

# WHAT DOES ENVIRONMENTAL HAPPINESS MEAN TO STUDENTS?

JELENA ANDREJA RADAKOVIĆ, MARKO ĆIROVIĆ,  
NEMANJA MILENKOVIĆ, MARKO PEPIĆ, NATAŠA  
PETROVIĆ

University of Belgrade -Faculty of Organizational Sciences, Jove Ilića 154, Belgrade,  
Serbia

jelenaandreja.radakovic@fon.bg.ac.rs, marko.cirovic@fon.bg.ac.rs,  
nemanja.milenkovic@fon.bg.ac.rs, marko.pepic@fon.bg.ac.rs,  
natasa.petrovic@fon.bg.ac.rs

**Abstract** The potential connection between environment and happiness is a relatively novel and understudied topic. This paper aims to contribute to this new research trend by investigating the long-term association between environmental protection and happiness by studying the correlation between the environment and students' attitudes. There have been two types of academic interest in the relationship between the environment and happiness: first, there has been a real curiosity in how the environment influences individuals' subjective well-being; second, there is a surge of interest in how pro-environmental actions affect individual's well-being, and how, in turn, people's emotional states can be used to prompt them into behaving in ways that are more ecologically responsible. The current concept of health is a complex interaction of environmental, organizational, and personal elements within the contexts and settings in which individuals live. Thus, broader environmental issues must be evaluated in the context of population health, as illustrated, for instance, in studies of migratory communities in which the impacts of a shifting life environment on health were shown to be considerable. Twenty-nine years ago, Chapter 36 of Agenda 21 proposed an education and sustainable development action plan. But even so, progress in Education for Sustainable Development (ESD) has so far been extremely slow. The authors of the paper have for precisely these reasons chose to conduct a survey amongst students of the University of Belgrade – Faculty of Organizational Sciences, Serbia, with the aim of finding out what exactly do students know about environmental happiness, what are their current attitudes towards the state of the environment in Serbia, and how all of this affects their future. The questionnaire included 102 students. An analysis of the results was carried out using the SPSS 25 software package.

**Keywords:**

environment,  
environmental  
happiness,  
environmental  
attitudes,  
students

## 1 Introduction

*“Think of all the beauty still left around you and be happy.” - Anne Frank*

The dynamic and accelerated development of civilization has led to pronounced consequential negative impacts on the environment and the quality of life of people, which is connected to the state of the global ecosystem of the planet Earth. These impacts have been brought about as a direct result of human activity. Thus, modern society, including all its communities and individuals, is exposed to numerous environmental issues that, depending on their severity, can have incalculable and irreversible effects on humanity (Maluf, 2009).

Our planet is home to a plethora of catastrophes and heartbreaking occurrences. It is not necessary to go into detail about the magnitude of the earthquake that occurred in Turkey and Syria in February of 2023; suffice it to say that it was a natural disaster. Poverty and hunger, cities and settlements leveled by war, territories ruined by conflict, diseases, plant and animal species destroyed out forever, and environmental devastation in the air, land, and water should be added to this list. In this regard, the effects of climate change stand out due to their relevance, global nature, and consequences. Climate change is the greatest global challenge of our time, influencing policies all over the world to aim to mitigate their negative effects (Intergovernmental Panel on Climate Change [IPCC], 2018). Moreover, climate change and global warming represent the greatest environmental problems facing humanity, as well as current and future generations, because in addition to its unquantifiable effects on the global ecosystem of the planet, it also reshapes our understanding and comprehension of development (Radaković et al., 2017). Because climate change causes many changes and threatens the existence of all life on Earth by influencing the increase in population migration (Berchin et al., 2017), extreme weather events, and the sixth mass extinction of species, it is imperative that we take immediate action (Ceballos et al., 2017; Slaughter, 2012). In a symbiotic relationship, it can be concluded that they exert an overall pressure on ecological, social, and economic systems, and when examining the global systems of the planet (Berchin & de Andrade, 2020).

“This is quite understandable, having in mind that ‘(...) everything that we need for our survival and well-being depends, either directly or indirectly, on our natural environment’” (Foray & Grübler, 1996; Marsh, 1864; United States Environmental Protection Agency [EPA], 2011; EPA, 2020; Jelić, Petković, & Petrović, 2021). These problems are readily apparent in the environment, where we can observe a deterioration in the conditions of the environment (Maletič et al., 2017).

These problems exacerbate the survival conditions of many populations, including our own - humans - and are collectively referred to as environmental crises (UNESCO - Division of Science, Technical and Environmental Education, 1986). These are the reasons why the current environmental crises require comprehensive environmental education and why it was recommended in principle 19 of the United Nations Declaration on the Human Environment at the United Nations Stockholm Conference on the “Human Environment” in 1972 that all nations must promote environmental education that is both adequate and of high quality. This education should be developed in accordance with the principles of sustainability with the aim of integrating environmental issues to expand the basis for responsible behavior of individuals, organizations, and communities in the protection and improvement of the environment.

For all the above-mentioned reasons, this paper will present the way environmental quality affects our happiness, precisely the students’ happiness. The reason for this lies in fact that “our natural environment, how to protect it, and in particular, how to deal with the causes and consequences of climate change are clearly amongst the leading issues of our time” (World Happiness Report [WHR], 2020). Having in mind that linkage between environment and happiness represents a relatively new issue, the presented research in this paper has the goal to the growing body of research on this subject.

The paper is structured as follows: section 2 reviews the existing literature about environment and happiness; section 3 describes the methodology; results and discussion are presented in section 4. Section 5 concludes.

## 2 Literature review: Environment and happiness

### 2.1 About happiness

The term happiness and therefore well-being as well is mostly referring to two states:

- First one being the present sense of the feeling of an emotion (affect) such as pleasure or joy in a positive sense, and pain and sorrow in a negative sense (Haybron, 2013) or as a sense of emotional state overall. Kahneman. (1999). has referred to this as happiness as “what I experience here and now”.
- Second one being overall life satisfaction, such as of quality of life. Veenhoven, (1991) referred to it as “overall appreciation of one's life as-a-whole”. Kahneman. (1999) qualifies this construct as of higher importance to humans than the one of the present experiences.

Regarding this, being in a positive state of happiness, doesn't imply just the absence of its negative qualitative and quantitative physical and psychological measure. Meaning that for the experience of happiness, absence of pain and sorrow are not enough on its own. Although, by the previous two constructs it can be noted, that with the lack of pleasure or joy due to illness or a health condition in the present moment, that can impair the feeling of happiness in the moment, it is still possible to feel “overall appreciation of one's life as-a-whole” (Veenhoven, 1991).

Regarding that happiness is so widely interpreted term in psychology and generally throughout the social sciences, for the purposes of this paper the term “Subjective well-being” will be used as a definition of the term happiness as it is most used in scientific literature in order to avoid mistaking it for other emotional states. This restriction allows us to concentrate on an individual's general personal feelings about their life in the current moment (Averill, & More, 1993; Helliwell, Layard, Sachs, & Neve, 2021; Steptoe, 2019; Tatarkiewicz, 1976). Moreover, it will be done so in the context of both constructs the present sense of the feeling of an emotion and in the sense of an overall life satisfaction.

## **2.2 Environmental happiness**

Happiness as defined for the purpose of this paper as a subjective well-being in both contexts, the present sense of the feeling of an emotion and in the sense of an overall life satisfaction, can largely be influenced by the environmental factors. Furthermore, environmental factors, such as environmental disasters, climate change, global warming, air, water and soil quality can influence tremendously ones' present and overall subjective and objective wellbeing, both physically and mentally.

Adger (2010) notes the psychological influence uncertainty and insecurity that come with the issue of global warming have on human wellbeing. Dasgupta, (2001) notes the influence the exposure to nature has on human wellbeing and overall quality of life. Epstein, (2000) analysis the impact that global warming has on human well-being. The authors Guite, Clark, and Ackrill (2006) note the effects that physical and urban environment have on human mental well-being. In addition, Lamb and Steinberger (2017) analyze the climate change mitigation and its influence on human health.

Regarding such an overwhelming effects ecological and environmental factors have on human condition, specifically well-being as defined previously as human subjective and objective well-being in a current moment and as an overall life satisfaction, the term environmental happiness will be used for the purpose of this paper. Furthermore, the term environmental happiness will be used as a referencing point of human well-being and life satisfaction that are influenced or affected by environmental and ecological factors. As such this relation will be analyzed through current moment subjective and objective feelings, as well as overall through life, life satisfaction.

## **3 Methodology - Research context**

Research was performed based on the students attending the winter semester of the 2022/2023 academic year. Students voluntary took part in an online survey. The survey was conducted at the University of Belgrade - Faculty of Organizational Sciences. In the survey 102 students participated (73 females, 27 males, and 2 other). Students completed the survey and results for each student were calculated.

In order to evaluate results of the survey, we used the statistical software package SPSS 28. Kolmogorov-Smirnov test has been used to determine whether the variables were distributed normally. Comparing two independent scale variables has been done by non-parametric Mann-Whitney test. Relationship between two categorical variables has been explored by the chi-square independence test. Relationship between two continuous variables was evaluated with non-parametric Spearman's rho correlation. A p value is used to indicate if the difference between two groups (or relationship between two variables) are statistically significant (where  $p < 0.05$  is considered statistically significant at the 95% confidence level).

#### **4 Results and Discussion**

The students who filled out the questionnaire were comprised of – 73 females (71.6 percent), 27 males (26.5 percent) and 2 other (2 percent).

For most of the questions we used a 7-point Likert scale where applicable. When asked to rate how satisfied they are with their current living environment - green to urban ratio, quantity of greenery in their city, etc.; 30.4 percent of students answered with the mark of three and 24.5 percent gave the mark of two (one being the lowest mark). At the same time, only 6.9 percent of students gave a mark of seven when answering how often they feel connected to nature in their daily life, while 26.5 percent of students gave a mark of two. Regarding this, 51 percent of students gave the highest mark when asked how important the access to green spaces and natural environments was to their overall well-being.

Also, when asked how important access to green spaces around their faculty was, 63.7 percent of students answered with high marks (six and seven). From this, we can conclude that most students feel the importance of natural environments to their happiness, but the majority does not have access to them.

When asked whether they feel that their community is making enough efforts to protect the local environment an astounding number of students answered no – 95.1 percent.

As to the answer to the question “how much do you feel you personally impact the environment on a daily basis?” we got the results that most students fell into the middle category of apathy, with 17.6 percent giving the mark three, 18.6 percent giving the mark four, and 25.5 percent five, giving a total of 61.7 percent of students who felt they do not make a difference. There have been few studies examining the factors that contribute to *environmental apathy* or indifference, particularly among young people (Juneman & Pane, 2013). And yet most surveyed students said that they often engage in activities such as recycling, reducing energy consumption, and using public transportation – 26.5 percent gave the mark five, 21.6 percent the mark six, 18.6 percent gave the mark seven, totaling to 66.7 percent of students. This fully ties into Hardin’s “The tragedy of the commons” (1998) – people understand the environmental problems and yet they do not feel that they themselves are responsible nor that they can make a difference. When asked “how likely are you to take action to improve the environment in your personal life or community?” the students showed great motivation, with 22.5 percent giving the highest mark of seven, 30.4 percent saying six, 21.6 answering five – totaling to 74.5 percent of students surveyed.

Adding on to this problem of apathy, we asked the students if they felt less motivated to act in an environmentally friendly way when they see that their own country is acting wrongly towards the environment; and the answers were rather mixed and polarized – 43.1 percent said yes, 42.2 percent said no, and 14.7 percent said they did not care.

But when asked why they said yes, their responses were:

- “When you see that other people do not care, you do not care”.
- “I feel very small and insignificant when the whole system is not proactive; so not only do I, as an individual, need to make an effort, but I need to multiply that effort in order to make an impact and inspire others to do the same”.
- “I alone cannot make any difference”.
- “I have a feeling like I am just one rock in the sea”.

When asked how much they feel that the environment is considered in the decisions made by their government and local leaders, 37.3 percent gave the lowest mark of one, 19.6 percent gave the mark two.

When it came to the students' pessimism, when prompted to think about the future of the planet only two people gave it an optimistic mark of a seven, while the marks one, two and three – the most pessimistic ones have the following percentages: 22.5, 30.4, 26.5 – totaling 79.4 percent.

When studying the correlations between the questions, the following results can be deduced:

- The more satisfied the students were with their current living environment the more they felt connected to nature in their everyday life. Also, the same applied to their opinion about the air and water quality of their city, as well as the future of the planet. Paradoxically these students gave lower marks on whether they participate in activities that improve the environment.
- On the other hand, interestingly, the students that gave high marks to the importance of access to green spaces and natural environments to their overall well-being also felt that they impact the environment more and were more ready to participate in activities of environmental protection. What is important is that these students also thought that environmental protection was paramount in schools.
- The students that are often engaged in activities such as recycling, reducing energy consumption, or using public transportation also felt that the environment is less considered in the decisions made by the government and local leaders.
- Students who were more likely to take action to improve the environment in their personal life also found the quality of air and water in their community to be lacking.
- Again, conducting the Mann-Whitney Test showed two paradoxes: first one being that the students that felt motivated to act environmentally friendly regardless of the country's behavior felt that the air and water quality were higher; second being that the same students were more optimistic regarding



the future of the planet. Showing that these students acted optimistically without climate anxiety (Clayton, 2020).

## **5 Conclusion**

The psychological health of people will most certainly be more and more impacted by climate change in the future. Deforestation, urban planning, less and less greenery in cities and the evident air and water pollution have increasingly dire consequences on both peoples physical health and their mind. Exposure to extreme weather events linked to climate change has been linked to negative effects on physical health, mental health, and social relationships, according to a large body of studies. The potential impacts of climate change on mental health have recently come into focus, specifically with regards to emotional responses like increased anxiety. All of this is the source of a new world problem called climate anxiety and environmental anxiety (Clayton, 2020). This novel type of anxiety could even act paralysing causing environmental apathy (Juneman & Pane, 2013).

The results of the survey conducted by the authors showed a worrying trend of apathy among the students, and also showed that they were afraid for the future of the planet showing their climate anxiety.

But most importantly, what the survey showed was that almost all of the students agreed that it was very important for them that environmental education was implemented in schools – 52.9 percent gave the highest mark of seven, 23.5 gave a six, and 8.8 percent gave a five, totalling to 85.2 percent. Unfortunately for our educational system the scales for their opinion on the current state of environmental education in Serbia was tipped the other side with the students giving it the lowest marks – 31.4 percent gave it a mark of one, 25.5 percent gave it a two, 20.6 percent gave it a three, totalling to 77.5 percent; with the correlation coefficient showing that it was more important to the students that found access to green spaces most important, and less important to students that thought that air and water quality was high in Serbia.

## Acknowledgments

The authors would like to thank the Center for Environmental Management and Sustainable Development of the University of Belgrade - Faculty of Organizational Sciences, Serbia, for their expertise that is used in this research, as well as University of Belgrade – Faculty of Organizational Sciences, Serbia for its support. We thank the Editor and anonymous reviewers whose comments helped improve and clarify this paper.

## References

- Adger, W. N. (2010). Climate change, human well-being and insecurity. *New Political Economy*, 15(2), 275-292. doi:0.1080/13563460903290912
- Averill, J. R., & More, T. A. (1993). Happiness. In M. Lewis & J. M. Haviland (Eds.), *Handbook of emotions* (pp. 617-629). The Guilford Press.
- Berchin, I. I., & de Andrade, J. B. S. O. (2020). GAIA 3.0: Effects of the Coronavirus Disease 2019 (COVID-19) outbreak on sustainable development and future perspectives. *Research in Globalization*, 2, 100014.
- Berchin, I. I., Valduga, I. B., Garcia, J., & de Andrade Guerra, J. B. S. O. (2017). Climate change and forced migrations: An effort towards recognizing climate refugees. *Geoforum*, 84, 147-150.
- Bonasia, M., De Simone, E., D'Uva, M., & Napolitano, O. (2022). Environmental protection and happiness: a long-run relationship in Europe. *Environmental Impact Assessment Review*, 93, 106704. <https://doi.org/10.1016/j.eiar.2021.106704>
- Bucea-Manea-Țoniș, R., Kuleto, V., Gudei, S. C. D., Lianu, C., Lianu, C., Ilić, M. P., & Păun, D. (2022). Artificial intelligence potential in higher education institutions enhanced learning environment in Romania and Serbia. *Sustainability*, 14(10), 5842. <https://doi.org/10.3390/su14105842>
- Ceballos, G., Ehrlich, P. R., & Dirzo, R. (2017 July 25). Biological annihilation via the ongoing sixth mass extinction signaled by vertebrate population losses and declines. *Proceedings of the National Academy of Sciences of the United States of America*, 114(30), E6089-E6096.
- Clayton, S. (2020). Climate anxiety: Psychological responses to climate change. *Journal of anxiety disorders*, 74, 102263. <https://doi.org/10.1016/j.janxdis.2020.102263>
- Dasgupta, P. (2001). *Human well-being and the natural environment*. Oxford University Press.
- Epstein, P. R. (2000). Is global warming harmful to health?. *Scientific American*, 283(2), 50-57. doi:10.1038/scientificamerican0800-50
- Foray, D., & Grübler, A. (1996). Technology and the environment: an overview. *Technological forecasting and social change*, 53(1), 3-13.
- Guite, H. F., Clark, C., & Ackrill, G. (2006). The impact of the physical and urban environment on mental well-being. *Public health*, 120(12), 1117-1126. doi: 10.1016/j.puhe.2006.10.005
- Hardin, G. (1998). Extensions of “the tragedy of the commons”. *Science*, 280(5364), 682-683.
- Haybron, D. M. (2013). *Happiness: A very short introduction* (Vol. 360). Oxford University Press.
- Helliwell, J. F., Layard, R., Sachs, J. D., & Neve, J. E. D. (2021). *World happiness report 2021*. New York: Sustainable Development Solutions Network.
- Intergovernmental Panel on Climate Change - IPCC (2018). *Global warming of 1.5°C*. [https://www.ipcc.ch/site/assets/uploads/sites/2/2018/07/sr15\\_headline\\_statements.pdf](https://www.ipcc.ch/site/assets/uploads/sites/2/2018/07/sr15_headline_statements.pdf)
- Jelić, T., Petrović, N., & Petković, J. (2021 March 17-19). Environmental chemical disasters and an example of security report. In P. Šprajc, A. Žnidaršič, D. Maletič, D. Tomić, N. Petrović, O. Arsenijević, ... & Y. P. Ziegler (Eds.), *Proceedings of the 40th International Conference on Organizational Science “Values, Competencies and Changes in Organizations”*, (pp. 375-387), Kranj, Slovenia, online, MS Teams. University of Maribor Press: Maribor. <https://doi.org/10.18690/978-961-286-442-2.27>

- Juneman, P., & Murty, M. (2013). Apathy Towards Environmental Issues, Narcissism, and Competitive View of the World. *Procedia - Social and Behavioral Sciences*, 101, 44-52. doi:10.1016/j.sbspro.2013.07.177
- Kahneman, D. (1999). Objective happiness. In D. Kahneman, E. Diener, & N. Schwarz (Eds.), *Well-being: The foundations of hedonic psychology* (pp. 3-25). Russell Sage Foundation.
- Lamb, W. F., & Steinberger, J. K. (2017). Human well-being and climate change mitigation. *Wiley Interdisciplinary Reviews: Climate Change*, 8(6), e485. <https://doi.org/10.1002/wcc.485>
- Maletić, D., Borojević, T., Petrović, N., Maletić, M., & Senegačnik, M. (2017 Septembar 25-28). Kvalitet visokoškolskog ekološkog obrazovanja za održivost. U G. Čirović (Ed.), *Zbornik radova XLIV Simpozijuma o operacionim istraživanjima – SYM-OP-IS 2017*, (pp. 460-465), Zlatibor, Srbija. Visoka građevinsko-geodetska škola. [In Serbian]
- Maluf, A. (2009). *Poremećenost sveta*. Laguna.
- Marsh, G. P. (1864). *Man and Nature; or, Physical Geography as Modified by Human Action*. Belknap Press of Harvard University Press.
- Radaković, J. A., Petrović, N., Milenković, N., Stanojević, K., & Đoković, A. (2017). Improving Students' Higher Environmental and Climate Change Knowledge: A Case Study. *Polish journal of environmental studies*, 26(6) 2711-2719. <https://doi.org/10.15244/pjoes/69645>
- Slaughter, R. A. (2012). Welcome to the Anthropocene. *Futures*, 44(2), 119-126. <https://doi.org/10.1016/j.futures.2011.09.004>
- Stephoe, A. (2019). Happiness and health. *Annual review of public health*, 40, 339-359. <https://doi.org/10.1146/annurev-publhealth-040218-044150>
- Tatarkiewicz, W. (1976). Analysis of happiness. Nijhoff, Den Haag. <http://dx.doi.org/10.1007/978-94-010-1380-2>
- UNESCO - Division of Science, Technical and Environmental Education. (1986). *The Balance of Lifekind: An Introduction to the Notion of Human Environment*. Retrieved from: [http://www.unesco.org/education/pdf/333\\_3.pdf](http://www.unesco.org/education/pdf/333_3.pdf)
- United Nations Environment Programme - UNEP (2015). *New UN Report Details Link between Climate Change and Human Rights*. <https://www.unenvironment.org/news-and-stories/press-release/new-un-report-details-link-between-climate-change-and-human-rights>
- United States Environmental Protection Agency - EPA (2011). *Sustainability and the U.S. EPA*. The National Academies Press. <https://doi.org/10.17226/13152>
- United States Environmental Protection Agency - EPA (2020). *Learn About Sustainability*. <https://www.epa.gov/sustainability/learn-about-sustainability#what>
- Veenhoven, R. (1991). Is happiness relative?. *Social indicators research*, 24, 1-34. <https://doi.org/10.1007/BF00292648>
- World Happiness Report – WHR. (2020). *Environments for Happiness: An Overview*. Sustainable Development Solutions Network. Retrieved from: <https://worldhappiness.report/ed/2020/environments-for-happiness-an-overview/>.

