 40 percent of young respondents were somewhat

worried, but similar 39 percent of respondents mentioned that they were really worried. It was observed that there were more respondents who tended to be more worried than not worried about climate change (Fig. 1).

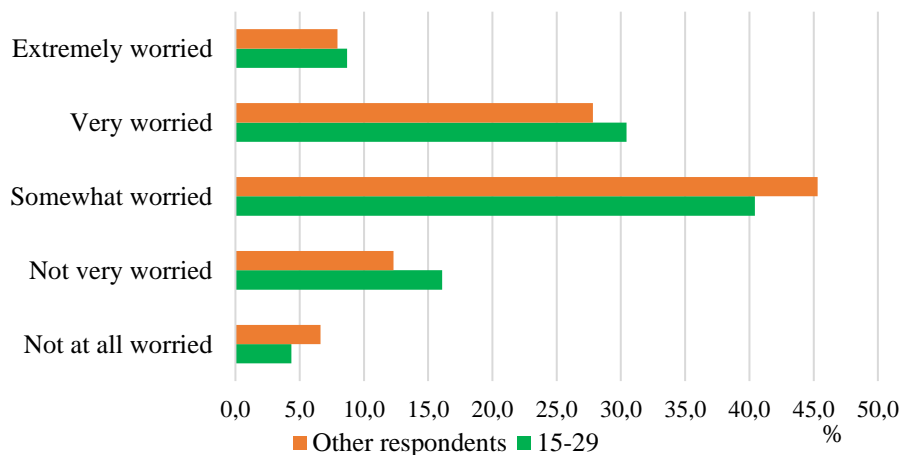


Figure 1. Youth answers to question “How worried are you about climate change?”, percent (Own calculation; the answers covered statements from Extremely worried to Not at all worried)

Comparing the opinion of young people (15-29 years) with older respondents (Other respondents), it was noticed that the rest of the research participants were more likely to worry about climate change than to remain indifferent to this issue. Even 36 percent of older respondents agreed that they are concerned about climate change. It is worth noting that there were more young people than

other respondents who really worried about the climate change. So, these data reflect insights from the relevance of the topic that in current societies there are much more young people than elder people who think that climate change is a problem.

Figure 2 presents respondents opinion if they feel a personal responsibility to try to reduce climate change.

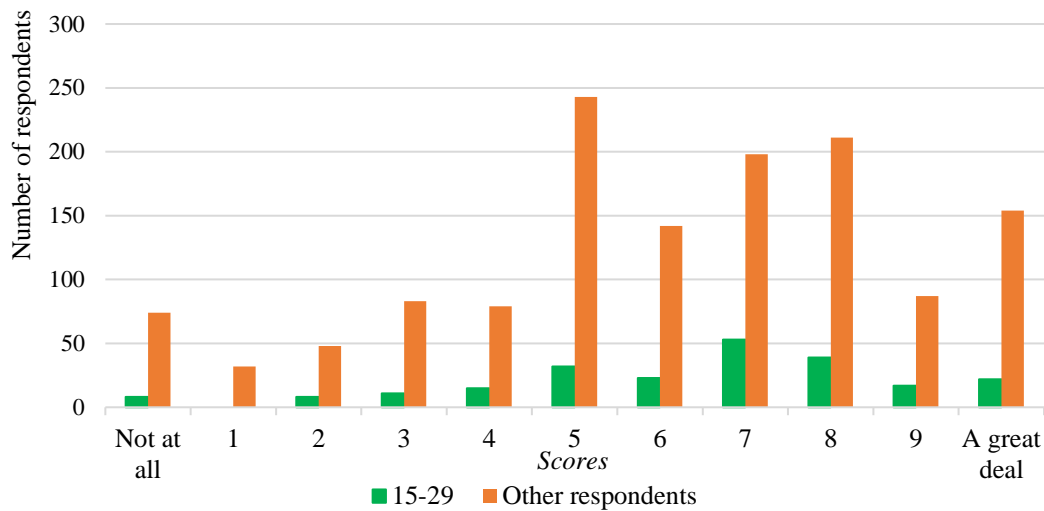


Figure 2. Youth answers to question "To what extent do you feel a personal responsibility to try to reduce climate change?"

(Own calculation; a scale was used, where 0 means Not at all and 10 means A great deal)

The positive insight is that there were more respondents who felt a personal responsibility to try to reduce climate change. Even 68 percent of respondents expressed such opinion, while just 18 percent were of opposite opinion. Similar situation was with other – older age groups, however, in this question the same there were more young respondents in favor of everyone's responsibility for climate change. From the theoretical point of view, such results support previous research findings that youth become more and more responsible not only to think, but probably also to take particular actions to reduce climate change.

Climate change can be caused by various factors (Figure 3). The findings from ESS data revealed that both youth (44 percent) and other respondents (46 percent) think similarly that climate change is influenced by about equally by natural processes and human activity. However, it is clear that both young people (37 percent) and other respondents (30 percent) agreed that climate change is affected mainly by human activity, other assessments were not as significant. A similar point of view was that climate change is affected by mainly natural processes and entirely human activity.

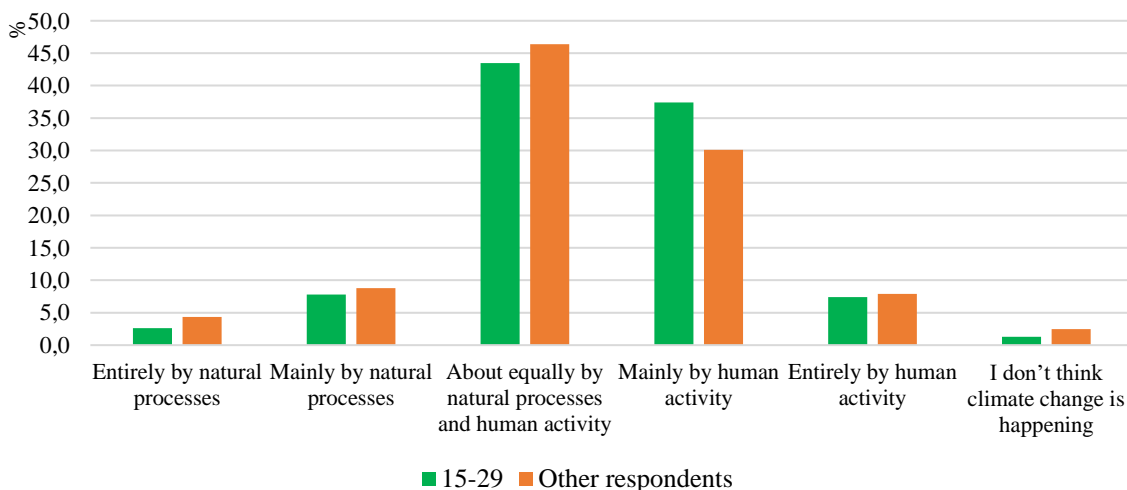


Figure 3. Youth answers to question "Do you think that climate change is caused by natural processes, human activity, or both?", percent

The next figure disclose two opinions of young respondents such as about governments' actions towards climate change mitigation and limited energy effect on climate change. These questions were not very simple for young people. This is proven by the fact that the number of respondents answers was very low and just some answered to it. It can be assumed that it may be difficult for young people to evaluate the potential decisions of governments, on the other hand, it is difficult to realistically assess how much energy reduction can actually change climate change. The Figure 4 shows that more young people (who indicated 5-10 scores) nevertheless realize that governments in enough countries will take action that reduces climate change. On the other hand, some of the young people who indicated 0-4 scores tend to doubt that governments would take real actions to reduce the climate change. This can be explained by various assumptions. It is likely that young people are not specifically familiar with government documents or concrete actions / activities that analyze and

assess climate change as a problem for societies.

When young people tried to imagine what it would be like if people reduced the energy use and how this would affect climate change, it was found that even 4 times as many young people thought it would help slow/reduce climate change. Those who pointed they didn't really think so - were in the minority. It can be assumed that the personal knowledge, skills or experience of young people in saving energy may also respond to its importance in climate change mitigation. This is due to the fact that even wording of the question reflects not only people's behavior in terms of energy reduction in general, but at the same time it allows insight into the individual assessment of young people. It can be assumed that when young people think about the governments of different countries, firstly they think of their own country. Such results showed that young people are really trying to understand what is causing climate change and what actions should be taken, starting with themselves.

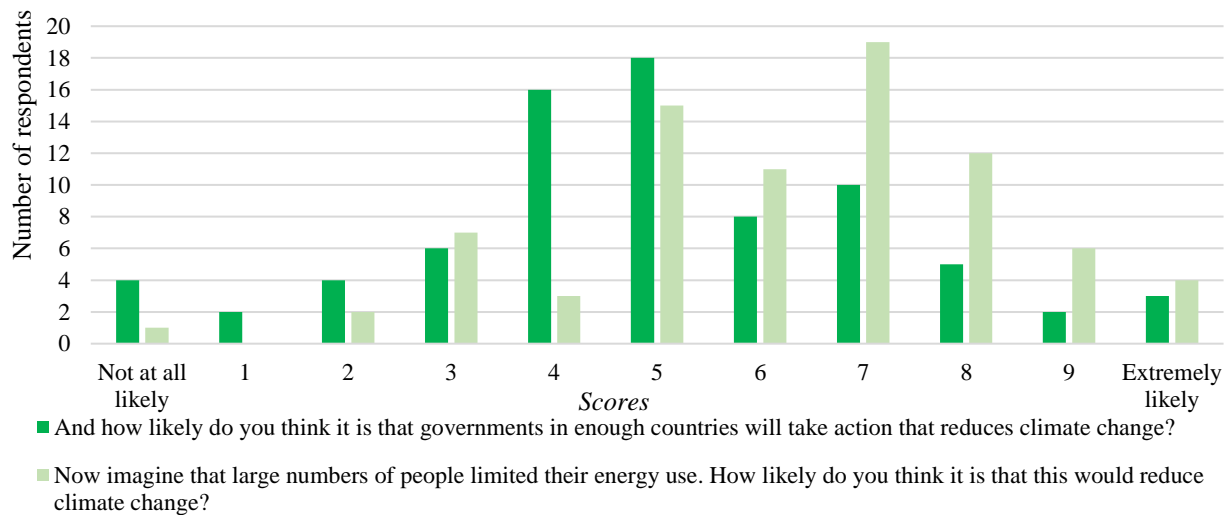


Figure 4. Youth answers to questions “And how likely do you think it is that governments in enough countries will take action that reduces climate change?” and “Now imagine that large numbers of people limited their energy use. How likely do you think it is that this would reduce climate change?” in scores

(Own calculation; a scale was used, where 0 means Not at all likely and 10 means Extremely likely)

Caring for nature and nature protection is taught to every person from an early age. As the theoretical analysis revealed (Rana et al., 2020; Bowers et al., 2021), more and more efforts are being made to educate young

people in order to protect the natural environment. To some purpose, in the ESS Round 10, a relevant question for the modern society was raised, related to the youth's point of view, how much people should care for

nature. In this case meaning “briefly describe some people” is closely related to very individual perception about taking care for

nature or looking after the environment (Figure 5).

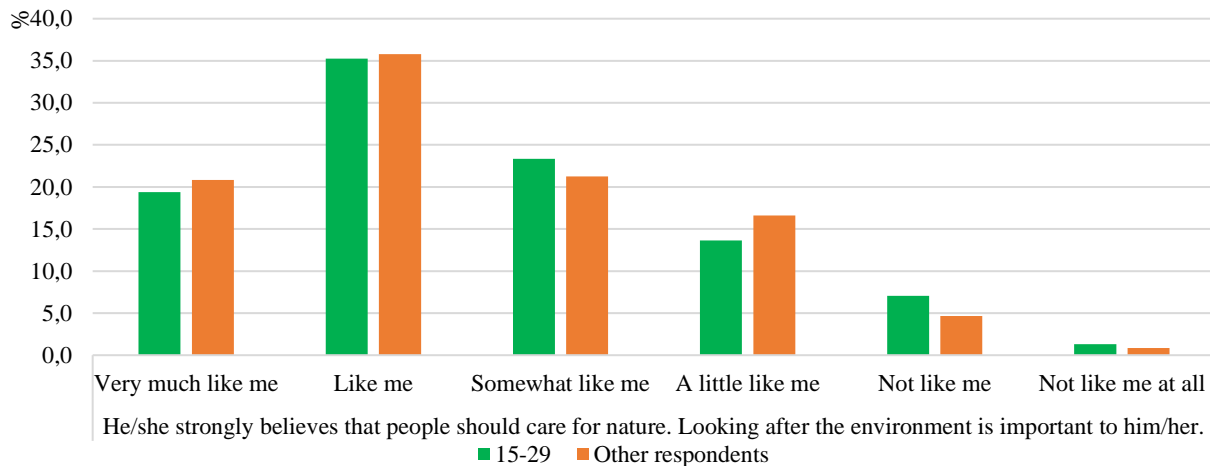


Figure 5. Youth answers to statement “Now I will briefly describe some people. Please listen to each description and tell me how much each person is or is not like you”, in percent (Own calculation; the answers covered statements from Very much like me to Not like me at all)

More than half of young people (55 percent) and 57 percent of other respondents (who answered “Very much like me+Like me”) pointed that looking after the environment is important to him/her. Each subsequent description showed that fewer respondents tended to classify themselves as having little (A little like me) or no concern for nature (Not like me at all). From this point of view, 22 percent both young and other respondents said that people shouldn't take care for nature and shouldn't look after the environment.

After calculating the Pearson correlation coefficient to determine the strength of relationships between the selected questions (variables), it turned out that the correlation coefficient varies between separate questions. Direct dependence was found between particular questions related to reduction of energy and climate change, and the relationship is dominated by moderate strength. Some examples where the medium-strength relationships were identified between such questions (** - Correlation was significant at the 0.01 level (2-tailed)):

- Now imagine that large numbers of people limited their energy use. How likely do you think it is that this would reduce climate change? *and* How likely do you think it is that large numbers of people will actually limit their energy use to try to reduce climate change? ($r=,536^{**}$);
- And how likely do you think it is that governments in enough countries will take action that reduces climate change? *and* How likely do you think it is that large numbers of people will actually limit their energy use to try to reduce climate change? ($r=,459^{**}$).

It was found out that the question „Now I will briefly describe some people. Please listen to each description and tell me how much each person is or is not like you (He/she strongly believes that people should care for nature. Looking after the environment is important to him/her)” revealed very weak negative - inverse relationships (from -0,042 to -,171) with all questions given in the methodology part. It can be assumed that there exist another, probably, more important variables that are not discussed here, but could highlight what is important in mitigating

climate change. Such insights become important when talking not only about society attitudes to nature or climate changes in general, but paying attention to specific social groups as youth.

Conclusions

The analysis of the scientific literature showed the nature protection and climate change topics are analyzed in a very diverse way, including the attitudes of different social groups, such as the youth, to the aforementioned problems. Challenges related to nature protection and climate change are very relevant for young people, as they represent the future generation. In Lithuania, this topic is still narrowly studied, more consistent research is lacking.

The results of this study about the youth of Lithuania based on ESS data confirmed the conclusions of already existing international studies that the youth are more worried than not worried about climate change. In addition, persons representing the youth group, compared to other respondents, tended to be more worried about climate change, because it determines their future life. The youth's answers to other questions also highlighted their positive approvals that the youth feel more personal responsibility to try to reduce climate change than they do not.

Young people and other respondents agreed that mostly climate change is affected

about equally by natural processes and human activity, but even about 40 percent of youth mentioned -mainly by human activity, other assessments were not as significant. This shows that young people realize that both nature protection and climate change depend first on human behavior and activities, and only then on natural processes.

It was observed that young people are not specifically familiar with government documents or actions that analyze and assess climate change as a problem for societies, because it was not easy and not all young respondents answered this question. The biggest part indicated just 4 and 5 scores - which expresses their doubts or ignorance. However, the majority of young people agreed that if people reduced the energy use it would help slow/reduce climate change.

Correlational analysis revealed the existence of moderate direct relationships between most of the analyzed questions.

From the scientific point of view, this study showed that not only the attitude of young people as a social group towards care of nature and climate change reduction is important, but it is also important to know other characteristics of young people related to this topic. It is reasonable to develop research in this area according to individual age groups of young people, they should be more consistent and carried out not only at the national but also at the local level.

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References

- Bowers, E.P., Larson, L.R., Parry, B.J. (2021). Nature as an Ecological Asset for Positive Youth Development: Empirical Evidence from Rural Communities. *Front. Psychol.* 12:688574. DOI: 10.3389/fpsyg.2021.688574
- Eurobarometer. (2009). Europeans' attitudes towards climate change. Special Eurobarometer 313 / Wave 71.1 – TNS Opinion & Social. <https://www.europarl.europa.eu/at-your-service/files/be-heard/eurobarometer/2009/climate-change/report/en-report-climate-change-200907.pdf>
- European Commission. (2009). Climate change - what is it all about? An introduction for young people. Luxembourg: Office for Official Publications of the European Communities.
- European Social Survey (2020). ESS Round 10 Source Questionnaire. London: ESS ERIC Headquarters c/o City, University of London.
- European Social Survey (2022). Sampling. Available online: https://www.europeansocialsurvey.org/methodology/ess_methodology/sampling.html (accessed on 5 January 2022).
- Gifford, R., Nilsson, A. (2014). Personal and Social Factors That Influence Pro-Environmental Concern and Behaviour: A Review. *Int. J. Psychol.*, 49, 141–157. DOI: 10.1002/ijop.12034. Epub 2014 Jan 6.

Kavaliauskaitė, D., Leščinskaitė, J. (2019). Aplinkosauginis švietimas lietuvoje: gamtos mokyklų įveiklinimas ir problemos aktualinimas. Esamos situacijos apžvalga. Kurk Lietuvai. <http://kurk.lt/wp-content/uploads/2019/10/Esamos-situacijos-analiz%C4%97-2.pdf>

Lee, K., Gjersoe, N., O'Neill, S., Barnett, J. (2020). Youth perceptions of climate change: A narrative synthesis. *WIREs Clim Change*. 11:e641, 1-24. <https://doi.org/10.1002/wcc.641>.

Lietuvos Respublikos Aplinkos ministerija. (2014). Studijos, nustatančios klimato kaitos keliamos grėsmės žmonių sveikatai, parengimo ir rekomendacijų sukūrimo bei pateikimo paslaugos. Galutinė ataskaita. https://am.lrv.lt/uploads/am/documents/files/Klimato_kaita/ataskaita.pdf

Lim, M., Lynch A.J., Fernández-Llamazares Á., Balint L., Basher Z., Chan I., Jaureguiberry P., Mohamed A.A.A., Mwampamba T.H., Palomo I., et al. 2017. Early-career experts essential for planetary sustainability. *Curr Opin Environ Sustainability*. 29:151–157. DOI:10.1016/j.cosust.2018.02.004

Martyn, B., Dimitra, P. (2019). Civic and Political Engagement Among Youth: Concepts, Forms and Factors. London: Routledge.

Poortinga, W., Whitmarsh, L., Steg, L., Böhm, G., Fisher, S. (2019). Climate Change Perceptions and Their Individual-Level Determinants: A Cross-European Analysis. *Glob. Environ. Change* 55, 25–35. DOI:10.1016/j.gloenvcha.2019.01.007

Prendergast, K., Hayward, B., Aoyagi, M., Burningham, K., Hasan, M.M., Jackson, T., Jha, V., Kuroki, L., Loukianov, A., Mattar, H., Schudel, I., Venn, S., Yoshida, A. (2021). Youth Attitudes and Participation in Climate Protest: an International Cities Comparison *Frontiers in Political Science Special Issue: Youth Activism in Environmental Politics*. *Front. Polit. Sci.* 3:696105. DOI: 10.3389/fpos.2021.696105

Rana, S., Ávila-García, D., Dib, V., Familia, L., Gerhardinger, L.C., Martin, E., et al. (2020). The voices of youth in envisioning positive futures for nature and people. *Ecosystems and People*. Vol. 16, No. 1, 326–344, DOI: 10.1080/26395916.2020.1821095

Taddicken, M., Reif, A., Hoppe, I. (2018). What do people know about climate change— and how confident are they? On measurements and analyses of science related knowledge. *JCOM*, 17 (03), A01. <https://doi.org/10.22323/2.17030201>

Vazonienė, G., Vazonis, B. (2021). Attitudes of population towards their wellbeing and climate change interface: territorial dimension. *Research for rural development 2021: annual 27th international scientific conference proceedings*. Vol. 36, 254-260, DOI:10.22616/rrd.27.2021.036.

Warren, M. (2019). Thousands of scientists are backing the kids striking for climate change. *Nature*. Retrieved from <https://www.nature.com/articles/d41586-019-00861-z>

Weber, E. U. (2010). What shapes perceptions of climate change? *WIREs Climate Change*, 1(3), 332–342. DOI:10.1002/wcc.41

Wojewódzka-Wiewiórska, A., Vazonienė, G., Vazonis, B. (2022). Who cares for nature in rural areas? Exploration of relationships between people's socio-economic characteristics and the perception of nature as a value in Poland and Lithuania. *Sustainability*. t. 14, nr. 16, 1 - 23, doi:10.3390/su141610048