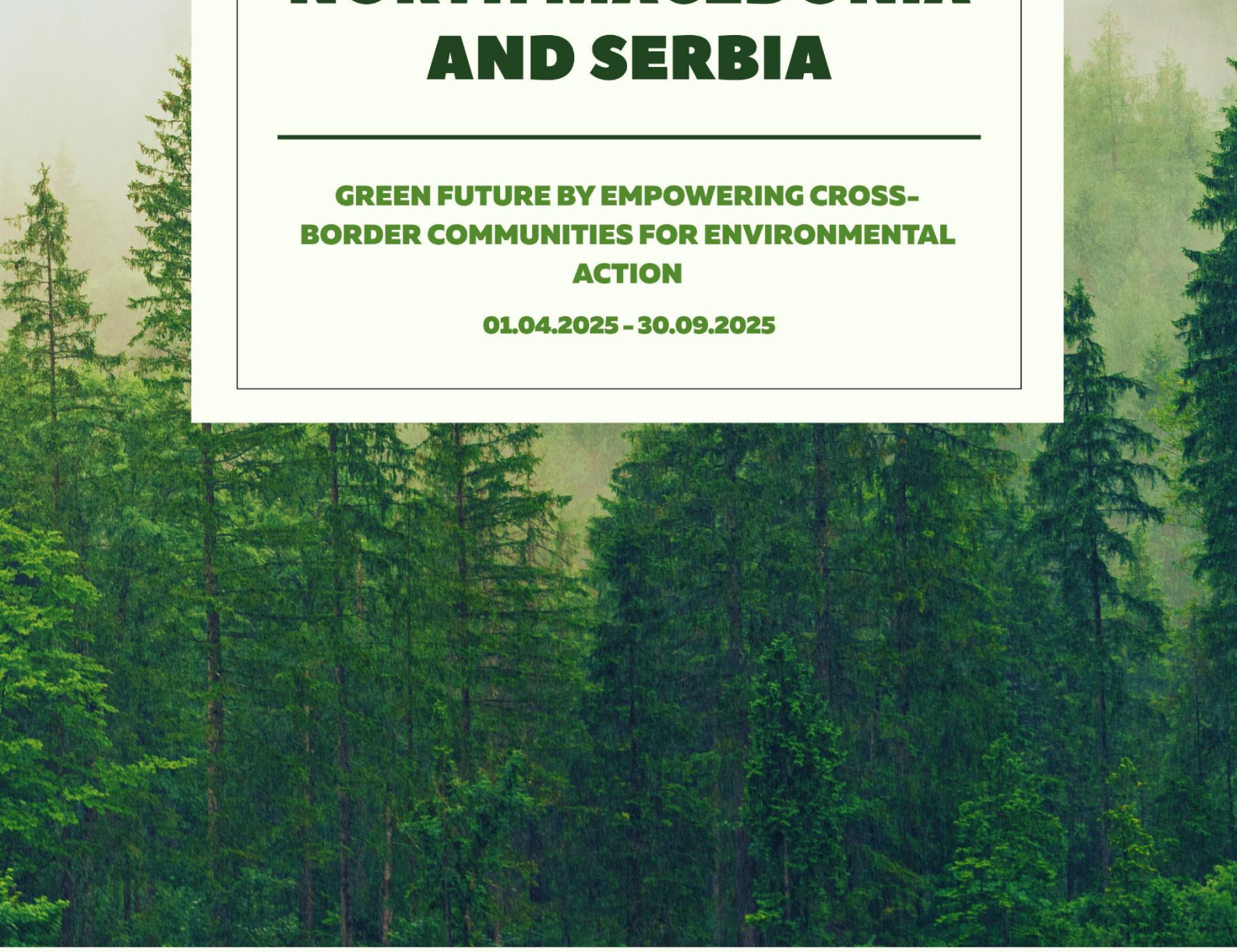
ANALYSIS
OF
COMPARATIVE RESEARCH ON GREEN PRACTICES AND POLICIES IN NORTH MACEDONIA AND SERBIA

GREEN FUTURE BY EMPOWERING CROSS-BORDER COMMUNITIES FOR ENVIRONMENTAL ACTION

01.04.2025 - 30.09.2025



Прогрес
Институт за социјална демократија

DISCOVER SERBIA

Центар за истражување и анализи
НОВУС

Content table:

This analysis was prepared by the Center for Research and Analysis NOVUS in partnership with Discover Serbia, as part of a project supported through the Think Tank Grants Program of the Progress Institute for Social Democracy and the Kalevi Sorsa Foundation. The program is funded by the Ministry for Foreign Affairs of Finland. ***The views and opinions expressed in this publication are solely those of the authors and do not necessarily reflect the official positions of the donor institutions.*** *All content is the responsibility and intellectual property of CRA NOVUS and Discover Serbia.*

For the project

This cross-border project aims to strengthen environmental awareness, youth engagement, and sustainable practices in North Macedonia and Serbia. Its core goal is to empower local communities,especially young people,through education, innovation, and public participation

in green initiatives. By combining research, media outreach, youth-driven innovation, and public events, the project fosters regional cooperation and promotes long-term environmental action.

Key activities include a cross-border environmental policy study, digital media and podcast campaigns, an “Eco-Conscious” awareness drive, a youth-led green solutions challenge, and the Green Future Conference & Festival in Strumica.

The project aims to produce tangible results, including a comprehensive policy brief, high public engagement across digital platforms, development of youth-led green initiatives, and a well-attended conference that promotes cross-border dialogue and collaboration. Ultimately, it seeks to build a more environmentally conscious and active generation capable of driving sustainable change in the region.

Introduction

Preserving the environment and achieving sustainable development have become increasingly prominent priorities in the political agendas of both North Macedonia and Serbia, as well as at the local level—particularly in urban centers such as Strumica (North Macedonia) and Belgrade (Serbia). These cities face growing challenges related to air and water pollution, inadequate waste management infrastructure, deforestation, and the escalating impacts of climate change. These environmental issues not only jeopardize the ecological balance but also deeply affect public health, economic stability, and the overall quality of life, especially among youth and vulnerable populations.

Environmental problems such as climate change, pollution, and habitat loss are not just global in nature; they have immediate and visible effects on local communities. In North Macedonia and Serbia, urban air pollution, poor water resource management, and rapid depletion of natural resources contribute to worsening health conditions and environmental degradation. Moreover, climate change has increased the frequency and severity of natural disasters, disrupting agriculture and increasing the vulnerability of rural communities. Despite ongoing efforts at national and local levels to address these issues, implementation of environmental policies often remains fragmented and inconsistent, lacking a coordinated, cross-sectoral approach.

Another pressing concern is the persistent gap in public awareness regarding the connection between environmental sustainability and everyday life. Many citizens remain uninformed about how they can contribute to mitigating environmental damage through individual or collective action. Local communities often lack access to education and resources about sustainable living, waste reduction, eco-friendly business practices, and the importance of environmental participation. This lack of awareness contributes to stagnation in the adoption and implementation of green policies.

This research arises from the need to assessing public perception, awareness, and participation in environmental protection initiatives. By conducting a comparative analysis between the cities of Strumica and Belgrade, the study aims to investigate political frameworks, the practical application of environmental strategies, and the level of citizen engagement with key environmental issues.

The methodology is based on the implementation of a detailed survey, which includes both quantitative and qualitative questions. The survey is designed to assess citizens' awareness, attitudes, and behaviors related to environmental issues, as well as their perceptions of national and local environmental policies. By combining closed-ended questions that allow for statistical analysis with open-ended questions that capture personal insights and experiences, this approach provides a comprehensive understanding of public engagement with environmental sustainability. The findings serve as a foundation for developing concrete,

actionable recommendations aimed at improving green policies and sustainability initiatives at both the national and local levels.

Key findings

North Macedonia

1. Environmental Concerns and Perceived Problems

- **Air pollution** is the most pressing environmental concern across the population, **identified by 77% of all respondents**. It is also the most serious concern across all age groups and both urban (75%) and rural (82%) communities.
- Other major concerns include polluted rivers and drinking water (50%), waste and illegal landfills (46%), and climate change (41%).
- Rural residents express greater concern across nearly all issues—including water pollution, illegal landfills, and climate change—indicating they perceive environmental degradation more acutely than urban dwellers.
- Older adults (60+) identify a broader range of environmental threats than younger respondents, especially highlighting climate change (66%), waste (59%), and polluted water (59%).

2. Environmental Quality and Personal Impact

- **Air quality, waste management, and water quality are perceived as poor**:
    - Air quality: 72% rate it as “poor” or “very poor”.
    - Waste management: 64% rate it negatively.
    - Water quality: Nearly half rate it poorly, with rural participants giving particularly harsh assessments.
- **Green spaces are viewed somewhat more favorably**, with 38% rating them as "average" and 21% as "good".
- **44.4% of participants report being personally affected by environmental problems,** most often due to air pollution (respiratory issues, limited outdoor activity), unsafe drinking water, and illegal waste sites.
- Participants with higher education are more likely to recognize environmental impacts and rate the quality of green spaces more critically than those with lower education.

3. Environmental Behaviors and Engagement

- **Reusable bag use is the most common eco-friendly behavior**:
    - Over 80% of participants use them at least sometimes, and 25.6% use them daily.

- Waste separation is moderately practiced:
    - 61.7% report doing it occasionally or more, though many note that bins are ultimately mixed, discouraging effort.
    - Urban participants are more likely to separate waste than rural ones.
- **Cycling is the least common green behavior**:
    - 53.3% of respondents never use a bicycle; only 5.6% use one daily.
- Public transport use is also low:
    - 27.2% never use it, and just 10.6% use it daily.
    - Rural residents are slightly more frequent users of public transport, while lower-educated participants also report higher reliance on it.

4. Civic Participation and Willingness to Act

- **Actual participation in environmental actions (e.g., clean-ups, protests, eco projects) is low across all groups**:
    - Only 21.2% of youth (18–29) have participated—the highest rate among age groups.
    - Participation falls to just 5.9% for ages 45–60.
    - Rural and older participants show higher uncertainty about whether they've participated, pointing to a lack of engagement or awareness.
- However, **willingness to support or volunteer for environmental causes is very high** (75%) across all demographics:
    - Highest among ages 30–44 (79.2%); lowest among ages 45–60 (64.7%), though this group also shows the most uncertainty.
    - Notably, no participant over 60 said they would not support such actions.

5. Awareness and Trust in Policies and Institutions

- **45.6% of participants have not heard of any major environmental policy**.
    - Among those aware, the Climate Action Plan (30.6%) and Environmental Protection Law (25.6%) are the most recognized.
    - Participants with higher education demonstrate greater awareness of most green policy documents.
- Awareness of the EU Green Deal is moderate, with 53.3% recognizing it, and 17.8% unsure.

- When asked if national green policies are adapted to local needs:
    - Only 7.2% said "yes", while 41.7% said "partially", and 30.6% said "don't know".
- **Institutional trust is low to moderate**:
    - 21.1% report no trust and 25% report low trust in environmental institutions.
    - Only 11.1% express high or full trust.
    - Among young people (18–29), moderate trust is most common (54.5%), but very few (3%) report high or full trust.
    - Participants aged 60+ have the lowest trust, with 47% reporting no trust in institutions.

6. Barriers and Responsibility

- The biggest barriers to implementing green policies at the local level:
    - Low political will (60.6%)
    - Lack of public awareness (60%)
    - Corruption and nepotism (55.6%)
- Responsibility for green policy implementation is seen as a shared duty:
    - 36.4% say municipal/local government
    - 30.6% say Ministry of Environment
    - 19.2% believe individual citizens also bear responsibility
- Lower-educated participants are less likely to identify responsible institutions and more likely to be unaware of green governance mechanisms.

7. **Ideas and Solutions**

- **30% of participants suggest stricter laws, fines, and enforcement to address environmental problems**.
- 11.1% propose public awareness and education as key solutions.
- However, **32.2% of participants had no concrete ideas**, reflecting lower engagement or uncertainty.
- Among concrete proposals, the most frequently mentioned include:
    - Tree planting, clean-up actions, recycling bins, air filters, and expansion of green areas.

Serbia

1. **Environmental Concerns and Perceived Problems**

- **Air pollution** is the dominant environmental issue, cited by 82%**%** of respondents across all demographics. It is perceived as severe in urban areas due to traffic, industrial emissions, and household heating.
- **Waste and illegal landfills** rank second, 78**%**, especially in rural areas and smaller cities where waste management infrastructure is lacking.
- **Polluted rivers/drinking water** is a critical concern for 76%**,** with rural communities highlighting contamination from agriculture, industry, and inadequate sewage systems.
- **Lack of green areas** (49**%**) and **climate change impacts** (45**%**) are also significant, particularly among youth (18–29) and older adults (60+).
- **Rural vs. Urban**: Rural residents report more acute water pollution and illegal dumping, while urban respondents emphasize air pollution and green-space deficits.

2. Environmental Quality Assessments

- **Air quality**: 72**%** rate it as "poor" or "very poor," citing industrial emissions, traffic, and winter heating.
- **Waste management**: 65**%** deem it "poor" or "very poor," criticizing inconsistent collection and limited recycling.
- **Water quality**: 41**%** rate it negatively (21% “poor” and 20% “very poor”, with rural areas noting contamination from agriculture and mining.
- **Green spaces**: More polarizing; urban youth rate them "poor" (45**%**), while older adults in smaller towns view them more favorably ("average/good," 30**%**).

3. Environmental Behaviors and Engagement

- **Reusable bags** are the **most adopted eco-friendly behavior**:
  - 62% of citizens use them "often" or "daily."
- **Waste separation** shows partial engagement:
  - 34% practice it "sometimes," while 21% never separate waste.

- **Urban residents** separate waste more consistently than rural counterparts (urban residents 36.7%, rural 24.6%)

- **Cycling** is the **least common sustainable practice**:
- 53% never use bicycles.

- **Public transport**: most people (71%) use public transport "often" or "daily", but 26% hardly or never do.

4. Civic Participation and Willingness to Act

- **Actual participation remains low**:
- **Youth (18–29 years)**: 48% join actions (highest rate).
- **Ages 45–60**: 28% participate.
- **Rural/older citizens** report uncertainty about engagement opportunities.
- **Willingness to support environmental causes is high**:
- 78% of youth express readiness to volunteer.
- Overall**:** 53.5% average willingness across age groups.
- No respondent aged 60+ opposes supporting actions.

5. Policy Awareness and Institutional Trust

- **Policy awareness gaps**:
- 39.3**%** are unaware of *any* national environmental strategy.
- Among the aware, 44.8**%** know only 1–2 policies.
- 15.9% are aware of 3+ policies.
- **Trust in institutions is critically low**:
- **77%** report "no trust" (49%) or "low trust" (28%).
- **Most distrustful groups**:
  - Youth (18–29): 82% low/no trust.
  - Seniors (60+): 47% report *no trust*.
- **Policy-local disconnect**:
- Only **23%** believe national policies address local needs.

6. Barriers and Responsibility

- Top barriers to green policies:
  - **Corruption/nepotism** (74%).
  - **Low political will** (70%).
  - **Lack of public awareness** (68%).

- Attributed responsibility**:**
  - **Ministry of Environment** (64.5%).
  - **Local governments** (61.7%).
  - **Citizens** (35.0%).
- **Education gap**: Lower-educated respondents struggle to identify responsible institutions.

Methodology

Research Objectives

The main objective of the research is to conduct a comparative analysis of green policies, environmental challenges, and sustainable practices in North Macedonia and Serbia, with a focus on their implementation at both national and local levels. The research aims to highlight the differences and similarities between the two countries, with particular emphasis on:

1. Examination of citizens' perceptions, attitudes, and awareness regarding environmental and climate change issues, through field surveys conducted in the Strumica micro-region (North Macedonia) and in Belgrade (Serbia) (a total of 360 respondents).
2. Assessment of environmental practices at both individual and collective levels, in order to determine the degree of active citizen involvement in environmental protection processes.
3. Development of recommendations for improving policies and measures, derived from the combined analysis of documentary sources (desk research) and field data, with the aim of encouraging more effective implementation of green policies at local and national levels and their alignment with EU policies, particularly the European Green Deal.
4. Development of advocacy tools in the form of a policy brief and organization of a roundtable discussion, which will serve as a foundation for involving civil society in the creation of green public policies at national and local levels.

Type of Research and Data Collection Methods

Field Research: Survey

A structured survey conducted with a total of 364 respondents, of which:

- 180 respondents will be from the Strumica micro-region in North Macedonia (municipalities of Strumica, Vasilevo, Bosilovo, Novo Selo),
- 184 respondents will be from Belgrade, with a similar socio-economic profile.

The survey included both closed and open-ended questions, covering topics such as:

- Perceptions of air quality, water quality, and waste management,
- Citizens' awareness of national documents and policies and their knowledge of them,
- Participation in environmental initiatives,

- Trust in institutions and their capacity to implement green policies,
- Personal environmental protection practices.

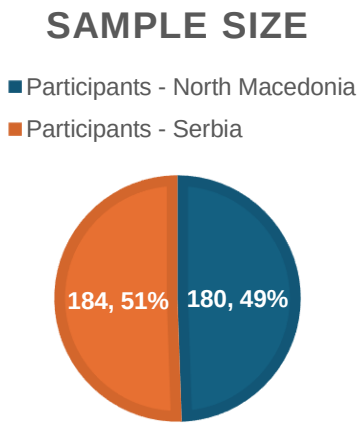
The survey was administered face-to-face and/or online, by distributing a digital version of the questionnaire via email and social media, in order to increase reach and representativeness, in collaboration with trained field enumerators. A standard data validation and protection system will be used (anonymity, access for research purposes only).

The use of a dual approach (online and offline) allowed greater flexibility, particularly in municipalities with limited internet access or digital tools, while simultaneously increasing the efficiency and volume of data collection.

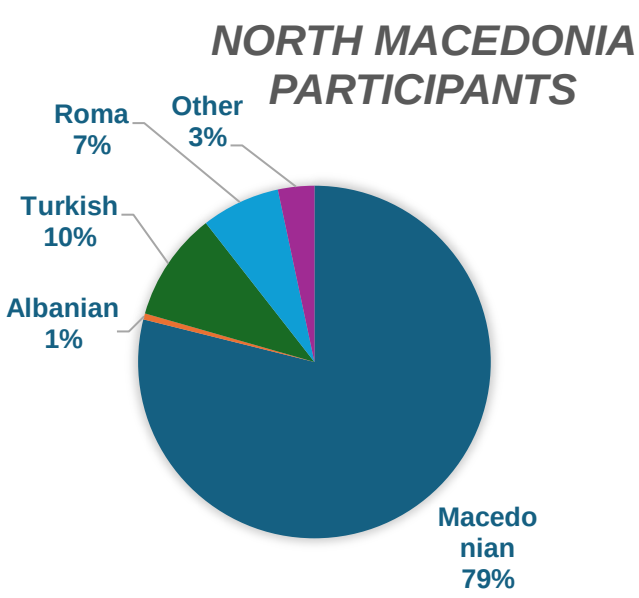
Description of the sample

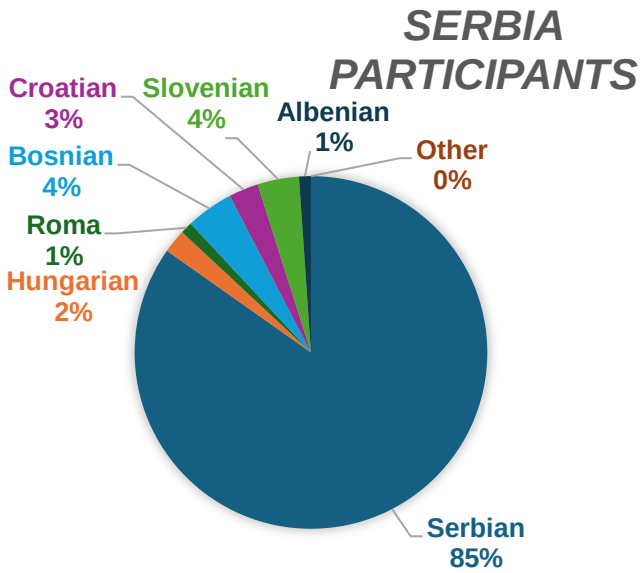
Demographic information

The total population size of the research is 7 511 736, out of which 5,855,279 come from Serbia and 1,656,457 comes from North Macedonia. The sample size consists of 364 survey responders, 180 responders from N. Macedonia and 184 from Serbia.



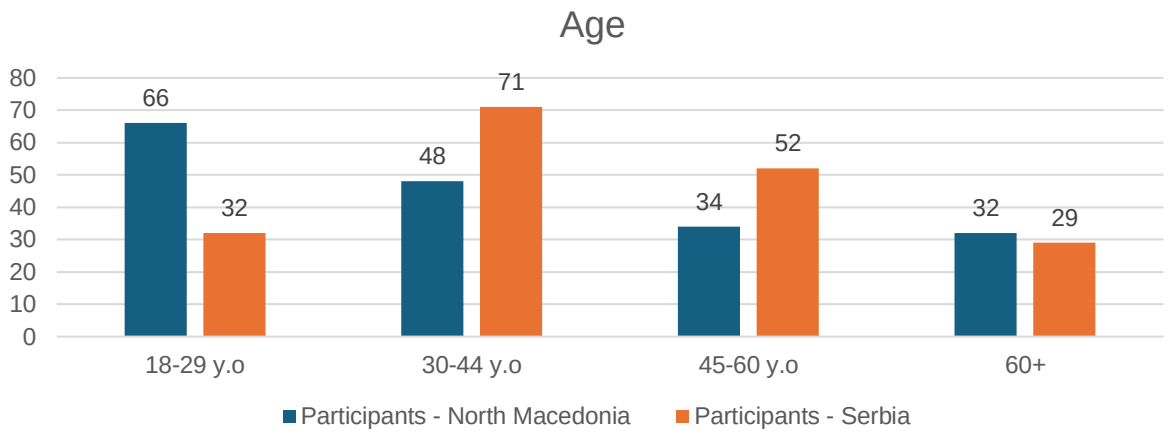
Whitin the sample for each country the ethnic background for North Macedonia is Macedonians – 79%, Albanians – 1%, Turkish – 10%, Roma – 7%, other – 3%. For Serbia regarding ethnic background, the sample consists of Serbians - 85%, Hungarian – 2%, Roma – 1%, Bosnian – 4%, Croatian – 3%, Slovenian – 4%, Albanian – 1%, and other 0%.



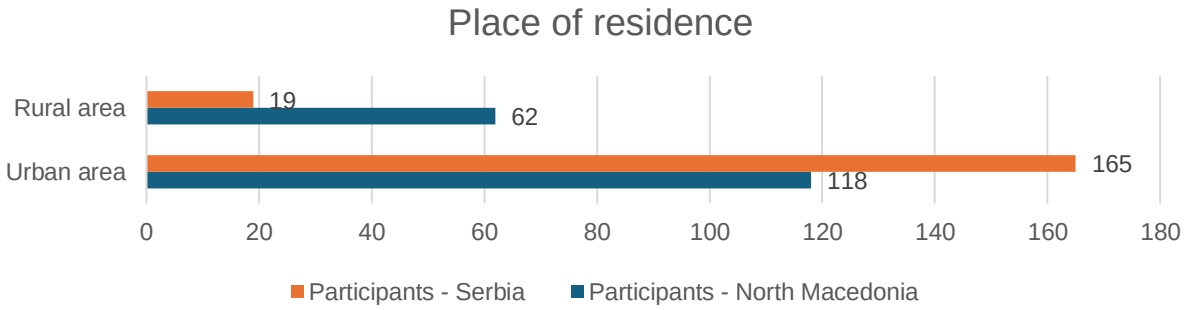


Regarding age, the sample size for North Macedonia consists of 66 or 36,7% were 18-29 years old, 48 responders or 26,7% were 30-44 years old, 34 responders or 18,9% were 45-60 years old, and 32 or 17,8% were 60+ years old.

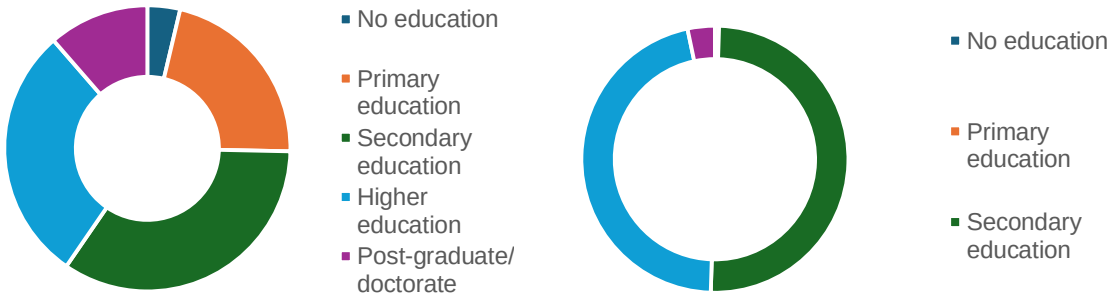
In Serbia's sample, regarding the same category, 32 survey responders or 17,4% were 18-29 years old, 71 responders or 38,6 % were 30-44 years old, 52 responders or 28,3 % were 45-60 years old, and 29 or 15,8% were 60+ years old.



Another sample category was place of residence, in terms of urban and rural place of residence. Within this criterion, in North Macedonia 118 responders reside in urban area, while 62 responders are from rural areas, while in Serbia's sample 165 responders have residency in urban area, and 19 reside in rural areas.

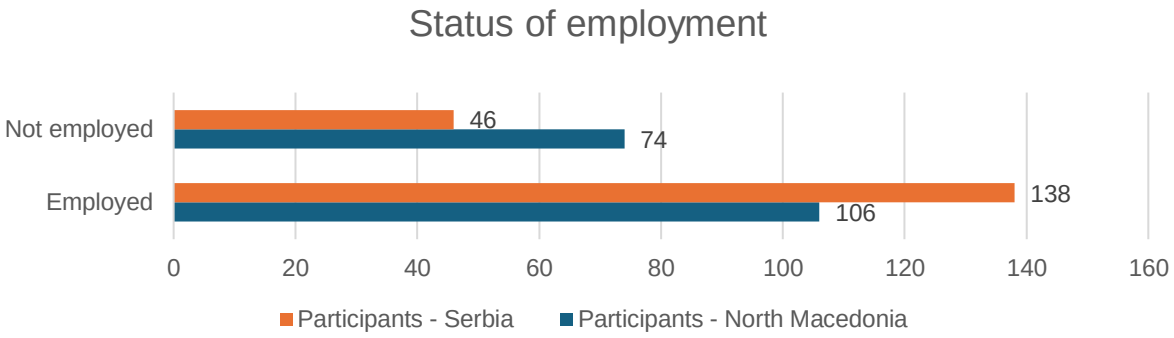


Regarding the criterium of educational level, in the sample of N.Macedonia 3,9% is with no education, 22,8 have primary education, 36,1 have secondary education, 30,6 have higher



education, and 6,7 have post-graduate education. In the sample from Serbia 0% have no education, 0,5% have primary education, 50% have secondary education, 46,2 have higher education, and 3,3 have post-graduate level of education.

Regarding the criteria of employment, for the North Macedonia's sample 106 responders (58,9%) are employed, while 74 respondents (41,1%) are not employed. In the sample from Serbia 138 responders (75%) are employed, while 46 respondents (25%) are not employed.



II. Key Environmental Concerns & Behaviors

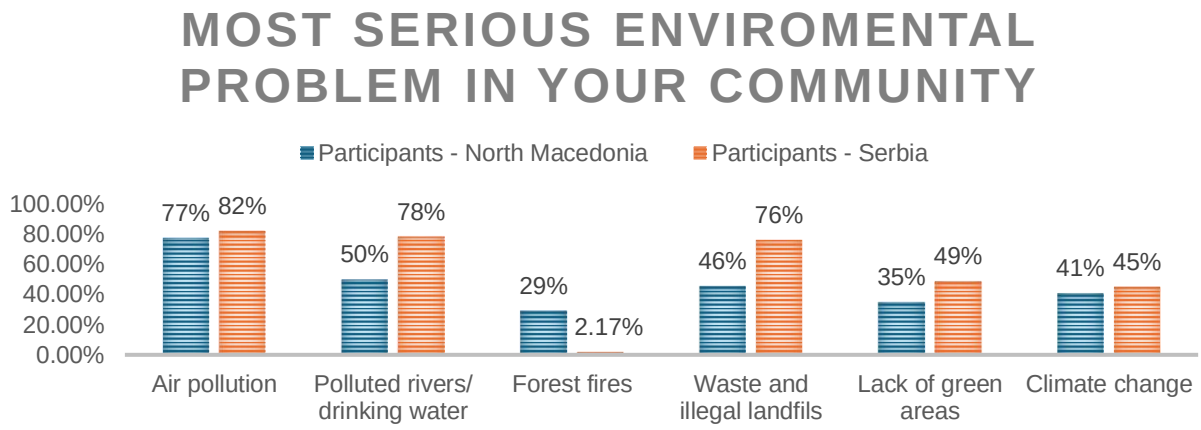
1. Top environmental problems

North Macedonia

For this question the participants had the option to select multiple answers. Among participants from North Macedonia, air pollution stood out as the most frequently identified environmental issue which was selected by 139 out of 180 participants, or 77% of the participants. The second most selected issue was polluted rivers and drinking water, chosen by 50% of respondents. Close behind was the issue of waste and illegal landfills, selected by 83 participants, or 46%. The problem of climate change was identified by 74 participants, making up 41% of responses. The least selected environmental problems were lack of green areas and forest fires, chosen by 35% and 29% of participants, respectively.

Serbia

Among participants from Serbia, air pollution also stood out as the most frequently identified environmental issue, selected by 126 out of 184 participants, or 68% of the respondents. The second most selected issue was waste and illegal landfills, chosen by 98 participants, or 53%. Polluted rivers and drinking water were identified by 72 respondents, representing 39% of the sample. The issue of climate change was marked by 68 participants, making up 37% of responses. The lack of green areas was selected by 59 participants, or 32%, while forest fires were the least frequently mentioned concern, selected by 33 respondents, or 18%.

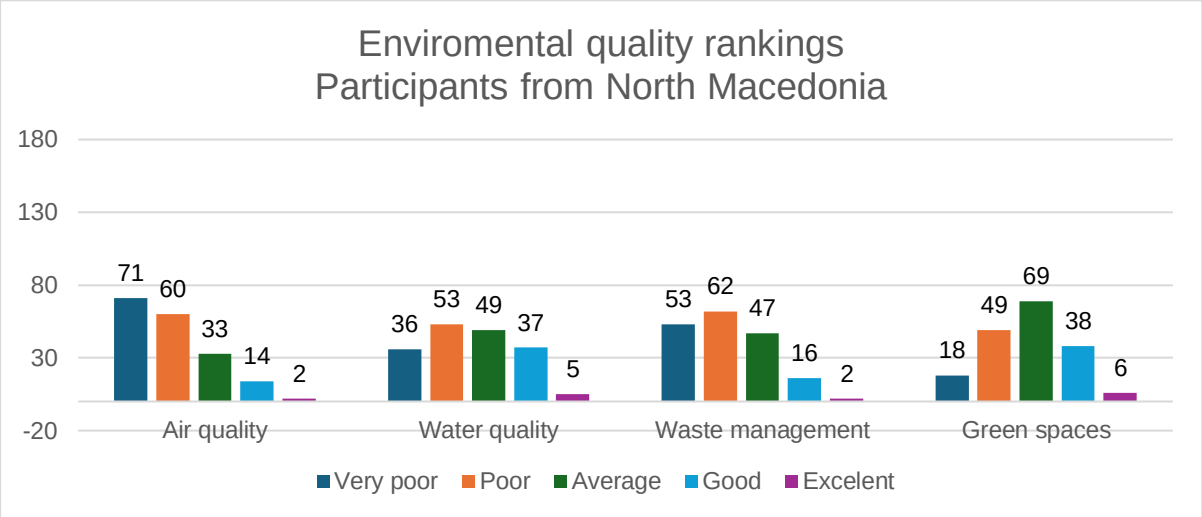


2. Environmental Quality Ratings

Participants were asked to rate air quality, waste management, green spaces, and water quality on a scale from 1 (very poor) to 5 (excellent).

North Macedonia

Among respondents from North Macedonia, air quality received the most negative assessments, with 39.44% rating it as very poor and an additional 33.33% as poor. Similarly, 49.44% rated the water quality as either very poor or poor. Waste management received even lower evaluations, with 63.89% of participants describing it as very poor or poor. In contrast, green spaces were viewed more favorably: 38.33% rated them as average, 27.22% as poor, and 21.11% as good. This suggests that, while most environmental conditions are perceived negatively, green spaces are seen as a relative strength.



Serbia

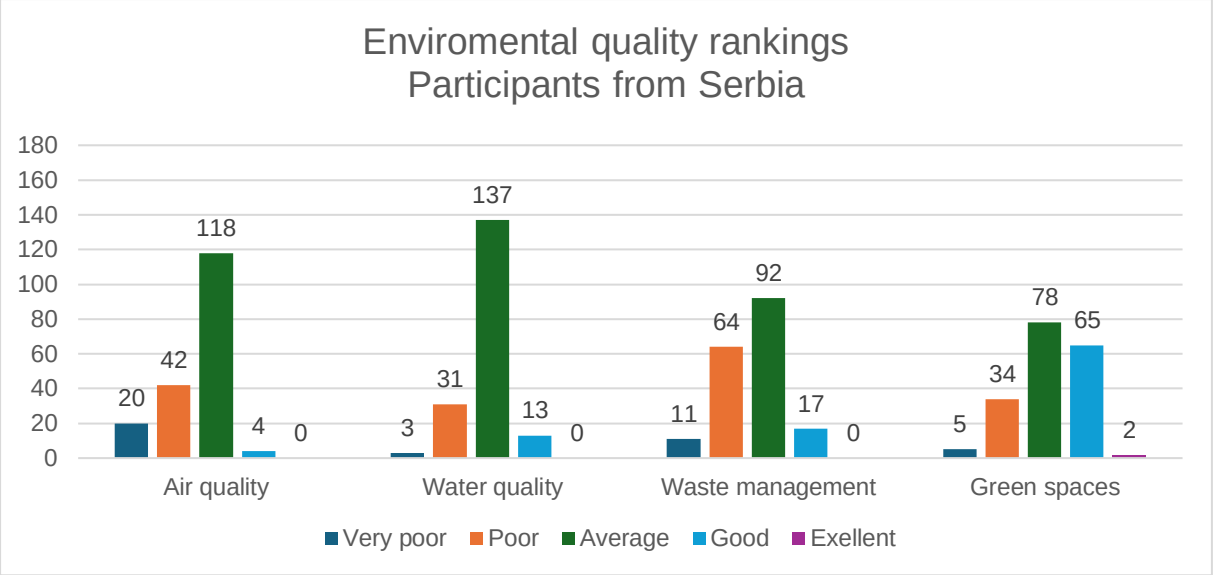
Among respondents from Serbia, air quality received predominantly negative assessments, with 10.87% rating it as "very poor" and an additional 22.83% as "poor," totaling 33.70% negative ratings. The largest percentage, 64.13%, rated air quality as "average."

Water quality was rated somewhat more favorably, but still with a significant share of negative perceptions. A total of 1.63% of respondents rated water quality as "very poor," and 16.85% as "poor," combining for 18.48% negative ratings. A large majority of respondents, 74.46%, rated water quality as "average."

Waste management received lower evaluations. Combined, 5.98% of respondents rated it as "very poor," and 34.78% as "poor," yielding a total of 40.76% negative ratings. Half of the respondents, 50.00%, rated waste management as "average."

Green spaces, in comparison to other aspects, were perceived most favorably. The largest percentage, 42.39%, rated them as "average," while 35.33% rated them as "good," and 1.09% as "excellent." Nevertheless, 18.48% of respondents considered green spaces "poor," and 2.72% "very poor," indicating a need for further improvements.

These results suggest that, while there is significant room for improvement in the perception of all environmental conditions, green spaces are seen as a relative strength, whereas air quality and waste management represent the areas with the most negative assessments.



3. Personal Behaviors

Participants were asked about their individual environmental practices, including waste separation, use of public transport and bicycles, and use of reusable bags.

North Macedonia

61.67% of participants from North Macedonia reported that they sometimes separate their personal waste. When asked whether they separate waste in general, responses were nearly evenly split between "yes" and "no." As the reason for not selecting waste, respondents report that even if they separate the bins, they are collected and transported to the same place, essentially making the their primary selection irrelevant.

Regarding public transport usage, only 10.56% of respondents from North Macedonia reported using it daily, while 27.22% said they never use it. The remaining participants indicated varying levels of use: 17.78% use it not often, 20.56% use it sometimes, and 23.89% use it very often.

When asked about how often they use a bicycle, 53.33% of the 180 participants from North Macedonia reported that they never use one. 23.33% said they don't often use a bicycle, approximately once a month. 10% indicated they use a bicycle sometimes (around once a week), while 7.78% reported using it very often (2–3 times per week). Only 5.56% of respondents stated that they use a bicycle daily.

Regarding the usage of reusable bags, 8.33% of the 180 participants reported that they never use them. An additional 11.11% said they use reusable bags not often, about once a month. The largest group, 31.67%, indicated they use reusable bags sometimes, roughly once a week.

Meanwhile, 23.33% reported using them very often (2–3 times per week), and 25.56% stated they use reusable bags daily.

Among the environmental protection practices surveyed, the use of reusable bags emerges as the most frequently adopted method by participants from North Macedonia. Over 80% reported using reusable bags at least sometimes, with more than 25% using them daily and nearly 23% using them very often.

In contrast, bicycle usage is the least common environmentally friendly behavior. More than half (53.33%) of respondents never use a bicycle, and only about 5.56% use one daily.

Additionally, waste separation shows moderate engagement, with 61.67% of participants sometimes separating their personal waste and a near-even split between those who generally separate waste and those who do not.

These findings suggest that while reusable bags are widely embraced for environmental protection, efforts to increase bicycle use and consistent waste separation could be beneficial areas for environmental policy and awareness campaigns in North Macedonia.

Serbia

Regarding waste separation, 75.54% of participants from Serbia reported that they "sometimes" separate their personal waste, while 20.65% answered affirmatively ("yes"). Only 3.80% of respondents do not separate waste. This indicates a significant level of engagement, although the majority of respondents reported occasional rather than regular separation.

Concerning public transport usage, a high percentage of 38.59% of respondents from Serbia reported using it daily, with an additional 26.09% using it "very often" (2-3 times per week). In total, 64.68% of participants use public transport daily or very often. A smaller proportion, 19.57%, use it "sometimes" (once a week), and 15.22% "not often" (once a month). Only 0.54% of respondents reported never using public transport, demonstrating its widespread acceptance as a mode of transportation.

When asked about how often they use a bicycle, perceptions are more varied. The largest share, 26.63%, reported using a bicycle "very often" (2-3 times per week), and 25.00% "sometimes" (once a week). However, a significant percentage of 19.57% never use a bicycle, and 21.20% use it "not often" (once a month). Only 7.61% of respondents stated that they use a bicycle daily. This indicates a moderate adoption of cycling as an eco-friendly mode of transport, with room for increasing daily usage.

The use of reusable bags is widespread. As many as 32.07% of participants reported using them "very often" (2-3 times per week), and 30.98% "sometimes" (once a week). An additional 20.65% of respondents use reusable bags daily. In total, 83.70% of respondents use them at least sometimes, making reusable bags the most frequently adopted environmental practice. Only 2.17% never use them.

Regarding the usage of natural/ecological products, 38.59% of participants reported using them "sometimes" (once a week), while 27.72% use them "very often" (2-3 times per week). Approximately 19.57% use them "not often" (once a month), and 11.96% daily. Only 2.17% of respondents stated that they never use natural/ecological products.

Among the environmental protection practices surveyed, the use of reusable bags and public transport emerges as the most frequently adopted behaviors by participants from Serbia. Over 83% of participants reported using reusable bags at least sometimes, and a similarly high percentage actively use public transport. Waste separation shows moderate engagement, with the majority doing so occasionally, while bicycle usage is also at a moderate level, with a significant number of those who do not use it at all.

These findings suggest that while reusable bags and public transport are widely embraced for environmental protection, awareness campaigns and infrastructure improvements could be beneficial for encouraging more consistent waste separation and more frequent bicycle usage in Serbia.

4. Impact of Environmental Problems

North Macedonia

A notable 44.44% of participants from North Macedonia reported that they personally feel affected by environmental problems, making this the most common response. In comparison, 22.78% said they do not feel personally impacted, while 32.78% were unsure. This indicates that nearly half of the respondents recognize a direct connection between environmental issues and their own lives.

In order to better understand the nature of the personal impact, participants were asked to describe how environmental problems have directly affected them. The most common theme in their responses was air pollution, especially during the winter months, often linked to difficulty breathing and worsened health conditions.

One respondent shared, *"During the winter you can feel that the air is so polluted that you can't even breathe,"* while another, living with asthma, noted, *"I can feel the pollution every time I go out."* Many others mentioned recurring respiratory issues, coughing, and headaches due to poor air quality. Several participants reported needing to limit outdoor activities because of pollution, with one stating, *"The air was toxic to breathe."*

Polluted drinking water also appeared frequently in responses. Some reported that the water in their area was undrinkable for extended periods, saying, *"We had to buy water,"* or *"Our tap water wasn't drinkable for three months."*

Additional issues included illegal landfills, forest fires, and the visible spread of waste, which not only affected the environment but also contributed to mental and emotional stress. One participant described the situation starkly: *"The air pollution affected me, and the climate change affected the production of vegetables and fruits."*

Serbia

A total of 45.1% of participants from Serbia reported that they personally feel affected by environmental problems, making this the most frequent response. In comparison, 21.6% said they do not feel personally impacted, while 33.3% were unsure. This means that nearly half of respondents perceive a direct connection between environmental issues and their own lives.

To better understand the nature of this personal impact, participants were asked to describe how environmental problems have affected them. The most common theme in their responses was air pollution—especially during the heating season and in urban areas—often linked to breathing difficulties, respiratory illnesses, and the inability to spend time outdoors. For example, one respondent stated: "*Toxic air during the heating season, from car pollution. No green spaces for dog walking or being outside*." Another participant from a rural area reported:"*The air is so polluted that it stinks*."

Health issues such as asthma, recurring cough, and headaches were frequently mentioned, with one respondent noting: "*Air pollution – breathing problem*."

Polluted drinking water was another recurring issue. Several respondents described periods when tap water was undrinkable, or when water pollution led to concerns about health and hygiene.

Lack of green spaces was also commonly cited, particularly among urban residents, who described a shortage of parks and recreational areas and the negative effects this has on quality of life.

Other problems included waste and illegal landfills, with some participants mentioning the visible spread of garbage and inadequate waste management infrastructure, especially in smaller towns and rural areas.

A few participants also mentioned the mental and emotional stress caused by constant exposure to environmental problems, as well as frustration with the lack of effective institutional response.

III. Policy Awareness & Trust

1. Knowledge of Environmental/ Green Policies

To check the public knowledge of the awareness of green policies, respondents got to select their awareness of 5 different policies - National Strategy for Environmental Protection; Environmental Protection Law; National Waste Management Plan; Climate Action Plan; National Strategy / Renewable Sources; as well as report that they have not heard of any of them.

North Macedonia

Almost half, exactly 45,56% of the respondents from North Macedonia, have not heard of any of the policies. The policy that was most selected was Climate Action Plan with 30,56% of the respondents from North Macedonia having heard of it, followed by 25,56% for Environmental Protection Law, and National Strategy for Environmental Protection with 21,67%. Additionally, 45% are aware of 1-2 national policies, while 11,11% have heard of 3+ policies.

When it comes to having heard of the Green Deal, 53,3% of the respondents from North Macedonia have heard of it, while further 17,8% are not sure if they have heard of it.

Furthermore, when asked whether national environmental policies are adapted to local needs, only 7.22% of participants from North Macedonia felt they are fully aligned. The majority, 41.67%, believed they are only partially adapted, while 20.56% felt they are not adapted at all. A considerable portion (30.56%) responded "I don't know," further reflecting uncertainty or a lack of awareness about how national policies are implemented at the local level.

Serbia

Nearly half of respondents from Serbia 49.2% reported that they have not heard of any of the listed national environmental policies.

Among those who indicated awareness, the most recognized policy was the Environmental Protection Law (selected by 16.4% of respondents), followed by the National Strategy for Energy/Renewable Sources (13.1%), the National Waste Management Plan (8.2%), the Climate Action Plan (7.4%), and the National Strategy for Environmental Protection (6.6%).

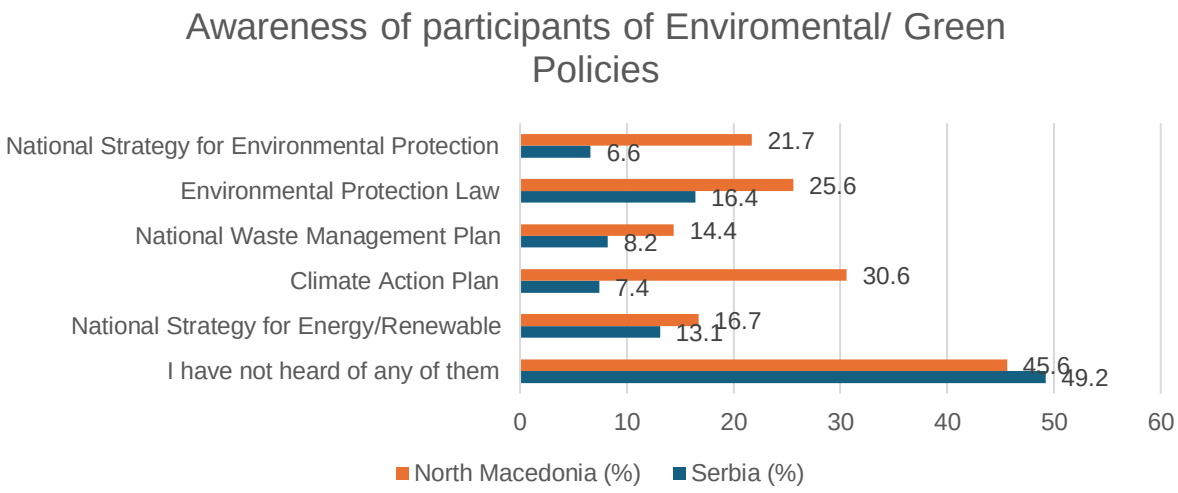
45.9% of respondents were aware of 1–2 national policies. Only 4.9% indicated they were familiar with 3 or more national policies.

44.3% of respondents from Serbia stated that they had heard of the European Green Deal, while 23.0% were unsure.

Regarding the adaptation of national environmental policies to local needs, only 8.2% of participants from Serbia felt that these policies are fully adapted. The majority, 37.7%, believed they are only partially adapted, while 20.5% felt they are not adapted at all. A

considerable portion (33.6%) responded "I don't know," reflecting uncertainty or lack of awareness about how national policies are implemented at the local level.

The data reveal that public knowledge of national environmental policies in Serbia is limited, with almost half of respondents unaware of any major strategies. Even among those who are aware, recognition is fragmented and concentrated on a few policies. There is also broad uncertainty about whether these policies are effectively adapted to local needs. This points to a need for more transparent communication, targeted public information campaigns, and greater efforts to connect national policy with local realities.



2. Trust in Institutions

North Macedonia

When it comes to having trust in institutions, 21,11% of the respondents from North Macedonia have no trust, further 25% have low trust, and 42,78% have moderate trust. Only, 11,11% of the respondents from North Macedonia have high or full trust.

Serbia

When asked about trust in institutions, 34.4% of Serbian respondents report having no trust, and a further 27.9% have low trust. Moderate trust is reported by 26.2%, while only 11.5% express high or full trust in institutions regarding environmental protection.

This distribution shows that a majority of respondents in Serbia are skeptical about institutional commitment to environmental issues, with less than one in eight expressing strong trust.

3. Policy Obstacles

To understand better what the responders think are the main obstacles to implementing national green policies at the local level, they were asked a question with the option to select multiple answers.

North Macedonia

As the number one answer selected by respondents from North Macedonia is the low political will/priority, which was chosen by 60,56% of these respondents. The reason that closely followed, according to them, is lack of public awareness which was selected by 60% of the respondents from North Macedonia, and the third reason is corruption and nepotism selected by 55,56%. The last given answers "insufficient monitoring and enforcement" and "lack of municipal funding" were selected by 31,67% and 26,11% respectively.

Serbia

When asked about the main obstacles to implementing national green policies at the local level, respondents in Serbia most frequently selected corruption and nepotism (68.9%), followed closely by low political will/priority (67.2%). Other commonly cited barriers include lack of public awareness (60.7%), insufficient monitoring and enforcement (54.1%), and lack of municipal funding (37.7%).

These results highlight that issues of governance and insufficient institutional support are seen as the most significant challenges to effective policy implementation in Serbia.

4. Attitudes on Priorities and Policies

In continuation of institutional trust and awareness the participants were asked whether environmental protection is a priority for their local authorities.

North Macedonia

Only 27.22% of participants from North Macedonia responded yes. A significantly larger portion, 46.67%, reported no, indicating a perception that local governments are not giving sufficient attention to environmental issues. Meanwhile, 26.11% were unsure, suggesting either a lack of information or unclear visibility of local environmental efforts.

Serbia

When asked whether environmental protection is a priority for their local authorities, only 19.7% of Serbian respondents answered yes. A majority, 52.5%, said no, while 27.9% were unsure.

This indicates that most people in Serbia do not perceive environmental protection as a local government priority, and a significant portion are uncertain, possibly due to a lack of visible action or communication from local authorities.

5. Responsibility for Implementing Green Policies

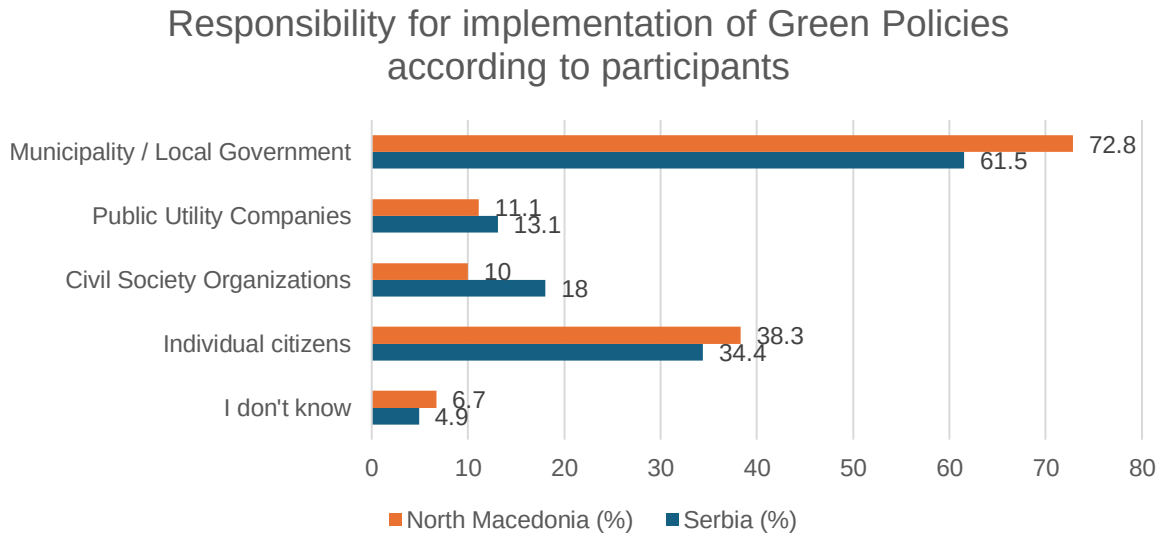
North Macedonia

When asked who should bear the most responsibility for implementing green policies in their area, the majority of participants coming from North Macedonia selected the Municipality / Local Government (36.39%) and the Ministry of Environment (30.56%), revealing a strong expectation for action from both local and national government institutions. Individual citizens were also seen as important actors, receiving 19.17% of responses. Public utility companies and civil society organizations were mentioned less frequently, with just 5.56% and 5.00% respectively. Only 3.33% of participants were unsure where to place the responsibility for implementing green policies.

Serbia

In Serbia, most respondents identified the Ministry of Environment (64.8%) and the local government or municipality (61.5%) as those who should hold the greatest responsibility for the implementation of green policies in their community. Individual citizens were also seen as important actors (34.4%), followed by civil society organizations (18.0%) and public utility companies (13.1%). Only 4.9% were unsure about where the responsibility should lie.

This distribution reveals strong expectations for action from both national and local government institutions but also recognizes the role of citizens and civil society in advancing green policies.



IV. Comparative Analysis within and between participants of North Macedonia and Serbia

1. Age Differences:

1.1. Most Frequently Recognized Environmental Problems by Age Group

The participants from North Macedonia, recognized air pollution as the most serious problem across all age groups. For younger individuals, air pollution is clearly seen as the most serious issue, with a significant gap between it and other concerns like water pollution and waste management. Among older participants (60+), air pollution remains the top concern, followed by climate change, which was identified as serious problem by 66%. Illegal landfills and water pollution follow closely, each selected by 59%. Notably, older participants tend to consider a wider range of issues as serious, while younger respondents focus more distinctly on air pollution. This pattern is also evident in the middle age groups, though to a lesser extent.

The participants from Serbia, also, recognized air pollution as the most serious problem across all age groups. However, here younger people are more focused on green spaces and climate change, middle-aged groups show broad concern, and older people remain concerned about air and waste but show less awareness or urgency around climate change.

Air pollution is seen as the most serious problem by participants in both countries of all ages. The participants in Serbia show more concern about green space and climate change among youth, while those in North Macedonia, climate change is seen as more serious by older adults. There is a difference between the participants coming from both countries regarding waste and illegal landfills. While participants in both countries see it as a serious problem, older participants from North Macedonia see it as a more serious problem, while in the participants from Serbia it's more unified, with young participants leading the way.

Country	Participants - North Macedonia				Participants - Serbia			
Age	18-29	30-44	45-60	60+	18-29	30-44	45-60	60+
Problem								
Air pollution	85%	73%	74%	72%	85%	80%	78%	75%
Polluted rivers/ drinking water	47%	52%	44%	59%	44%	38%	42%	37%
Forest fires	24%	27%	32%	50%	13%	10%	12%	15%

Waste & illegal landfills	39%	44%	50%	59%	60%	55%	58%	52%
Lack of green areas	32%	38%	26%	47%	70%	62%	55%	50%
Climate change	26%	46%	41%	66%	48%	40%	35%	28%

1.2. Distrust in Institutions by Age Group

The majority of participants in North Macedonia have moderate trust in institutions 42,8%, however a significant 46,1% have low to no trust, while only 11,1% have high to full trust. Young people (18-29 y.o) have the most moderate trust out of each age group at 54,5%, however they also have very low overall trust at 3% (for high and full trust), and prevalent low trust at 42,4% for no or low trust. The majority (43,8%) of the middle age group of 30-44 y.o. also have moderate trust, and while the part of the participants that have no to low trust is high (42%), this is the age group with the highest percentage of participants that have high trust in institutions (11,8%) out of all age groups. The second middle age group (45-60 y.o) has the most evenly distributed responses across all levels of trust, with 47% having no and low trust, 29,4% having moderate trust and 24% having high to full trust. The last age group (60+) has least trust in institutions out of all age groups, with 47% having no trust in institutions, and additional 12,5 having low trust in institutions, making it the only age group of participants to have significantly higher percentage of participants with no trust than moderate trust.

The majority of participants in Serbia show low trust in institutions when it comes to environmental protection, with distrust remaining high across all age groups. The youngest group of participants (18–29 years old) exhibits the highest level of low trust, with 82% expressing little or no trust. The 30–44 age group follows closely, with 75% reporting low trust, while 68% of those aged 45–60 also indicate low institutional trust. Even among the oldest participants (60+), who are typically more conservative or traditional in attitudes, 60% express low trust. In the participants group from Serbia, distrust is most pronounced among the young but remains high across all generations.

In comparison while the participants from both countries show low trust in institutions, the participants from North Macedonia report more nuanced trust, while the participants from Serbia consistently report high institutional distrust.

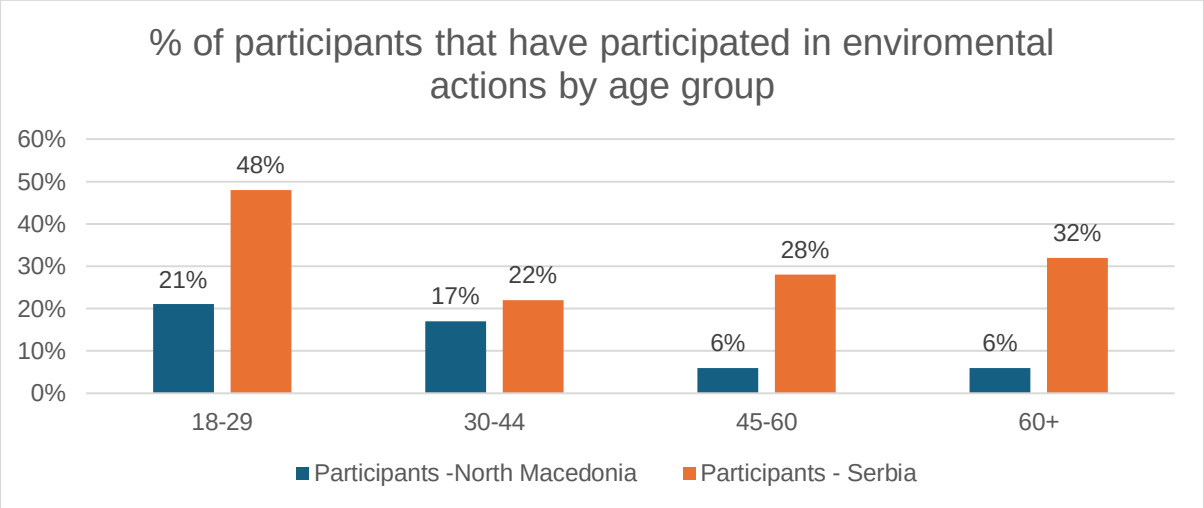
1.3. Participation in Environmental Actions by Age Group

When it comes to past participation in environmental actions, the youngest age group (18–29) of participants coming from North Macedonia reports the highest level of engagement, with 21.2% having participated, the highest among all age groups. However, 28.8% of them are unsure whether they have participated, and exactly 50% report no participation. This pattern of low participation is consistent across all age groups, with at least half of respondents in each group stating they have not taken part in such actions. The lowest participation rate is found among participants aged 45–60, at 5.9%. The second most active group is 30–44, with

16.7% reporting participation. Meanwhile, the oldest age group (60+) shows the highest uncertainty, with 43.8% unsure whether they have been involved in environmental activities. It's noted also that the nature of actions that were reported was waste clean-up by all of the groups, while the participants of ages 18-29 and 30-44 also reported participation in discussions, protests and eco projects.

In the group of participants coming from Serbia, the youngest age group (18–29 years) shows the highest level of engagement in local environmental actions, with 48% reporting participation. Participation drops among the 30–44 age group, with only 22% involved. Interestingly, engagement rises slightly among older participants, with 28% of those aged 45–60 and 32% of those aged 60+ reporting involvement in local environmental initiatives.

When comparing participants from Serbia and North Macedonia, those from Serbia demonstrates significantly higher and more balanced participation in local environmental actions across all age groups. In this group, nearly half (48%) of young people (18–29) report participating, compared to only 21.2% in the group of participants from North Macedonia. Participation in participants from Serbia remains moderate among older groups, with 22–32% involved, while in those from North Macedonia, the rates are much lower, ranging from 5.9% to 16.7% across all groups except the youngest. On the other hand, uncertainty about participation is much higher in participants from North Macedonia, especially among older groups (up to 43.8% unsure in the 60+ category), while this data point is not emphasized in participants from Serbia—implying greater awareness or clarity about civic engagement.



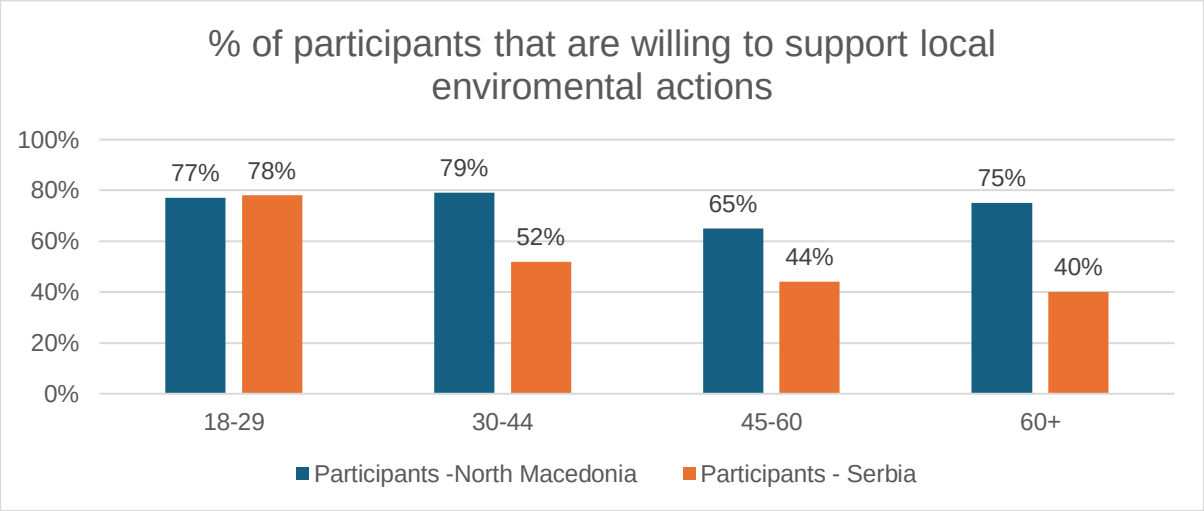
1.4 Support for Green Policies by Age Group

In the group of participants coming from North Macedonia, their willingness to support or volunteer in a local environmental action is high overall, with 75% reporting that they would support these kinds of actions, while 17,8% are unsure, and only 7,2% reported that they would not. The age group with the highest percentage of willingness is the 30-44 y.o with a percentage of 79,2%, while the one with lowest percentage of willingness is the age group od 45-60y.o with a percentage of 64,7%. Still, this group also has the highest percentage of

participants uncertain about whether they would support these kinds of actions with 26,5%. The participant group with age 60+ is the only participant group where no one reported that they would not support local environment actions.

In the group of participants coming from Serbia, willingness to volunteer or support environmental policies is highest among the youngest age group (18–29), with 78% expressing support. They are the most engaged in personal and collective actions, more frequently use public transport, and emphasize the need for education and local initiatives. Among 30–44-year-olds, only 52% report willingness to volunteer, and their focus shifts from personal actions to broader systemic and institutional barriers. While this group is less personally engaged, they are more concerned with the need for structural reform and better policy implementation. Among those aged 45–60, willingness to volunteer drops further to 44%, and among the 60+ population, only 40% report readiness to support or volunteer for environmental causes.

These results show willingness to support environmental actions is consistently high across age groups in participants from North Macedonia, while in participants from Serbia it is strongest among youth and declines significantly with age.



2. Key Differences in Attitudes Toward Environmental Problems Between Urban and Rural Age Groups

2.1. Major Environmental Problems

Participants from North Macedonia recognized air pollution as the most serious problem in both urban and rural areas. For rural residents, air pollution stands out strongly, with 82% identifying it as a serious issue, followed by polluted rivers/drinking water and waste and illegal landfills. Urban participants also see air pollution as the top concern, though at a slightly lower rate of 75%, with polluted rivers/drinking water and waste and illegal landfills

close behind. Notably, rural participants tend to express higher concern across most environmental problems, including climate change and lack of green spaces, compared to their urban counterparts. This suggests that while air pollution is a universal priority, rural residents may perceive a broader range of environmental challenges as more urgent.

Participants from Serbia identified air pollution as the most serious environmental problem across both urban and rural areas. In urban areas, concerns are largely tied to traffic, heating systems, industrial activity, and urbanization. Younger urban participants often mention the personal consequences of pollution, such as being unable to spend time outdoors due to smog or the lack of accessible green and recreational spaces. In contrast, rural participants—predominantly older—also highlight air pollution but place stronger emphasis on waste and illegal landfills, polluted water, and inadequate infrastructure like the absence of sewage systems or organized waste separation. Rural residents also express a stronger sense of institutional neglect and point to limited environmental action and support in their communities.

Country	Participants - North Macedonia		Participants - Serbia	
Location	Urban	Rural	Urban	Rural
Problem				
Air pollution	75%	82%	81%	79%
Polluted rivers/ drinking water	42%	66%	41%	38%
Forest fires	27%	39%	11%	13%
Waste & illegal landfills	43%	51%	57%	54%
Lack of green areas	36%	32%	68%	41%
Climate change	38%	47%	41%	32%

2.2. Perception of Environmental Quality

Air quality was rated poorly by respondents from North Macedonia across both urban and rural areas. Among urban participants, 71% described the air quality as either "very poor" or "poor", while this number was even higher in rural areas, reaching 76%. In contrast, rural respondents rated water quality significantly worse than their urban counterparts. In rural areas, 32% rated water quality as "very poor" and an additional 29% as "poor". Among urban participants, 30% rated it "poor", while 30% rated it "average" and 25% considered it "good", indicating a more balanced perception. Waste management was also viewed more negatively in rural areas, with 40% describing it as "very poor", compared to 24% in urban areas. Additionally, 34% of rural and 35% of urban participants rated it as "poor", suggesting that concerns about waste systems are widespread but felt more acutely in rural communities. When it comes to green spaces, urban participants provided lower ratings: 31% rated them as "poor" and 35% as "average". In rural areas, 45% rated green spaces as "average", and 21% as "good", indicating a generally more favorable view.

Participants coming from urban areas in Serbia give the lowest ratings for air quality and green spaces (often "very poor"). They have greater pessimism about public space conditions and recreational opportunities, and are more concerned about urbanization and loss of green zones.While the rural group, also rate air quality poorly, it's somewhat better for water and waste (where local solutions exist).This group more often emphasize infrastructure problems and lack of support for recycling and public campaigns and they stress the need for basic environmental services (e.g., waste separation bins, sewage systems).

2.3. Personal Engagement and Behavior

Participants from North Macedonia show differing environmental behaviors depending on whether they live in urban or rural areas. Participants from rural areas tend to use public transport more frequently and report greater use of natural products, with 27% using them daily. In contrast, urban participants are more likely to separate their waste. One common behavior across both groups is the use of reusable bags, with around 80% of participants, regardless of location, using them on a weekly or daily basis. When it comes to environmental engagement, more than half of both urban and rural participants have not taken part in local environmental actions. Bicycles are also underused in both groups, with over 50% reporting that they never use them. Despite this, both urban and rural residents express an equal willingness to support or volunteer in local environmental initiatives.

In Serbia, environmental behaviors differ between urban and rural participants as well. Younger urban respondents volunteer more, change personal habits, use public transport and eco-friendly products. Participants coming from urban areas rely on digital tools for environmental information and mobilization. They also show greater willingness to participate in campaigns and organized environmental initiatives. Older rural respondents participate more in local collective actions (cleanups, tree planting), but less often change daily habits or use digital channels. A recurring sentiment among rural residents is the feeling of being left on their own, with limited institutional support for local environmental efforts and poor backing from authorities for community initiatives.

2.4. Trust in Institutions

Both rural and urban participants from North Macedonia predominantly report moderate trust in institutions. Among urban residents, the second most common response is low trust (29.7%), while among rural participants, it is no trust (24.2%).

Participants from Serbia demonstrate low levels of institutional trust across both urban and rural areas. Urban respondents express the lowest trust, frequently voicing skepticism about the authorities' ability to address environmental issues. Their responses often reflect criticism of corruption, political disinterest, and poor law enforcement. While rural participants also report low institutional trust, their perspective is shaped by a deeper sense of neglect, particularly due to the lack of basic environmental services. This group tends to expect more support from local and national institutions, but often they do not receive it.

3. Impact of Education Level on Attitudes Toward Green Policies

3.1 Participants with Higher Education

North Macedonia

Participants with higher education consistently perceive environmental problems as more serious compared to those with lower education, with two notable exceptions: polluted rivers and drinking water, which participants with lower education rate as more serious, and climate change, where both groups show similar levels of concern. Both groups agree that air pollution is the most serious environmental issue, with 82.1% of higher-educated participants identifying it as such.

While higher-educated participants rate the quality of air, water, waste management, and green spaces as low, they particularly rate the quality of green spaces lower than participants with lower education. Awareness of environmental policy is higher across all but one (Climate Action Plan) individual documents within this group, especially for the National Strategy for Environmental Protection (33%) and the Environmental Protection Law (28%). Despite this, overall awareness of the Green Deal remains low, even among these respondents.

Higher education respondents demonstrate a higher concentration of low institutional trust. They also display more consistent and frequent environmentally-friendly behaviors, particularly in the use of reusable bags and consumption of natural products.

Serbia

Young and middle-aged participants from Serbia with higher education clearly recognize key environmental problems such as air pollution, waste management, and climate change. They are more actively involved in environmental protection by volunteering, signing petitions, changing personal habits, and supporting public campaigns. They tend to use digital sources for information and follow environmental policies at both national and EU levels closely.

Older participants with higher education from Serbia also demonstrate strong environmental awareness and support for green policies. They emphasize the need for education, infrastructure improvements, and collective actions like cleanups and afforestation. This group is particularly engaged in local initiatives, especially in rural communities, showing a commitment to hands-on environmental work.

3.2 Participants with Lower Education

North Macedonia

Participants with lower education tend to rate the quality of air, water, and waste management worse than their higher-educated counterparts. Awareness of environmental policy documents is considerably lower in this group, with nearly half (49.6%) having not heard of any, compared to 37.3% among those with higher education. The Climate Action Plan is the most recognized document in this group (32.7%), slightly more so than among the highly educated (26.9%).
This group exhibits a more polarized level of institutional trust, with significant shares expressing either no trust or some degree of trust, but none showing full trust. Additionally, participants with lower education rely more on public transport compared to those with higher education.

Serbia

Participants from Serbia with secondary education, regardless of age, show less involvement in environmental activities and have lower awareness of national strategies and environmental laws. Many have not heard of key national policies or European initiatives such as the Green Deal.
Their suggestions for improving the environment are generally broader and less detailed—for example, calling for "more greenery" or "better water quality." This contrasts with the more detailed proposals from highly educated participants, who suggest stricter regulation, innovative solutions, public campaigns, and enhanced education efforts.

Both participants from Serbia and North Macedonia show that education strongly influences environmental awareness and behavior, with higher education correlating with more knowledge, engagement, and sophisticated views.

4. Comparative analysis of the proposed environmental measures

When comparing participant responses from North Macedonia and Serbia regarding proposed environmental measures, several key differences and similarities emerge:

-Legal Enforcement and Monitoring:

A significantly higher number of participants in Serbia (90 out of 184, or 48.9%) emphasized the need for stricter laws, monitoring, and enforcement through fines or consequences, compared to 54 out of 180 Macedonian participants (30%) who highlighted the same need. In both countries, this was the most frequently mentioned type of measure, indicating a shared belief that institutional action and regulation are key to addressing environmental problems.

-Awareness, Education, and Information:

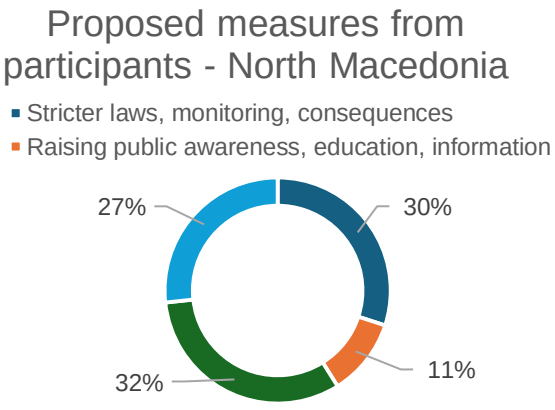
Raising awareness and educating the public was suggested by only 2 Serbian participants (1.1%), whereas 20 participants from North Macedonia (11.1%) mentioned this as an important approach, suggesting a stronger perceived need for environmental education in North Macedonia.

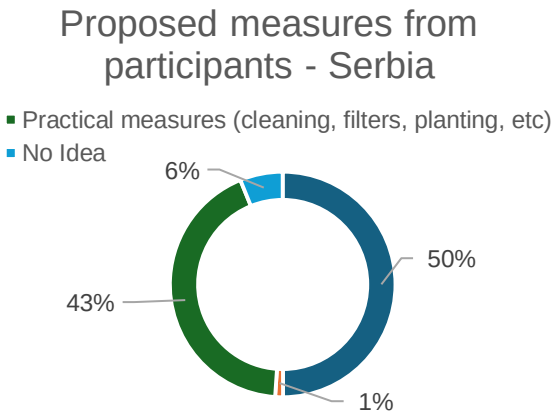
-Lack of Proposed Measures:

A notable 32.2% of Macedonian participants (58 out of 180) said they had no specific ideas for environmental measures. In contrast, this number is much lower in Serbia, where only 11 out of 184 participants (6%) reported the same, indicating higher engagement or awareness among Serbian respondents.

-Specific Practical Measures:

In Serbia, 77 participants (41.9%) proposed specific and diverse measures to address environmental issues. These included cleaning and preservation of nature, installing filters and purifiers, improving the quality of public transport and coal, planting trees, creating more green spaces, and organizing collective environmental actions. In contrast, 48 participants from North Macedonia (26.7%) provided concrete proposals, most commonly suggesting cleaning actions, tree planting, installing recycling bins or air filters, and expanding green spaces. While both groups focused on local, practical solutions, the Serbian participants offered a broader range and higher volume of specific ideas.





IV. General Recommendations

North Macedonia

1. **Increase Public Awareness Campaigns:**

   Given that 60% of respondents see lack of public awareness as a major obstacle, NGOs, media, schools, and community groups should collaborate to raise awareness on environmental issues and promote eco-friendly behaviors through targeted campaigns. These efforts should include digital strategies, such as using social media to engage younger audiences with relatable content, interactive challenges, and short educational videos. At the same time, creative offline campaigns, including local events, school programs, public displays, and community workshops, are necessary to reach broader demographics and ensure inclusivity. These workshops can focus on practical actions like proper waste separation, reducing single-use plastics, and understanding personal environmental impact.

2. **Enhance Community Engagement in Waste Management:**

   Since waste and illegal landfills are identified as notable problems, local communities should be encouraged to participate actively in waste separation, recycling programs, and clean-up initiatives through education and incentives, such as reward programs for households that consistently separate waste, providing accessible recycling bins and regular collection services, and encouraging neighborhood cleanup events to reduce illegal dumping.

3. **Promote Sustainable Transport Use:**

   Low daily usage of public transport and bicycles suggests the need for campaigns targeting individuals to adopt greener mobility options, emphasizing health benefits and environmental impact, thus motivating people to choose greener options.

4. **Support Vulnerable Groups Affected by Pollution:**

   Many participants reported health impacts from air pollution and water quality. Health institutions should collaborate with environmental agencies to monitor pollution levels and provide timely alerts, especially during winter when air quality deteriorates. Establishing free or subsidized health screenings for respiratory conditions and public support services can help those most affected by environmental problems.

5. **Strengthen Role of Civil Society and Utilities:**

   With relatively low trust and involvement of civil society and public utility companies, these actors should be empowered to play a bigger role in environmental monitoring, advocacy, and service delivery to build trust and effectiveness through

capacity-building programs and fostering partnerships with local authorities, thus increasing their involvement in environmental monitoring, education, and service improvements, and, as a result, building public trust and accountability.

For Serbia

Recommendations for Advancing Green Policies in Serbia

The analysis of survey data from Serbia highlights several priority areas for the advancement of green policies, reflecting both the challenges and opportunities identified by respondents.

1. **Strengthening Enforcement and Accountability**

   A significant proportion of survey participants identified corruption, insufficient enforcement, and low political will as the main obstacles to effective environmental policy implementation. In fact, 68.9% of respondents cited corruption and nepotism, while 67.2% pointed to low political will as key barriers. This widespread perception underscores the urgent need to strengthen the monitoring and enforcement of environmental laws at both the national and local levels. Transparent mechanisms for reporting and addressing corruption must be established to rebuild public trust. Without robust accountability, even the best designed policies risk remaining ineffective.

2. **Enhancing Public Awareness and Education**

   The survey revealed that nearly half of respondents (49.2%) had not heard of any national environmental strategy, and only 19.7% believed that environmental protection was a priority for their local authorities. These findings indicate a critical gap in public awareness and engagement. To address this, it is essential to launch nationwide campaigns targeting both urban and rural populations, making information about environmental issues and solutions accessible and relevant. Integrating environmental education into school curricula at all levels will help foster a culture of sustainability from an early age, ensuring that future generations are better equipped to address ecological challenges.

3. **Investing in Green Infrastructure**

   Respondents frequently cited air pollution, waste, and lack of green spaces as the most pressing environmental problems in their communities. For example, 81% of urban and 79% of rural participants identified air pollution as a serious concern, while 68% of urban residents pointed to a lack of green areas. To effectively respond to these priorities, investments should be directed toward the development of public green spaces, modern waste management systems, and clean public transport. Local initiatives such as tree planting, afforestation, and community cleanups should be encouraged and supported, as these not only improve the environment but also strengthen community bonds.

4. **Improving Policy Adaptation and Communication**

   The data also show that only 8.2% of respondents felt national environmental policies were fully adapted to local needs, while a third were unsure. This disconnect between national strategies and local realities highlights the importance of participatory policy-making processes. Ensuring that national policies are tailored to the specific needs of different communities will increase their effectiveness and legitimacy. Additionally, increasing transparency and public access to environmental data and decision-making processes will empower citizens to hold authorities accountable and participate more actively in shaping their environment.

5. **Fostering Cross-Sector Collaboration**

   Finally, the responsibility for implementing green policies should not rest solely with government institutions. While the majority of respondents assigned primary responsibility to the Ministry of Environment (64.8%) and local governments (61.5%), a substantial proportion also recognized the role of individual citizens (34.4%), civil society organizations (18%), and public utility companies (13.1%). Promoting cooperation between government, civil society, the private sector, and citizens is essential for building a broad-based movement for environmental protection. Cross-sector partnerships can mobilize resources, expertise, and public support, making green policies more resilient and impactful.

V. Recommendations for Policymakers

For North Macedonia

1. **Adapt National Policies to Local Needs:**

   Only 7.22% from the participants feel policies are fully adapted locally. Policymakers must ensure better alignment of national environmental strategies with local contexts by involving local authorities and communities in policy design and implementation. This can also include flexible policy frameworks that allow local authorities to prioritize actions based on their unique environmental conditions.

2. **Increase Political Will and Prioritization:**

   Since 60.56% of participants cited low political will as a key barrier, governments at all levels should visibly prioritize environmental protection, allocate adequate resources, and set clear targets to drive change, while publicly committing to those measurables targets.

3. **Improve Transparency and Anti-Corruption Measures:**

   With corruption and nepotism selected by 55.56% of respondents as obstacles, policymakers should strengthen transparency, enforce anti-corruption laws, and promote accountability in environmental governance. They need to enforce transparency by publicly publishing projects details, budgets, and outcomes. Independent oversight bodies should be established, alongside strong protections for those reporting environmental violations.

4. **Enhance Monitoring and Enforcement:**

   About 31.67% or participants noted insufficient monitoring and enforcement as a challenge. Strengthening inspection regimes and penalties for environmental violations will improve compliance and environmental outcomes. The capacities of these agencies should also be increased by increasing staffing, training, and technological resources.

5. **Promote and Support Green Infrastructure and Services:**

   Given poor ratings for waste management and water quality, policymakers should invest in improving infrastructure for waste disposal, water treatment, and urban green spaces to improve overall environmental quality. Policymakers should also incentivize green building practices and sustainable urban planning to improve environmental quality at the community level.

For Serbia

Recommendations for Policymakers

Addressing Serbia's pressing environmental challenges requires a set of integrated, evidence-based policy measures that respond directly to the needs and perceptions of its citizens, as revealed by the survey data.

1. **Combat Air Pollution and Waste**

   Air pollution and improper waste management are consistently identified as the most severe environmental problems by Serbian respondents, with over 80% of urban and nearly as many rural participants citing air pollution as a top concern. Waste and illegal landfills are also recognized as a major issue by more than half of all respondents. To tackle these problems, it is crucial to enforce strict emissions standards for both industries and vehicles, ensuring that polluters are held accountable through regular inspections and penalties for non-compliance. Additionally, a significant gap exists in recycling infrastructure, as 58% of urban residents report a lack of waste separation bins in their neighborhoods. Expanding recycling options and modernizing waste management systems would reduce pollution and promote responsible waste disposal practices among citizens.

2. **Boost Policy Awareness and Trust**

   The survey reveals a worrisome lack of awareness about national environmental policies, with nearly half of respondents stating they have not heard of any major green strategy. This disconnect is compounded by low levels of trust in institutions. Over 60% of participants report no or low trust in the authorities responsible for environmental protection. To address these issues, policymakers should launch clear and accessible public information campaigns, making use of social media and other digital platforms to reach especially younger audiences. Simplifying messages about existing laws and environmental rights can empower citizens to demand better enforcement and participate more actively in environmental initiatives. Publishing real-time data on air and water quality, as well as on the progress of environmental projects, will further enhance transparency and help rebuild public trust.

3. **Empower Local Actions**

   While national policy is essential, the survey underscores the importance of local engagement. Many respondents' express willingness to participate in community, led green initiatives, such as tree planting, clean-up actions, and recycling drives. However, these efforts are often hampered by a lack of funding and organizational support. Policymakers should prioritize the allocation of resources to grassroots projects and foster partnerships between municipalities, non-governmental organizations, utility companies, and citizens. Such cross sectoral collaboration can

amplify the impact of local actions and ensure that solutions are tailored to the specific needs of each community.

4. **Target Youth Engagement**

   Young people in Serbia demonstrate high levels of concern for environmental issues and are often at the forefront of advocacy and volunteer efforts. However, barriers such as insufficient cycling infrastructure, 53% of respondents report never using a bicycle, often due to safety concerns, limit their ability to adopt sustainable lifestyles. Integrating environmental education into school curricula from an early age will cultivate environmental literacy and civic responsibility. At the same time, investing in safe and accessible infrastructure for cycling and walking can encourage more sustainable daily habits among youth and the wider population.

5. **Address Corruption and Ensure Accountability**

   Corruption and nepotism are perceived as the most significant obstacles to effective environmental governance, with nearly 70% of respondents identifying these issues as key barriers. To restore confidence in public institutions and guarantee the integrity of environmental projects, it is essential to establish independent monitoring bodies that oversee project implementation, spending, and outcomes. Furthermore, introducing robust whistleblower protections will encourage individuals to report violations without fear of retaliation, thereby strengthening the rule of law and ensuring that environmental policies serve the public interest.

Appendix A: Survey Questionnaire

1. Demographics

1. Select Country:

- North Macedonia
- Serbia

2. Ethnic Affiliation – North Macedonia:

- Macedonian
- Albanian
- Turkish
- Roma
- Serbian
- Other (Please specify) _____

3. Ethnic Affiliation – Serbia:

- Serbian
- Hungarian
- Roma
- Bosniak
- Croatian
- Slovenian
- Albanian
- Other (Please specify) _____

4. Age:

- 18–29 years
- 30–44 years

- 45–60 years
- 60+ years

5. Place of Residence:

- Urban area (city)
- Rural area (village)

6. Education:

- No education
- Primary education
- Secondary education
- Higher education
- Postgraduate/Doctoral studies

7. Are you currently employed?

- Yes
- No

8. If yes, in which sector?

- Public administration
- NGO / Civic sector
- Finance and insurance
- Construction
- Wholesale and retail trade
- Transport and storage
- Hospitality and tourism
- Information and communication technology

- Education
- Health and social protection
- Arts, culture, and creative industries
- Agriculture, forestry, and fisheries
- Other (please specify) _____

2. Perception of Environmental Challenges

9. Which of the following issues do you consider the most serious in your community? *(You may select more than one)*

- Air pollution
- Polluted rivers / drinking water
- Forest fires
- Waste and illegal landfills
- Insufficient greenery
- Climate change (high temperatures, floods, etc.)
- Other: _____

10. In the past 12 months, have you personally experienced the impact of an environmental issue?

- Yes
- No
- Not sure

11. If yes, please describe the issue and how it affected you:

_____

12. Rate the quality of the following environmental aspects in your area (1 = very poor, 5 = excellent):

- Air quality
- Water quality

- Waste management
- Green spaces

13. Do you think the environment is a priority for your local government?

- Yes
- No
- Not sure

3. Awareness of National Policies and Their Implementation

14. Have you heard of any of the following national documents and strategies? (You may select more than one)

- National Environmental Protection Strategy
- Environmental Law
- National Waste Management Plan
- Climate Action Plan
- National Strategy for Energy / Renewable Sources
- I have not heard of any

15. Do you believe these national policies are sufficiently adapted to your community's local needs?

- Yes, completely
- Partially
- Not at all
- I don’t know

16. Who do you think should be responsible for implementing green policies in your area? (Select up to two)

- Ministry of Environment

- Municipality / Local government
- Public enterprises
- Civil society organizations
- Individual citizens
- I don't know

17. In your opinion, what are the main obstacles to implementing national green policies at the local level? (*You may select more than one*)

- Insufficient public awareness
- Lack of municipal funding
- Low political will / priority
- Corruption and nepotism
- Lack of control and enforcement
- Other: _____

18. Have you heard of the European Green Deal?

- Yes
- No
- Not sure

19. Which of the following measures do you believe are most needed to improve national green policies? (*You may select more than one*)

- Better alignment of national policies with local needs
- Increased environmental budget
- Improved coordination among institutions
- Greater transparency and accountability
- Increased citizen participation in decision-making
- Better implementation and monitoring of existing laws

- Other (please specify): _____

4. Personal Habits and Behavior

20. Do you regularly separate waste (paper, plastic, glass)?

- Yes
- Sometimes
- No

21. If not, please explain why: _____

22. How often do you use the following? (scale of 1 to 5)
(1 = never, 2 = rarely, 3 = occasionally, 4 = often, 5 = very often)

- Public transport
- Bicycle
- Reusable bags (cloth bags, recycled fabric)
- Natural / eco-friendly products

23. In what ways have you contributed in the last 12 months to the implementation of green policies at the local level? (*You may select more than one*)

- Participated in a public hearing or discussion on environmental issues
- Signed a petition or supported a campaign related to environmental protection
- Volunteered in an eco-action or green initiative
- Reported an environmental issue to the authorities
- Made personal changes in lifestyle (e.g., reducing waste, using public transport more)
- Advocated for green practices in the workplace or community
- I have not contributed in any way
- Other (please specify): _____

5. Trust in Institutions and Participation

24. How would you rate your trust in institutions regarding their commitment to environmental protection?

- I have no trust at all
- I have little trust
- I have moderate trust
- I have high trust
- I fully trust them

25. Have you ever participated in a local action or initiative related to environmental protection?

- Yes
- No

26. If yes, which one? _____

27. Would you support/volunteer in an eco-action in your community?

- Yes
- No (Explain)
- Not sure

28. What do you think is the greatest environmental threat in your community?

_____
_____

29. What specific measure would you propose to improve the environment in your area?

_____
_____

01.04.2025 - 30.09.2025

GREEN FUTURE BY EMPOWERING CROSS-BORDER COMMUNITIES FOR ENVIRONMENTAL ACTION

прорес
Институт за социјална демократија

DISCOVER SERBIA

Центар за истражување и анализи
НОВУС