

Preaching to the Converted? Suggestions for Better Environmental Communication in Azerbaijan

written by Farhad Mukhtarov Fərhad Muxtarov

As Azerbaijan prepares to host COP-29^[1] in November 2024, the country faces growing scrutiny over its environmental policy. It currently ranks 121st out of 180 countries in terms of its environmental performance (YCELP 2024). International organizations have pointed to significant gaps in Azerbaijan's environmental policies and its preparedness for the looming challenges of climate change (UNECE 2011).

One strategy to improve environmental performance is to encourage individuals to take up pro-environmental behavior (PEB). For example, in recent years, environmental education has been integrated into the national curriculum, with various initiatives targeting preschool to higher education levels (UNECE 2011). Moreover, the government and affiliated NGOs and foundations regularly initiate campaigns aimed at reducing littering in public spaces, water wastage, and promotion of sustainable mobility. A good recent example is the *Birdamcı* (a drop of water in Azerbaijani) public information campaign aimed to encourage citizens to save water (Birdamci 2024a; 2024b). The campaign started in 2023 and targeted the general population in Baku and surrounding areas through informational posters, billboards and video clips placed in public spaces and social platforms (Baku Water Week 2024; see Appendix). The organizers of the campaign now plan to expand it to other regions of Azerbaijan.

Such campaigns are indeed much needed. For example, average water consumption in Baku is estimated at 400

liters/capita/day (l/c/d). This amount includes much water that is lost in distribution systems, the real consumption is estimated at around 170 l/c/d (Scandizzo and Abbasov 2022, 194). Nonetheless, even the estimated real consumption is well above the minimum norm of 50 l/c/d widely considered as necessary for human well-being (Gaddis *et al.*, 2019). This begs the question of why public information campaigns carried out in Azerbaijan so far have not brought about much behavioral change in the population.

A common belief is that the primary reason people do not engage in PEB is lack of knowledge. According to this view, once people are informed about the negative consequences of their actions and the benefits of alternatives, they will shift their behavior. This view motivated many public education and information campaigns around the world. However, ample evidence suggests otherwise (Owens and Driffill 2008; Sleenhof *et al.* 2015). For instance, despite widespread awareness of the environmental and health benefits of reducing meat consumption, or the dangers of smoking, many individuals continue these behaviors. These examples suggest that knowledge alone does not necessarily lead to changes in behavior. One alternative view is the Theory of Planned Behavior (TPB), which suggests that behavioral intentions are shaped by three key factors: attitudes towards the behavior, perceived ease of performing the behavior, and social norms (Ajzen, 2011; 1991). Effective PEB strategies, according to this theory, recognize that individuals are more likely to engage in pro-environmental behavior when they perceive it to be important, easy and relatively cheap, and socially acceptable.

This article is based on an original survey research conducted in the fall of 2015 with 230 Bachelor students from the School of Public and International Affairs at ADA University in Baku. After excluding incomplete and invalid responses, the study had data from 214 students. A self-administered questionnaire was used to measure constructs related to four major

environmental issues that Baku residents deal with—public transportation, saving water, saving electricity, and littering in public spaces. The survey also tested three TPB theses in order to understand which factors might influence participant behavior.

There are three major findings from this study. First, it demonstrates that the respondents in this survey have high levels of environmental awareness, knowledge and concern. This is despite the many negative assessments of population's levels of awareness and knowledge about the environment. Second, this study demonstrates participants' high levels of responsiveness to social norms around the four issues discussed below (littering, transport, water and electricity). Finally, the study shows that respondents feel that not littering and saving water and electricity are relatively easy for them to achieve, but that is not the case with using public transportation.

Environmental Attitudes of the Youth in Azerbaijan

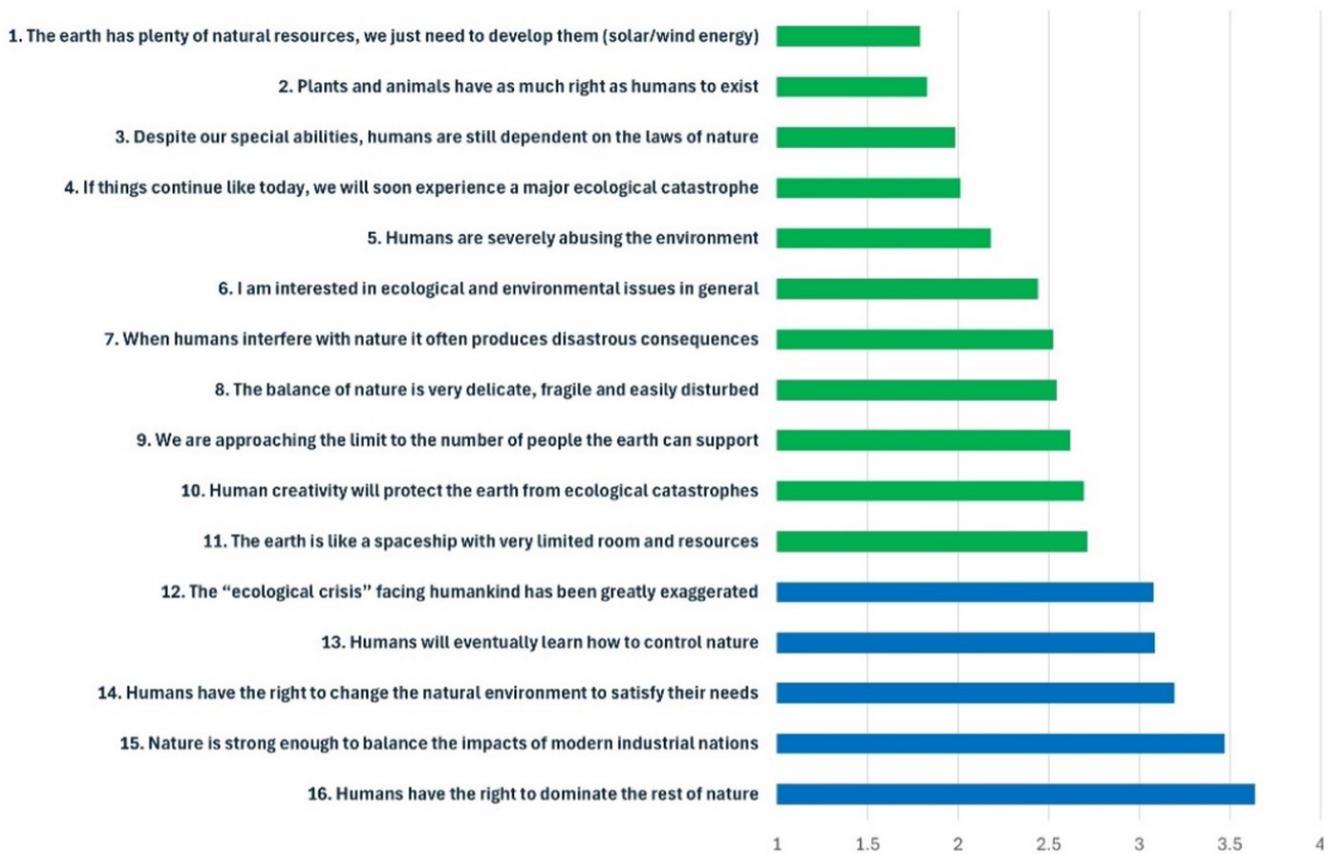
Out of 214 respondents, 117 (54,7%) were females and 97 (45,3%) males, and the average age of the participants was 19,15 years old as all participants were between 18 and 20 years old. The average size of a participant household was 4 members. Nevertheless, this sample poses several serious limitations for generalization to the whole of Azerbaijan. First, ADA University is an English language institution where most students pay relatively high tuition fees for Azerbaijan. The average monthly household income of the participants (1001-2000 AZN; equivalent to \$950-\$1900 based on 2015 exchange rates) were higher than the earnings of a majority of families in Azerbaijan. Second, the sample includes students of 18–20-year-olds in Baku and hence cannot be generalized to the youth in the whole country. Furthermore, the data is from 2015. It is not uncommon for behavioral research to be analyzed from data that is 5-10 years old, however, this is a limitation and needs to be considered when the findings of

these research are considered for policy. One way of dealing with these limitations is to compare this study's findings with more recent and more representative studies on environmental attitudes of the youth in Azerbaijan, which I do in section 5. While the findings of this research should be taken with a grain of salt, they can still be useful for designing better communication campaigns in Azerbaijan.

The questionnaire was in English, the language of instruction at ADA University, and it included sixteen questions regarding attitudes towards environmental issues, along with a single question about which parties are responsible for enacting policy. Figure 1 displays the average scores for each statement reflecting participants' attitudes, with scores recoded so that 1 represents *strongly agree* and 5 represents *strongly disagree*. These scores are plotted on the X axis. Scores below 3 indicate stronger agreement (green), while scores above 3 indicate stronger disagreement (blue). Scores around 3 suggest a neutral stance, interpreted as *neither agree nor disagree*.

Figure 1: Environmental attitudes of ADA University students (n 214)

Values in green are closer to 1 and signal agreement; those in blue closer to 5 signal disagreement

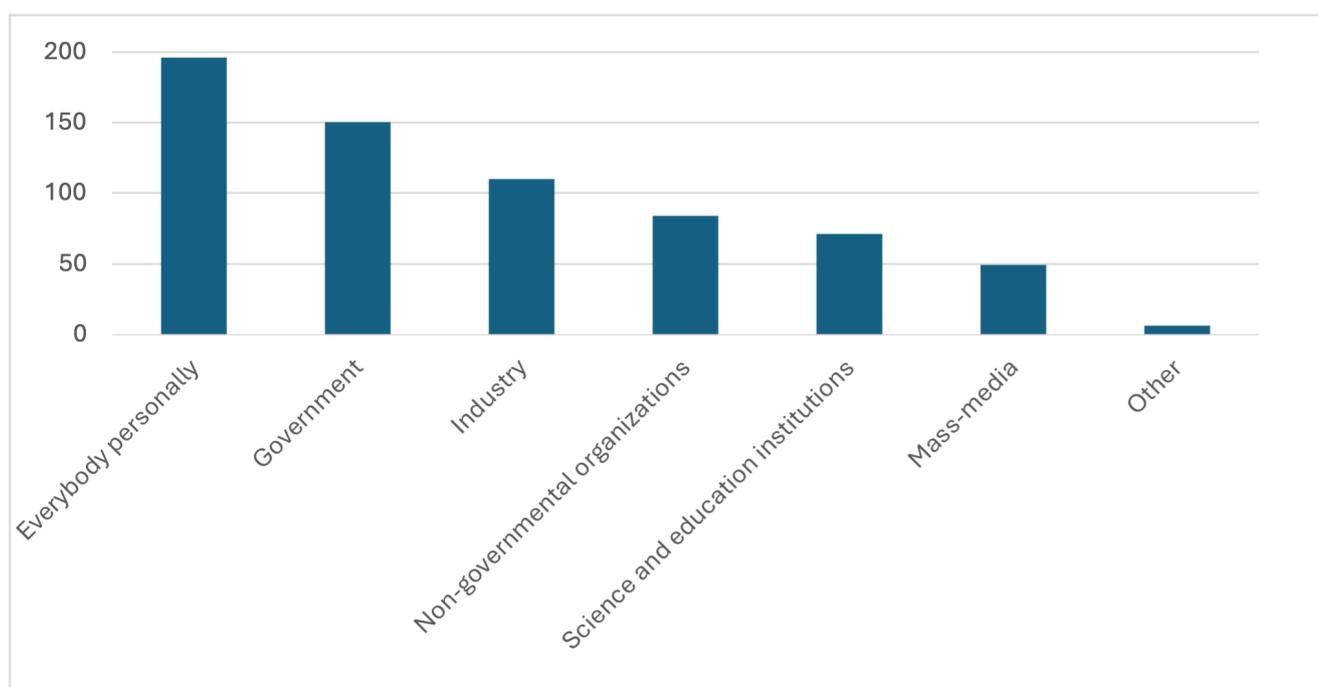


Based on these statements, four core beliefs emerge. First, participants acknowledge an interconnectedness of humans and nature with a strong belief that humans and nature are deeply interdependent. Second, participants acknowledge environmental crisis—the environment is believed to be in a severe crisis, largely driven by human activity, which could lead to catastrophic outcomes if not addressed. Third, the respondents acknowledge personal responsibility to protect the environment—they emphasize human responsibility, particularly at the individual level, to protect the environment. Finally, the respondents are overall optimistic about the future and human creativity is viewed by many as a solution to the current environmental crisis. While the majority believes in the potential of technology and renewable energy, some doubt humanity's ability to adapt and control nature sustainably.

Another question asked in the survey concerned the major parties who are responsible for acting to protect the

environment. The numbers on the Y axis indicate the absolute number of answers for a particular option; options are displayed on axis X. The respondents overwhelmingly find that everyone has a responsibility to protect the environment. However, the government is seen as a major stakeholder, whereas industry comes only as third. Remarkable is the little role that educational institutions and mass-media organizations have to play in this according to the students.

Figure 2: Who is responsible for dealing with the environment (multiple answers are possible)



Figures 3 through 6 below present data on the attitudes of participants towards the four environmental issues: public transportation, water, electricity and littering. In all the figures below, light blue indicates the answer *neither agree nor disagree* with zero (0) in the middle of that category. The category to the left marks the participants who disagree with a statement (negative numbers), and to the right those who agree (positive numbers). The exact numbers of participants per each category are not shown to make the figure legible. The lengths of the categories, however, indicate how much agreement there is on a particular response on a scale of 0 to 214 in both directions. Dark blue indicates strong agreement,

orange agreement, purple disagreement, green strong disagreement, and light blue is for neutrality. The statements are sorted based on the values given to individual responses in order to make the graphs readily explanatory. This means that the graphs have different order of the statements.

For each of the four environmental issues, six questions were formulated to gauge participant attitudes. Quantitative surveys require qualitative interpretation, and while maximizing clarity of concepts is important, fixing definitive meanings is impossible. Below, I present the results of the survey for each issue. Qualitative research techniques such as interviews and focus groups are required to further nuance the meanings of these answers.

Figure 3 shows results of the participants' responses to six questions with regard to their attitudes on using public transportation. They were asked to indicate their agreement with the following statements: "for me, using public transportation instead of private car/taxi when going to university is right/appropriate/good/beneficial/important/pleasant." Each question was formulated separately.

Figure 3: Attitudes on using public transportation

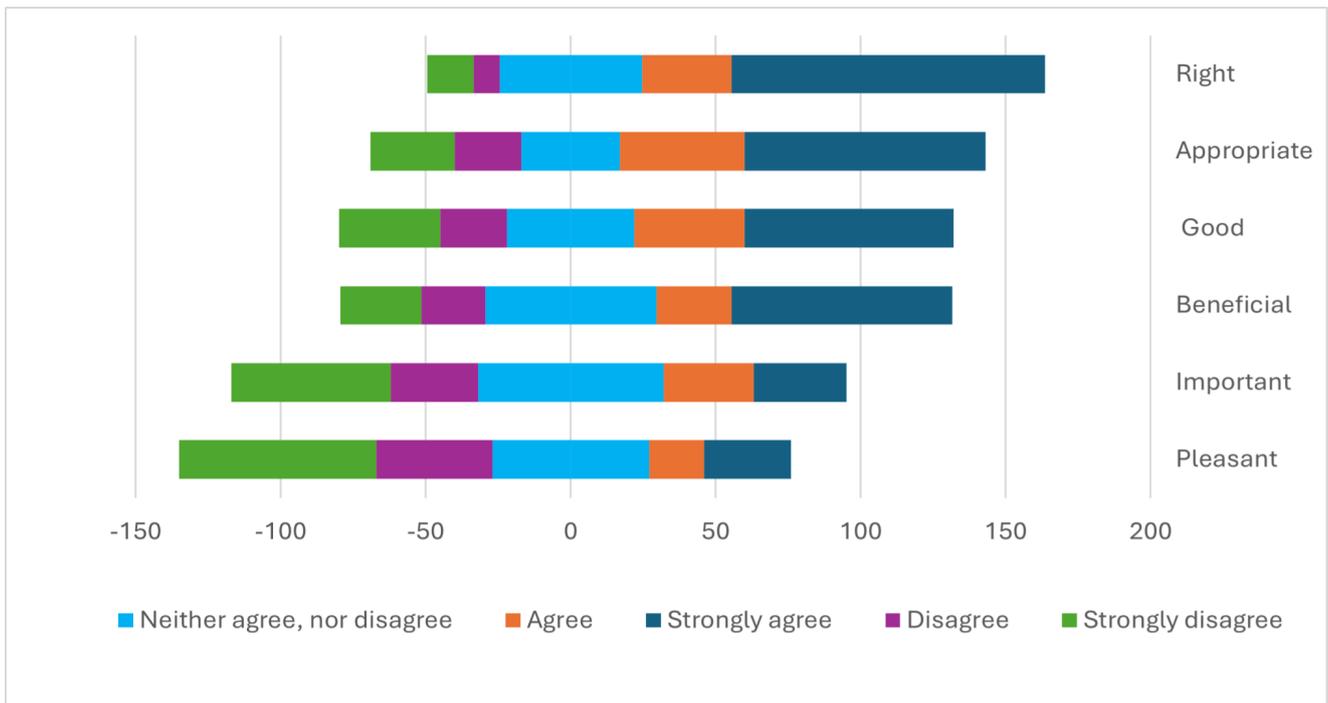
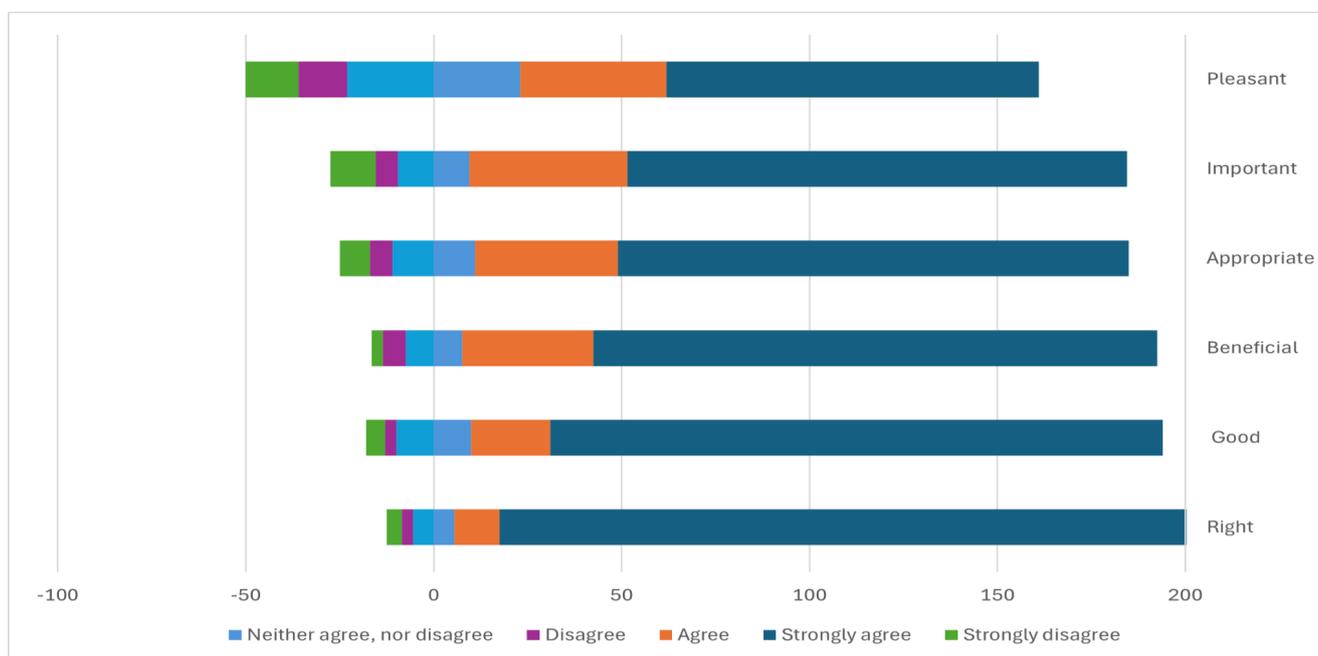


Figure 3 shows that most agreement is found with the statement that using public transport is the *right thing to do*. The combined answers for *agree* and *strongly agree* make up the majority of answers. This points to the moral value of taking public transportation, potentially stressing the public value of it as opposed to using personal vehicles. Students also find that it is *appropriate* and that it is *good* to do so. This indicates that social acceptance of public transportation is high. Students are undecided whether such travel is *beneficial* and *important*, with the largest value being *neither agree nor disagree*. Finally, the overwhelming majority of the students find such travel *unpleasant*—a sentiment most likely linked to the lack of comfort and reliability of public transportation in Baku. Overall, students indicate awareness about the value of public transportation for the environment and express positive attitudes towards taking it, even if it is unpleasant. It is worthwhile to note that the meanings of the terms *right*, *good*, *appropriate*, *important*, *pleasant* and *beneficial* were not provided to the participants and were hence open for interpretation.

Figure 4 shows results of the participants' responses to six questions with regard to their attitudes on saving water. They were asked to indicate their agreement with the following

statements: “for me, saving water during showering, cooking, washing, etc. is right / appropriate / good / beneficial / important / pleasant”. Each question was formulated separately.

Figure 4: Attitudes to saving water



The attitudes are overwhelmingly positive and are associated with positive emotions. Given water scarcity in Azerbaijan (Scandizzo and Abbasov 2022), it is unsurprising that the great majority of the participants value water more than other resources.

Figure 5 shows the results of participant responses to six questions with regard to their attitudes of using public transportation. They were asked to indicate their agreement with the following statements: “for me, saving electricity whenever possible is right / appropriate / good / beneficial / important / pleasant”. Each question was formulated separately.

Figure 5: Attitudes to saving electricity

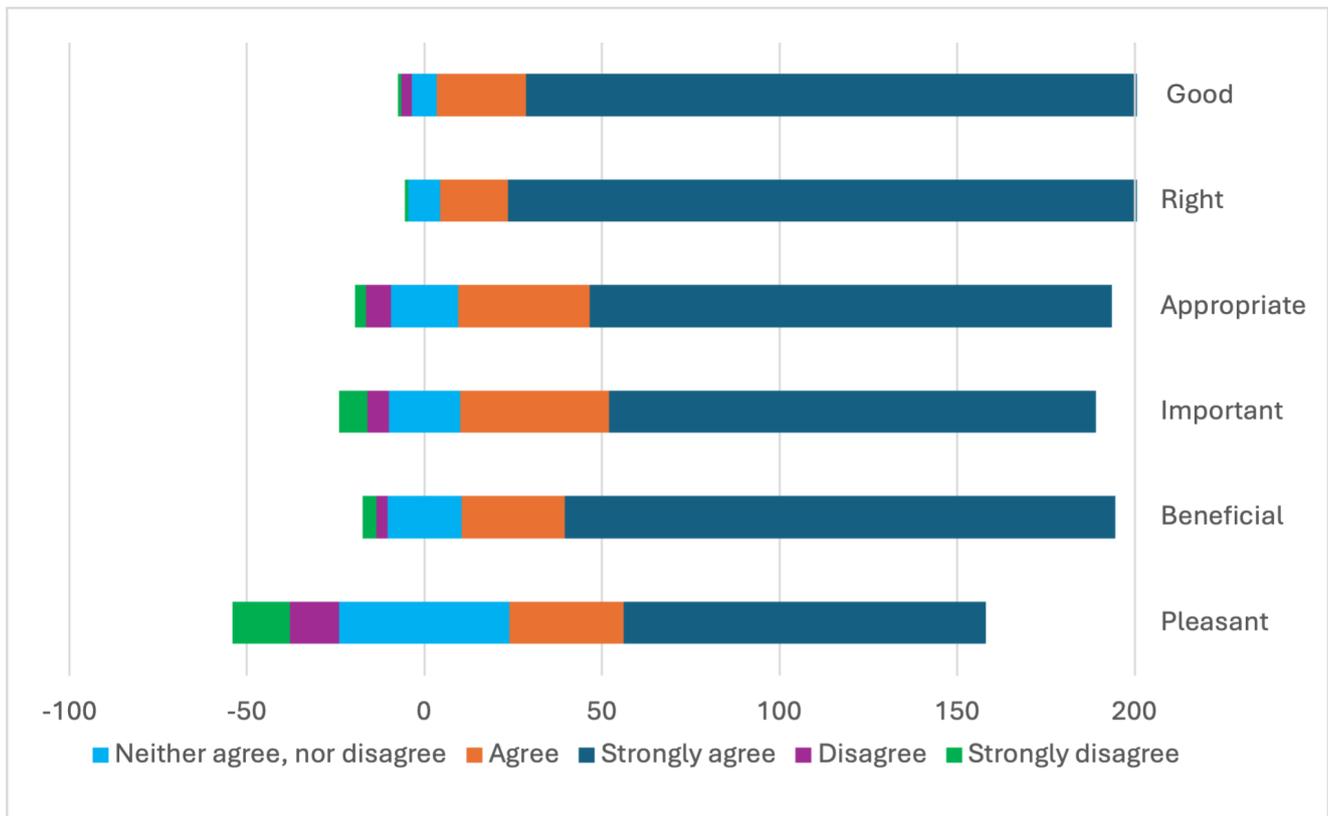


Figure 5 shows that the respondents predominantly view saving electricity as positive. Negative sentiments (purple and green segments of the bars) are minimal across all categories. These findings are comparable to the attitudes towards saving water but cannot be explained by scarcity as Azerbaijan is an energy-rich state. This perhaps has to do with the economic habits that youth learn in families as electricity may be available, but not easily affordable to all segments of population.

Figure 5 shows results of participant responses to six questions with regard to their attitudes on littering. They were asked to indicate their agreement with the following statements: “for me, littering – throwing rubbish in public places – is right / appropriate / good / beneficial / important / pleasant”. Each question was formulated separately.

Figure 6: Attitudes to public littering

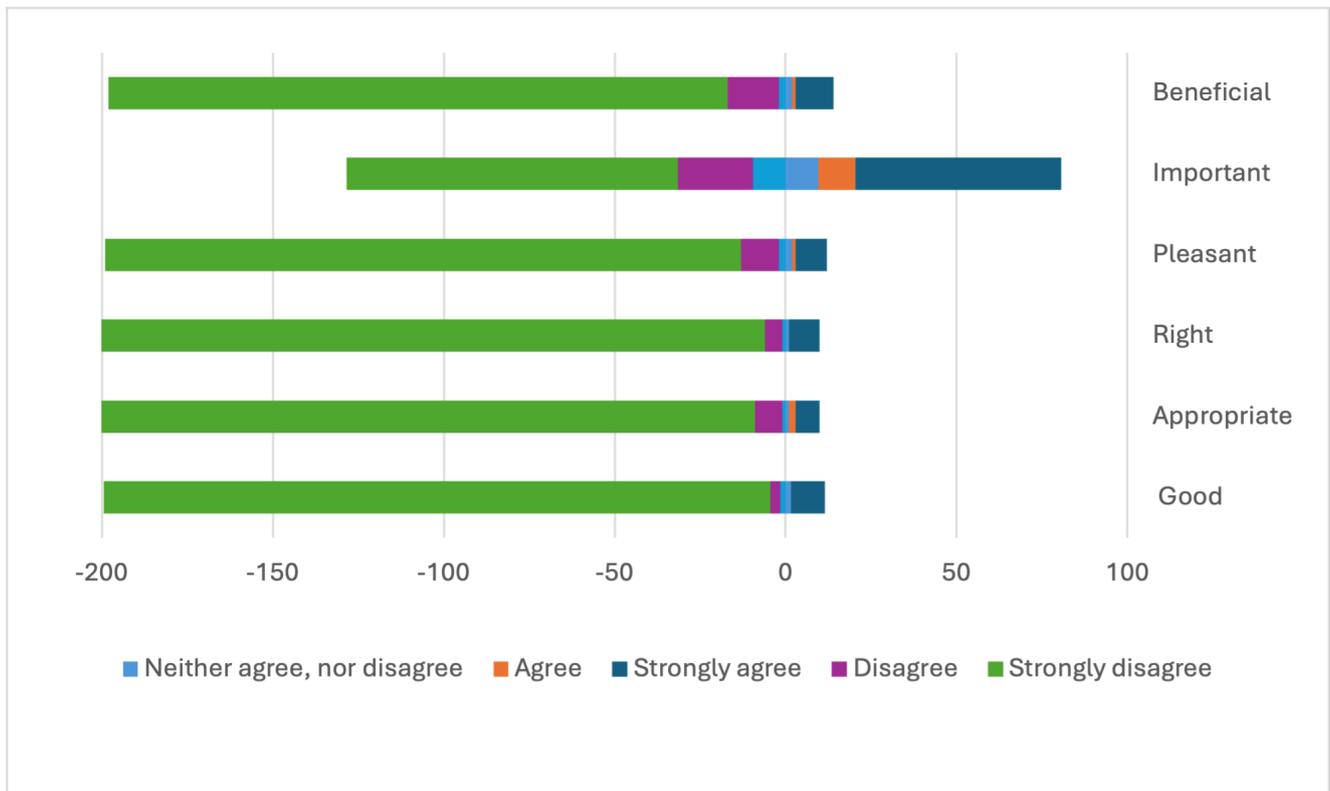


Figure 6 shows that respondents predominantly view littering as negative (opposite of the terms indicated on the right-hand side). Negative sentiments (green and purple) are dominant across all categories, whereas positive sentiment towards littering is present only in the question of whether it is *important*.

Social Norms and Behavioral Control

Social norms refer to the perceived social pressure to perform or avoid a particular behavior. Social norms are influenced by the expectations of significant others, such as family, friends, and colleagues, and the desire to conform to these expectations. In essence, social norms reflect the cultural and societal values that guide behavior, making them a powerful force in decision-making. Behavioral control, on the other hand, refers to an individual's perception of their ability to perform the behavior in question. It encompasses the ease or difficulty of carrying out the behavior, which can be influenced by both internal factors (such as skills and knowledge) and external factors (such as availability of resources and opportunities). Behavioral control is vital

because it not only affects the intention to perform a behavior but also directly influences whether the behavior is ultimately carried out. Figures 7 and 8 represent different aspects of PEB related to four activities: not littering, saving electricity, saving water, and using public transportation.

Figure 7: Social norms expressed through the question “Most people close to me think that I should... (and then one of the four proposals listed at the right-hand side of the graph)”

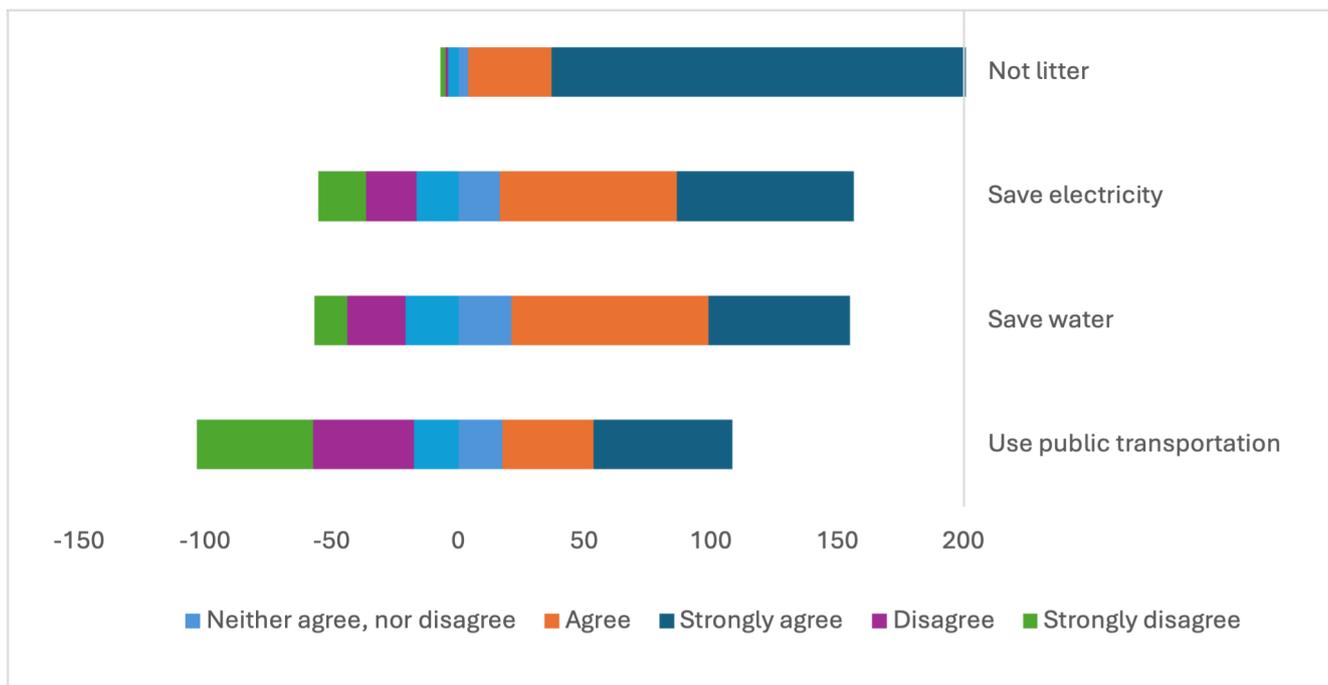


Figure 7 above reflects social norms, specifically the perception of what people close to the respondents—such as friends, family members, and relatives—think they should do regarding these activities. For not littering, there is strong social pressure, with many respondents perceiving that their friends, family, and relatives expect them to avoid littering. Similarly, saving electricity and saving water are also supported by strong social norms.

Figure 8: Behavioral control or easiness to exhibit pro-environmental behavior (“It is easy for me... (and then one of the four proposals listed at the right-hand side of the graph))”

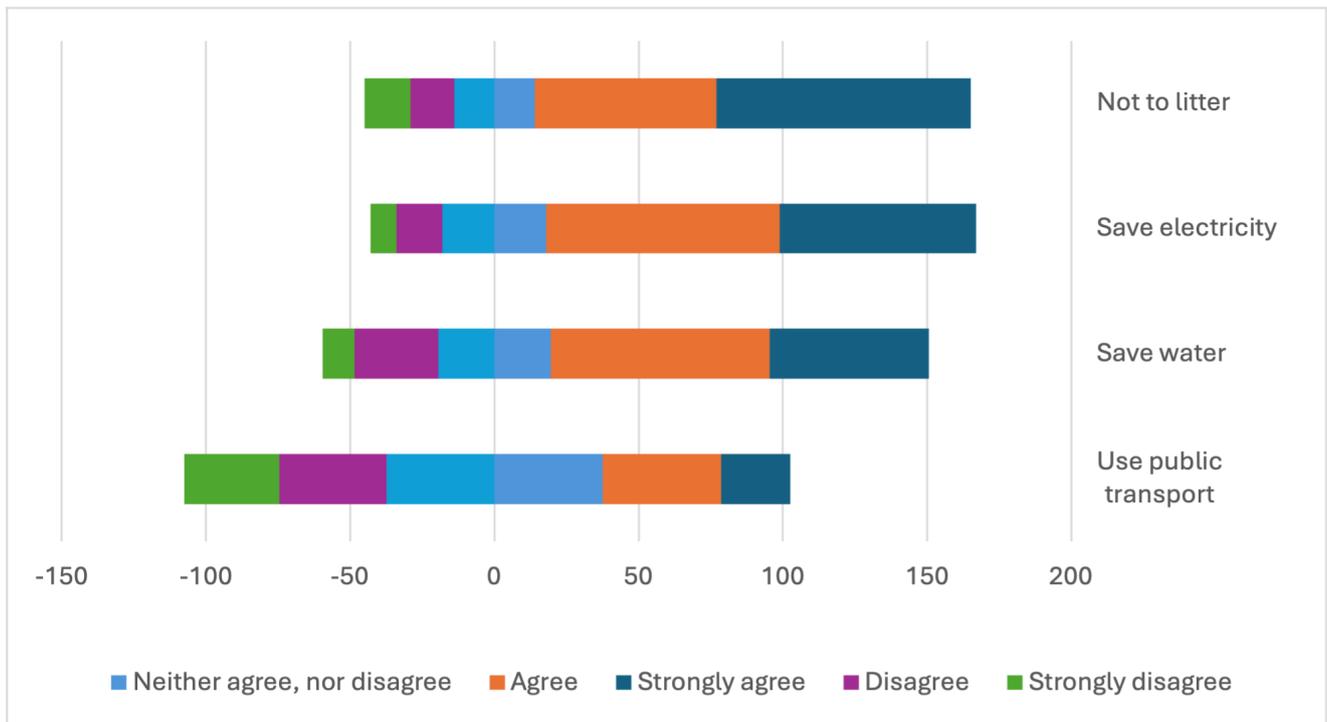


Figure 8 illustrates behavioral control, with respondents indicating how easy it is for them to perform these behaviors. A significant number of respondents strongly agree that not littering is easy for them. Similarly, when it comes to saving electricity and saving water, the majority of respondents also agree that these behaviors are easy. However, when it comes to using public transportation, there is more variation in the responses. A notable number of respondents disagree that using public transportation is easy.

Interesting is the alignment between the perceived easiness of performing certain behaviors and the social norms surrounding them. Behaviors that are perceived as easy to perform, such as not littering, saving electricity, and saving water, are also strongly supported by social norms. This alignment suggests that when participants perceive social pressure to engage in PEB, they find such behavior easy, and are more likely to enact it. There was however one exception from this positive association of norms and behavioral control. While there is some social support for using public transportation, the perceived difficulty in using it clearly hinders its adoption. This suggests that interventions aimed at increasing the use of public transportation might need to focus on reducing

barriers or changing perceptions about its convenience and accessibility, alongside reinforcing social norms.

Discussion

In this study, three major findings emerged regarding the environmental attitudes and behaviors of the participants. First, this study found that while there are strong environmental attitudes of the youth in our sample, these do not translate into meaningful action. Second, it identified the crucial role of social norms in promoting PEB in Azerbaijan. Finally, it highlighted the importance of perceived behavioral control in enabling individuals to act, especially in encouraging use of public transportation.

The first finding aligns with those of Starcevic (2018), who observed high levels of environmental knowledge among Azerbaijani university students, yet a lack of corresponding action. She studied a sample of 260 students across three universities in Baku – ADA University, Baku State University and Khazar University. Another study on youth attitudes towards climate change in Azerbaijan revealed a mixed picture—some high levels of concern about deforestation and water scarcity coincides with indifference about climate change (FESSC, 2023). These findings suggest that Azerbaijani youth may be well-informed and highly concerned about environmental degradation, although this may differ in different regions and socio-economic layers of the society. If some awareness already exists on the part of population, future communication campaigns may do well to focus on fostering social norms and improving access to services and technologies.

Contrary to previous studies that emphasized the need to increase individual responsibility of Azerbaijani citizens, this research indicates that the participants in this sample already feel responsible for tackling environmental issues. For example, Trautwein et al. (2023) has a more representative

sample of the Azerbaijani population. However, they also report limitations in their sample—underrepresentation of the poorer segments of population and over-representation of the youth. Almost 70% of their participants are between 16 and 35 years of age. Given the similarity in our samples (most participants in both studies are young and relatively well-off economically), it is hence surprising that the results are different. Findings in this study also contrast with Gurbuz et al. (2021), who reported low environmental awareness in Ganja, suggesting potential regional differences that warrant further investigation to explore the value of different communication approaches in different regions of Azerbaijan.

Secondly, this study underscores the importance of social norms in driving environmental action. While positive attitudes may be widespread, they are insufficient without the influence of social norms. The results suggest that leveraging social norms could significantly enhance the effectiveness of environmental initiatives. This is in contrast to Trautwein et al. (2023), who did not find a significant role for social norms in their study of environmental behavior in Azerbaijan.

Thirdly, this study found that perceived behavioral control is critical for translating positive attitudes into action. Empowering individuals with the necessary tools and confidence to make environmentally-friendly choices is essential. This includes providing practical infrastructure improvements, such as access to water-saving technologies, and combining public education with regulatory measures to remove barriers to action.

Finally, providing a mix of strategies rather than relying on single approaches is crucial. Effective environmental policies should combine public education campaigns with tangible infrastructure improvements and regulatory measures. For example, awareness campaigns should be coupled with improved access to water-saving technologies, better public transportation options, and incentives for adopting

sustainable practices, such as subsidies or price discounts (e.g. Mukhtarov, 2024).

Conclusion

Environmental strategies in Azerbaijan should integrate social norms and behavioral agency, adopt a mixed approach, and build on successful elements of initiatives like the *Birdamcı*. Campaigns should move beyond simply providing information and instead focus on shaping social norms and demonstrating the ease of transitioning to sustainable behaviors. While studies often recommend more environmental education (Trautwein et al., 2023; Gurbuz et al., 2021; UNECE, 2011), this research shows that public attitudes are already largely positive within our sample. This may not be representative of the whole of Azerbaijan; however, the data here present a point to consider. Perhaps, communication strategies should, in addition to raising awareness, prioritize influencing social norms, such as engaging celebrities and role models to promote desired behaviors. For example, campaigns could normalize water-saving habits and portray wasteful behavior as deviant, following approaches like those of Seyranian et al. (2015). Communication should also offer practical advice on water-saving techniques, such as using domestic appliances efficiently or reusing urban water for household gardens, common in Baku's suburbs. The *Birdamcı* campaign already employs some of these methods, featuring TV personalities and sports figures who emphasize the importance of saving water and provide practical tips for home use and small gardens (Birdamcı, 2023). Continuing and expanding such communication efforts is crucial.

Acknowledgements

I would like to thank Dr. Vener Garayev of ADA University for helping design and conduct this study. I am also grateful to all participants who gave us their time and insights and made

this study possible. I am also thankful to the reviewers and the editor of Baku Research Institute for useful questions and comments.

References

Ajzen, I., 1991. The theory of planned behaviour. *Organizational Behaviour and Human Decision Processes*, 50(2), 179-211.

Ajzen, I., 2011. The theory of planned behaviour: Reactions and reflections. *Psychology and Health*, 26(9), 1113-1127.

Baku Water Week, 2024. *Bir damcı layihəsinin məqsədi nədir? 09.02.2024, Xəzər TV*. [What is the purpose of the project "One drop"? 09.02.2024, Khazar TV]. <https://bakuwaterweek.az/en/video-gallery/bir-damci-layihesinin-meqsedi-nedir-09-02-2024-xezer-tv#lg=landslide=0> (accessed 1 July 2024).

Birdamci, 2023. *Gələcəkdə suyumuz axsın deyə bir damcı qoruyaq! [Let's save a drop of water to make sure our waters flow in the future]*, Youtube video: https://www.youtube.com/watch?v=StNee-0mG60&ab_channel=Birdamci (accessed 2 July 2024).

Birdamci, 2024a. [@birdamci]. *Youtube account. Screenshot*. <https://www.youtube.com/@birdamci5946/videos> (accessed 30 June 2024).

Birdamci, 2024b. [@birdamci]. *Instagram account. Screenshot*. <https://www.instagram.com/birdamci.az/> (accessed 15 June 2024).

Friedrich-Ebert-Stiftung South Caucasus (FESSC). 2023. Youth study, youth voices of Azerbaijan – attitudes, values and future prospects. <https://library.fes.de/pdf-files/bueros/georgien/20821.pdf> (accessed on 1 August 2024).

Gurbuz, I.B., Nesirov, E. and Ozkan, G., 2021. Investigating environmental awareness of citizens of Azerbaijan: a survey on ecological footprint. *Environment, Development and Sustainability*, 23, pp.10378-10396.

Mukhtarov, F., 2024. Combining behavioural and reflective policy tools for the environment: a scoping review of behavioural public policy literature. *Journal of Environmental Planning and Management*, 67(4), 714-741.

Owens, S. and Driffill, L., 2008. How to change attitudes and behaviours in the context of energy, *Energy Policy*, 36(12), 4412-4418.

Scandizzo, P.L. and Abbasov, R., 2022. Do People Appreciate Economic Value of Water in Baku City of Azerbaijan?', in Dhyani, S., Basu, M., Santhanam, H., and Dasgupta, R (Eds). *Blue-green infrastructure across Asian countries*. 2022. Singapore: Springer Singapore, 193-220.

Seyranian, V., Sinatra, G. M., & Polikoff, M. S. 2015. Comparing communication strategies for reducing residential water consumption. *Journal of Environmental Psychology*, 41, 81-90.

Sleenhoff, S., Landeweerd, L. and Osseweijer, P., 2015, Bio-basing society by including emotions, *Ecological Economics*, 116, 78-83.

Starcevic, Milica. "Environmental Education for Behavioural Change: Case of Azerbaijan." Eurasia Partnership Foundation, *Study Series on Public Policy Issues*: 68.

Trautwein, U., Babazade, J., Trautwein, S. and Lindenmeier, J., 2023. Exploring pro-environmental behaviour in Azerbaijan: an extended value-belief-norm approach, *Journal of Islamic Marketing*, 14(2), 523-543.

United Nations Economic Commission for Europe (UNECE). 2011.

Environmental performance reviews: Azerbaijan (2nd review).
United Nations.
<https://unece.org/environment-policy/environmental-performance-reviews/azerbaijan> (accessed on 15 August 2024)

Yale Center for Environmental Law & Policy (YCELP). 2024
Environmental Performance Index. Yale University.
<https://epi.yale.edu/>

Appendix

Birdamcı (Water drop) campaign poster



Photo credit – Farhad Mukhtarov, Baku, Azerbaijan, May 2024.
The poster says “Təbiəti qoruyaq! Plastik tullantılara yox deyək!” (“Let’s protect the environment, say no to plastic

waste"! An example of a public information campaign to encourage PEB in Baku, Azerbaijan.

Birdamcı (Water drop) campaign posters





Photo credit – Farhad Mukhtarov, Baku, Azerbaijan, May 2024. The left-hand side poster says “Bir damcı qoruyaq!” (Let’s save one drop!), which in the context of Azerbaijani, implies both saving water and that every little action matters. The picture on the right hand-side is a close-up of the right side of the kiosk. It says “Həyat izi itməsin! #AXSINDEYƏ Bir damcı qoruyaq!” (So that signs of life are not lost! #SOTHATITFLOWS Let’s save one drop!).

Birdamci (Water drop) campaign poster



Photo credit – Farhad Mukhtarov, Baku, Azerbaijan, May 2024. The poster on the large billboard on the busy Azadliq avenue in Baku says “Bir damcı qoruyaq!” (Let’s save one drop!).

[\[1\]](#) United Nations Framework Convention on Climate Change (UNFCCC) Conference of Parties (CoP)