

EUROPEAN DECARBONIZATION POLICIES ON HOUSING AND MOBILITY IN THE SLOVAK REPUBLIC

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AUTHOR'S DECLARATION

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ABSTRACT

This thesis analyses main obstacles for successful implementation of European (EU) decarbonization policies in Slovakia's housing and mobility sectors. Slovak Republic continues its struggle to cut emissions despite national targets made under the European Green Deal (EGD), mainly because of its reliance on private transportation and slow adoption of energy-efficient housing renovations. Through a combination of primary research methods – trend analysis and interviews – and secondary research methods – survey, focus groups, active research engagement, participatory observations, and collaborative inquiry – this thesis identifies socio-cultural, structural, and financial barriers to effective implementation of green policies in the housing and mobility sectors.

The results show that Slovakia's decarbonization is significantly stifled by institutional incapacities, economic pressures, and a decline in confidence in subsidy programs. Progress is also hampered by populist rhetoric in the mobility sector and cultural opposition to green renovations of the building stocks in the housing sector. The findings show that in addition to financial and technological solutions, increased public involvement, streamlined processes and inclusive planning are very important for successful decarbonization. Based on experience from abroad, this thesis offers policy recommendations to improve communication, institutional capacities, and execute fair climate transition using knowledge and inspiration from best practices.

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LIST OF ABBREVIATIONS

| | |
|---------|--|
| CEE | Central and Eastern Europe |
| EGD | European Green Deal |
| ETS | Emissions Trading System |
| EU | European |
| EV | Electric vehicle |
| GHG | Greenhouse gas emissions |
| NGO | Non-governmental organization |
| Non-ETS | Non-EU Emissions Trading System |
| OECD | Organization for Economic Co-operation and Development |
| V4 | Visegrad Group |

INTRODUCTION

To reach the EU's climate commitments, greenhouse gas emissions (GHG) must be reduced. However, when imposing new reforms, it always comes with challenges; mostly due to lack of details in sectoral strategies and dislike of politicians and society (Hubatka and Theisen 2020, 2–18). Furthermore, the EU faces populist voices and Euroscepticism within its own ranks (Buzogány and Četković 2021).

Specifically, the Slovak Republic is committed to a 12% reduction in emissions in the non-EU Emissions Trading System's (non-ETS) sectors by 2030 based on 2005 levels, and a more ambitious goal under its 'Greener Slovakia' strategy (International Energy Agency 2019) – 20% (European Parliament 2021, 1). Slovakia is one of the countries from the Central and Eastern European (CEE) region where the challenges during the green transition will be with high probability the biggest. This is mainly because of its historical background, being an economically less developed than the Western European states, and its higher volatility and distrust of the political system and democratic values within society (Europeum *et al.* 2023, 4). These factors create problems with decarbonization of high-emission sectors such as housing and mobility – that are deeply embedded in citizens' daily lives and shaped by entrenched social, cultural, and institutional processes.

Even though Slovakia has recorded measurable emissions savings since 2005, these are uneven across sectors. Emissions in the housing sector have declined slightly, in large part due to the insulation of multi-apartment building blocks, while those in the transport sector remained high because of the dominance of private car use and a relatively slow uptake of electric mobility. These trends show systematic issues – from economic constraints and lack of public transportation infrastructure to differences between rural and urban areas.

While EU climate policy has been analyzed in many studies, localized research – about how these policies are received and implemented in the CEE countries like Slovakia – is limited. Therefore, this thesis's research question identifies: **What are the main barriers to the implementation of EU decarbonization policies in Slovakia's housing and mobility sector and how can they be overcome?** It focuses on the structural, social, cultural and institutional barriers that shape policies and their public acceptance. Attention is also paid to the geographical, economic, and cultural differences across Slovakia and the role of populist rhetoric.

Analysis is conducted through mixed-methods approach which combines both quantitative data on emissions and on public opinion (survey) with qualitative insights from expert interviews, focus groups, active research engagement, participatory observations, and collaborative inquiry. This creates very complex research that helps to deeply understand the quantifiable trends with lived experience. Furthermore, it provides original insights and necessary information thanks to a combination of local-level participatory research with policy analysis for the development of policy recommendations that are not only technically possible but also socially acceptable.

The in-depth examination of the social and institutional dimensions of the green transition in Slovakia informs debates on how European climate goals can be implemented more effectively and localized. This thesis aims to offer suggestions on inclusive and fair implementation of EU decarbonization policies in the sectors of housing and mobility to policymakers, municipalities, and civil society actors.

CHAPTER 1: LITERATURE REVIEW

Lessons learned from the post-communist transformation of the 1990s and afterwards have taught us that participation of citizens in transformation processes is the sole mean to secure legitimacy of such processes. Especially in the Visegrad Group (V4) countries, such as in the Slovak Republic, people care more about the economic impacts of decarbonization policies that could potentially deepen the existing economic inequalities compared to the Western European states (Europeum *et al.* 2023, 5). This makes it imperative to understand how different communities – e.g. urban and rural communities – perceive and engage with the transformation process.

1.1 Housing Sector: Urban-Rural Differences

In the **housing** area, EU decarbonization policies focus on energy efficiency renovations of houses, offices, and public buildings and on diversification of energy supplies. 80 % of Slovaks (in 2022) felt that costs of their household energy needs pose a serious problem, while housing prices were rising at an above-average level compared to the other member countries of the Organization for Economic Co-operation and Development (OECD) (Europeum *et al.* 2023, 8). Additionally, as of January 2025, Slovakia has been cut off from Russian gas supplies which will cause rising energy prices in the following year (TASR 2024). Also, prices of apartments and houses in the country rose for a third successive quarter at the end of 2024, with the risk that a significant number of working people with an average salary will not be able to afford housing (Ambrová 2025). These pressures on housing affordability may be exacerbated by prevailing socio-economic differences, with significant regional disparities (Kačalka 2024).

Since 2014, Slovak nominal house prices have more than doubled twice. In real terms, the increase is about 50%. A more useful measure of affordability, however, is relative to salary

growth: house prices have risen by nearly 20% relative to the average gross salary over the same period. Additionally, Slovakia had the fifth-highest mortgage rates in the eurozone as of January 2025. The average annual rate was 3.86%, compared to the eurozone average which was 3.14% (Institute for Strategy and Analysis 2025). This imposes a big burden on lower and middle-income households and deepens, already existing, social inequalities (Ambrová 2025). Shortage of resources and information is most prominently viewed when comparing rural areas to urban centers, as renovation schemes and green technologies are often limited in the rural areas (Eurofound 2023, 3–6).

Furthermore, Slovakia still relies on older and energy-inefficient housing which complicates decarbonization efforts but at the same time provides opportunities – since much of the housing stock is outdated, the potential for improving energy efficiency is substantial. The Slovak Republic has introduced different programs focused on renovation of blocks of flats and houses, such as Green Households or Green Solidarity (Slovak Innovation and Energy Agency n.d.), however, they remain particularly problematic for lower-income households that lack access to information about government financial assistance and subsidies. Moreover, there are differences between urban and rural areas, where rural communities pose lower financial capital (Eurobarometer Report 2022). Therefore, this leads us to:

Hypothesis 1a: People from urban areas show greater willingness to accept green policies in the housing sector than people from rural areas.

This is a crucial hypothesis to test since the literature finds a significant rural-urban knowledge gap in access to information, energy efficiency efforts, and financial capital. Such a gap, if confirmed, will enable decarbonization policies to be targeted more effectively towards the different kinds of communities.

1.2 Mobility Sector: Urban-Rural Differences

In the field of **mobility**, the EU's main goal is to introduce the use of zero-emission vehicles powered by renewable energy sources in as many countries as possible, in the pace as fastest as possible. Further development of walking and cycling infrastructure is also needed.

Sector-wise, Slovakia is the leading car producer per capita in the world. On its territory, there are four big automotive companies: Volkswagen in Bratislava (since 1991), PSA Peugeot Citroën in Trnava (since 2003), Kia Motors in Žilina (since 2004) and Jaguar Land Rover in Nitra (since 2016). Slovakia's car industry is of high importance as it contributes a great percentage to Slovakia's GDP and provides jobs. Therefore, new regulations may have negative social and economic consequences. Electrification of transport poses certain challenges due to the requirements of new skills, retraining of workers, and reorganization of supply chains. Unless it is complemented by a well-directed policy, there is a risk of job losses and economic decline at the regional level, particularly in industrial regions (Theisen and Hubatka 2021, 4–5).

Moreover, the use of electric cars is behind in V4 countries in comparison with Western EU countries. This is mainly caused by the fact that people do not have enough financial resources to buy electric cars. Additionally, these countries have underdeveloped charging infrastructure (Europeum *et al.* 2023, 8). Also, many politicians point out that some policies under the EGD, especially the ban on combustion engines, are unwise and will fail. They consider these kinds of policies unfeasible because of the underdeveloped infrastructure and its economic burdens (Europeum *et al.* 2023, 5).

Furthermore, what can be observed is a lack of reliable public transportation in many regions of Slovakia, especially in rural areas where high dependency on cars prevails, that hinders the transition to sustainable mobility solutions (SME Conferences 2023). This could make such populations more receptive to green transportation solutions, particularly those that

offer the promise of reducing the unique transport issues to which they are exposed, e.g. limited public transportation. This brings us to:

Hypothesis 1b: People from rural areas show greater willingness to accept green policies in the mobility sector than people from urban areas.

With the dependence on private vehicles in rural areas, this hypothesis tests if rural residents are more inclined to embrace green mobility changes that would assist them in solving their transport challenges. Verification of this hypothesis may help in shaping infrastructure developments and policymaking in different regions.

1.3 Impact of Populism

Another important part of the green transition in Slovakia is the administrative capacity and local governance. Slovak municipalities often lack the financial, institutional, and human capacities to effectively implement green policies. This creates big issues and gaps between ambitious EU environmental goals (or even national) and the local implementation. In practice, it leads to delays in fulfilling deadlines and inefficiencies (Filčák and Škobla 2023, 49–63). This can be also due to ineffective monitoring and data gaps, which are especially important for the effectual evaluation of the impact of individual policies and their re-implementation in the future (Kišš, Mach, and Zajíček 2013, 9).

Therefore, effective execution of climate policies in Slovakia lies in the multi-level governance gap. Even though the EU formulates ambitious targets and funding programs, their interpretation and tangible achievements are often displayed by inadequate coordination, fragmented responsibilities, and deficiency in local institutional capabilities (Deutsche Gesellschaft für Internationale Zusammenarbeit 2018, 3).

In addition, research shows how policy feedback loops also shape public opinion about reforms – both negatively and positively (Rodriguez-Gonzalez, Rico-Martinez, and Rico-

Ramirez 2020, 2). This means, in case of green policies, if they are presented as top-down, costly, or ineffective, they can cause public backlash that creates hatchery of populism (Jordan and Matt 2014). Therefore, it is necessary to improve implementation efforts, focus on the principle of subsidiarity, engage with more participatory approaches and deepen citizen engagement in the policy processes. This could improve intergovernmental coordination and build long-term support of citizens for green transition and green policies (Deutsche Gesellschaft für Internationale Zusammenarbeit 2018, 41).

Closely connected to the problem mentioned is public participation and environmental awareness. According to Fairness Perceptions of the Green Transition (2022), not that many Slovak citizens believe the green transition will occur fairly. The Slovak Republic scored below the EU average (Eurobarometer Report 2022). This is partly due to low environmental literacy and insufficient support from public institutions. Education in Slovakia greatly contributes to the green transition. However, despite numerous educational reforms, there is still a shortage of environmental topics and sustainable practices in school curricula. Without educating people from a young age, the risk of public unwillingness to change will remain a big issue for the Slovak Republic. Fortunately, many initiatives exist that work on making population more environmentally conscious – they are especially focused on primary, secondary, and high schools. Nevertheless, more is required if Slovak society wants to achieve long-term behavioral change (Milová, Medal, and Klocovková 2012).

Insufficient education in this area breeds public distrust of the EU decarbonization policies which serves as a weapon for populist politicians who use fear of job losses and increasing living costs, especially in rural areas, to mobilize political support. They create negative connotations with EGD that has, in their words, potential to harm industry and households. Ambitious decarbonization policies are then difficult to implement, especially in

sectors that require significant financial resources from both governments and individuals (Oravcová *et al.* 2024, 7-151).

However, it is important to note that the impact of populism on the green transformation is different across the V4 region. For instance, Hungary has strongly anti-EU rhetoric (Fornara 2023), but in fact they have embraced industrial change by investing heavily in electric mobility infrastructure, such as mass production battery factories (Sustainable Bus 2024). That means the impact of populism depends heavily on the narrative strategy and priorities of the government. In Slovakia, populist stories have centered on *status quo* protection, especially in the automotive sector, portraying EU policies as economically harmful and externally imposed (Geist 2024). This kind of populism can hamper reform in mobility more than in housing, where reforms are less concrete and politically divisive. This points toward:

Hypothesis 2: Populism in Slovakia undermines effective implementation of EU decarbonization policies in the mobility sector more than in the housing sector.

The mobility sector – especially vehicle electrification – has become a topic of political clash. Testing this hypothesis helps assess whether populist narratives disproportionately affect mobility reforms, particularly given Slovakia’s strong automotive industry.

1.4 Socio-Cultural Barriers

Also, different social, cultural, financial, and informational barriers make implementation of green policies more complicated. Firstly, one of the barriers is that citizens are not aware of the benefits of energy efficiency and green transport options. This, very unfortunately, prevents large-scale implementation of decarbonization policies. It is a problem that mainly affects rural and marginalized communities, where access to information and financial resources is limited, as already mentioned. Moreover, they struggle with complex processes or finding of trusted installers.

In comparison with higher-income regions, early adopters of greener solutions for energy efficient households and green transport options living in these affluent areas influence other people in their communities which leads to wider implementation of decarbonization policies in practice. This creates an “inequality trap”, leading to a gap between richer and poorer areas, where more affluent groups gain the most and marginalized communities are often left out (Stewart 2022, 1–9). Altogether, vulnerable groups do not have enough finances, nor social and cultural capital, to be engaged in discussions with opinionmakers (politicians, experts, and journalists) about the green transition (Europeum *et al.* 2023, 10). This takes us to:

Hypothesis 3: Social and cultural barriers create bigger obstacles to be overcome for effective implementation of decarbonization policies in the housing sector than in the mobility sector.

This hypothesis arises from evidence that marginalized groups face many social and informational barriers when it comes to renovating their homes. Housing decarbonization requires active, and sometimes complex, choices by individuals, while mobility shifts may be more infrastructure-led. Testing this hypothesis will determine where targeted interventions are needed the most.

1.5 Role of Civil Society, Private Sector and Media

The basis of Slovak decarbonization efforts comes from EU directives, regulations and government policy (Dokupilová and Repíková 2024, 48). As their implementation is often very difficult and not that much efficient in practice (Filčák and Škobla 2023, 50), a big role plays civil society together with bottom-up initiatives, non-governmental organizations (NGOs), and local entrepreneurs. In countries with a Soviet history, where civic participation and trust in political elites are low, local environmental groups and NGOs have taken the forefront in spreading green information and awareness. Slovak civil society organizations are considered

weak socio-economic actors (in terms of economic output and employment) as they are small and dependent on volunteers. Additionally, they are usually community-focused and local (Strečanský 2017, 92).

Some examples are non-governmental organizations such as Živica¹ and Friends of the Earth² that cooperate directly with schools, municipalities, and rural communities. This bottom-up strategy is more likely to succeed when top-down policies are failing. This is especially true as there is a need to mobilize vulnerable groups and activate young people who otherwise risk being excluded from the policymaking circles of national governments. It is not only about putting pressure on governments but also about including the local contexts.

However, civil society organizations often lack systemic support and must face many bureaucratic barriers. Currently, Slovakia's NGOs deal with almost non-existent political backing, which is highlighted by the newly proposed amendment to the Slovak Non-Profit Organizations Act. As Amnesty International puts it, this is a serious attack on civil society (Amnesty International 2025).

The amendment introduces stringent administrative and regulatory measures that would acknowledge independent experts providing advisory services to the government as lobbyists, who would have to mandatory register as being ones. Furthermore, the amendment obliges NGOs to report accounts and provide the names of donors contributing more than €5,000, which can undermine private funding. Moreover, the bill has discriminatory provisions as it exempts trade unions, employers' organizations, and sport clubs, while other NGOs would have to be under strict regulation and potential threat of dissolution by the Ministry of the Interior (Amnesty International 2025).

¹ Read more: <https://zivica.sk>

² Read more: <https://www.priateliazeme.sk/spz/>

In addition to NGOs, the private sector is also of high importance for Slovakia's green transformation, especially through its investments in green technology and sustainable innovations. Slovak businesses, in both the energy and automobile sectors, have been encouraged to decarbonize and use initiatives like the EU Emissions Trading System (ETS)³ and the EU Innovation Fund⁴. These programs support development of low-carbon technology and its deployment, which would allow various sectors to reduce emissions – without compromising competitiveness. Local stakeholders, such as the Slovak Research and Development Agency⁵, have been also offering grants for sustainable materials, renewable energy, and circular economy-based solutions.

Overall, media have an important role to play in shaping public discourse around decarbonization, too. Green policy has been often mentioned in Slovak media as limiting and costly, instead of pointing out its long-term benefits or opportunities. This has deepened public fear-based perception and resistance (Mindeková 2023, 14). Besides, research shows that more and more industrial firms apply environment-friendly innovations if they are under media coverage (Chen, Jin, and Li 2022, 8).

In short, the green transition in Slovakia – to reach the EU's climate goals – is characterized by the social, cultural, financial, bureaucratic and informational barriers. While the policy and legislative framework is strong, its implementation is limited mainly due to (in)capacities on the local level, citizens' lack of trust in political elites and media, and socio-economic factors. To make the green transition successful, policies must be socially equitable, financially supported, and inclusive of all geographical and minority groups.

³ Read more: https://climate.ec.europa.eu/eu-action/eu-emissions-trading-system-eu-ets_en

⁴ Read more: https://climate.ec.europa.eu/eu-action/eu-funding-climate-action/innovation-fund_en

⁵ Read more: <https://www.apvv.sk/?lang=en>

CHAPTER 2: METHODOLOGY

This thesis incorporates a mixed-methods approach – combining both quantitative and qualitative research methods to analyze the main barriers to the implementation of EU decarbonization policies in Slovakia's housing and mobility sectors. Specifically, the analysis follows a convergent parallel design, where the two types of data are collected and examined separately but interpreted together to draw conclusions. Main aim of this thesis is to provide possible solutions for Slovakia's housing and mobility sectors transition towards a greener economy.

The quantitative part of the analysis focuses on the levels of current GHG emissions and the progress towards targets of decarbonization (EU 2030 targets) with a specific focus on the mobility and housing sectors. Data are collected from official government reports, international documents, and academic studies. Trend analysis, using sectoral breakdowns, is employed to determine if Slovakia is on the path towards meeting its decarbonization goals. Even though this quantitative analysis is not used for testing of the research hypotheses, it provides a context and important information about where Slovakia currently stands in the two selected sectors, which frames the qualitative part of the research.

The results of the quantitative analysis indicate the existing level of emissions in Slovakia today, and whether the country is closer to the EU targets that are put for 2030 – specifically the 12% reduction in non-ETS sectors based on 2005 levels (International Energy Agency 2019). It is also shown how housing and transport sectors are contributing to the overall emissions and thus it provides a sign of which areas need immediate attention if the policy is to be correctly implemented.

However, a major part of this thesis is analyzed through qualitative methods which help with understanding the rural versus urban differences, social and cultural barriers, and populism and public (dis)trust of EU decarbonization policies.

The primary qualitative method used is semi-structured interviews with eight experts, NGO officials and community representatives in the mobility and housing sectors⁶. Interviewees are chosen using purposive sampling to ensure a coverage of diverse perspectives and opinions from both urban and rural areas. These interviews are not used only to collect expert opinions but also to test the key hypotheses of this thesis, which are connected to the main implementation barriers of EU decarbonization policies in Slovakia – including economic constraints, administrative and institutional capacities, rural-urban divides, and the impact of populism and public (dis)trust.

The interview questions are designed to explore the thematic areas mentioned, to understand how each factor influences the implementation of decarbonization policies and the differences between sectors (housing and mobility) and locations (urban and rural). The findings from the interviews are used to confirm or refute the hypotheses set out in the thesis. All information gained is synthesized with quantitative and policy data to provide a complete picture of the barriers and opportunities associated with Slovakia's green transition.

Additional quantitative data are mainly derived from online survey, focus groups (with active citizens and community stakeholders), active research engagement (workshops), participatory observations (during discussions and workshops), and collaborative inquiry (active engagement of workshop participants).

⁶ Policymakers affiliated with political parties are excluded from the interviews to avoid potential conflicts of interest, as the interviewer is also involved in party politics.

All data are analyzed through comparative analysis of mobility and housing sectors to explore similarities and differences between the two. This comparison focuses on rural versus urban differences, social and cultural barriers, and rise of populism and public (dis)trust within the mobility and housing sectors. Ethical guidelines – informed consent, anonymity, and non-discrimination – are followed (see Appendix 1).

Furthermore, the research also explores successful decarbonization initiatives in Slovakia and other EU member states through policy analysis, with a stress on best practices evaluation to adapt them at different political levels. This is accomplished by delivering evidence-based recommendations for opinionmakers in the field of green transition.

All findings from quantitative, qualitative, and policy analysis are compared, synthesized, and interpreted in a coherent way to give a leeway forward on how decarbonization policies in the Slovak Republic can be implemented effectively.

CHAPTER 3: RESULTS

This chapter summarizes the key findings of the research in a factual way without interpretation and provides answers to the research question: **What are the main barriers to the implementation of EU decarbonization policies in Slovakia's housing and mobility sectors, and how can they be overcome?**

The results are organized in two main sections. Firstly, quantitative data explains background on Slovakia's current emissions and progress in reaching EU 2030 targets, focusing on the housing and mobility sectors. This section offers important information on the topic but does not directly test the hypotheses.

Secondly, qualitative data are structured around core hypotheses to test them properly on the themes like rural-urban differences, the role of populism, and social and cultural barriers. This data was collected from interviews.

3.1 Quantitative Findings: Emissions in Slovakia – Housing and Mobility

Slovakia has made progress in reducing overall GHG emissions – they dropped approximately by 28% in 2023 in comparison with the year 2005. Even though there was the overall reduction in GHG emissions, it was not equally distributed across sectors (see Table 1; Slovak Hydrometeorological Institute 2025a).

Table 1: Total GHG Emissions in Slovakia

| Year | Total GHG Emissions in Slovakia |
|------|------------------------------------|
| 1990 | 73425.57 |
| 1995 | 52535.17 |
| 2000 | 48295.06 |
| 2005 | 50269.48 |
| 2010 | 45427.05 |
| 2015 | 40399.26 |
| 2020 | 36911.88 |
| 2023 | 36073.66 |

Source: Slovak Hydrometeorological Institute 2025a

Residential heating remains an essential source of emissions in Slovakia. Emissions from the household sector, which includes residential buildings, have fallen slightly over the last few years but still contribute greatly to the overall air pollution and GHG emissions (see Table 2; Slovak Hydrometeorological Institute 2025b). The combustion of solid fuels, such as wood and coal, in many households – especially in rural areas (Remiaš 2006) – remains the most important driver of these emissions. Lack of proper air circulation in certain geographical areas, such as narrow valleys, adds to the impact of these emissions as it traps pollutants in the surface area. Burning domestic waste and plastics in residential heating devices, even though it is illegal, continues to happen and releases poisonous hazardous substances, e.g. carcinogens. All these elements together create critical air pollution, particularly during the winter months when temperature inversions limit atmospheric dispersion (Slovak Hydrometeorological Institute 2025b).

Table 2: Housing Sector Emissions in Slovakia

| Year | Housing Sector Emissions in Slovakia |
|------|---|
| 1990 | 7220.88552156913 |
| 1995 | 4606.03505363886 |
| 2000 | 4771.31780205511 |
| 2005 | 4002.61030787331 |
| 2010 | 3732.13274681638 |
| 2015 | 2990.75407172881 |
| 2020 | 3133.55396980064 |
| 2023 | 2802.44847030656 |

Source: Slovak Hydrometeorological Institute 2025b

The mobility sector in Slovakia has been one of the most difficult to decarbonize, with a rising trend of emissions. Specifically, in 2023 compared to the base reference year 1990 the emissions increased by 13% (see Table 3; Slovak Hydrometeorological Institute 2025b). Despite numerous previous steps, emissions attributable to diesel and petrol fuel consumption have been increasing every year. It is not yet known if the trend will continue (Potočár 2025). This ongoing problem is accompanied by Slovakia's dependence on private vehicles and limited public transport infrastructure, especially outside urban areas, and the economic position of the car industry, which influences policy formulation in the mobility sector.

Table 3: Transport Sector Emissions in Slovakia

| Year | Transport Sector Emissions in Slovakia |
|------|---|
| 1990 | 6816.31637055727 |
| 1995 | 5490.92316301985 |
| 2000 | 5721.58783230534 |
| 2005 | 7693.07550400205 |
| 2010 | 7421.47968357688 |
| 2015 | 7294.17122769183 |
| 2020 | 7061.46897384448 |
| 2023 | 7735.53556578624 |

Source: Slovak Hydrometeorological Institute 2025c

Slovakia is bound by the EU Effort Sharing Decision to cut non-ETS sectors' (e.g., transport and housing) emissions by 12% by 2030 compared with 2005 levels (European Parliament 2021, 4). As of the last reported year, Slovakia is not yet meeting this target, particularly because progress in the transport sector is lagging (Slovak Hydrometeorological Institute 2025c). Instead, Slovakia's ownership rate for automobiles is still growing. Nevertheless, in March 2025, electric vehicle uptake in Slovakia reached a record of 4.7% of new registrations. For comparison, in the same period, the EU average was 15.3% (Slovak Electric Vehicle Association 2025).

As the year 2030 is being closer, the value of understanding the social, cultural, and political dynamics that either support or hinder implementation of green policies is becoming more significant. The quantitative results revealed the structural barriers in the housing and mobility sectors and prepared the ground for the following sub-chapter, in which qualitative results are presented to understand the deeper and human-related dimensions of these challenges.

3.2 Qualitative Findings: Interviews – Housing and Mobility

This sub-section presents the main qualitative findings from eight semi-structured interviews with experts, municipal officials, researchers, and policy professionals conducted in Slovakia. In total, 15 individuals were invited to participate in interviews; however, seven declined – four citing a lack of expertise, three due to time constraints, and one person did not respond. The interviews were designed to test the four hypotheses of this thesis and provide insight into perceptions and administrative and institutional barriers in the housing and mobility decarbonization agenda. Results are presented by hypothesis and detail common themes without interpretation.

The individuals interviewed were: **Michal Vašečka**, sociologist and member of the directors' board for the Just Green project (see Appendix 3); **Marián Zachar**, decarbonization strategist at the Climate Office in Bratislava (see Appendix 4); **Dušana Dokupilová**, climate policy researcher at the Slovak Academy of Sciences (see Appendix 5); **Tomáš Nemec**, energy advisor for the Union of Slovak Cities (see Appendix 6); **Marián Balko**, head of the municipal administration in Veľký Krtíš (see Appendix 7); **Martina Repíková**, climate policy researcher at the Slovak Academy of Sciences, focusing on climate poverty (see Appendix 8); and **two participants who requested anonymity**, one who serves as mayor of a middle-sized town in western Slovakia (see Appendix 9) and another who is an expert for green economy and Recovery and Resilience Plan (see Appendix 10).

Hypothesis 1a: People from urban areas show greater willingness to accept green policies in the housing sector than people from rural areas.

This hypothesis was not confirmed. Three of the respondents were in support of the hypothesis, believing the urban-rural divide exists in connection with awareness and willingness to accept green policies in the housing sector. One respondent, however, was skeptical of such a divide but he highlighted that the urban areas, particularly Bratislava, are more active in energy-saving renovations, as they have greater access to finances, bigger institutional capacities, and a greater amount of younger, better-educated people who understand the long-term benefits. Majority (four respondents) emphasized that financial capacity and education could be more relevant than geography. More educated people with bigger financial budget – from both urban and rural areas – are more likely to start green housing renovations. Even though, rural communities often face higher energy costs through detached housing and solid fuel reliance but may be less inclined to have confidence in grant schemes. Barriers such as perceived ineligibility, bureaucracy, and the fact that they view their homes as already being "good enough" were often indicated as reasons for limiting uptake.

This implies that while there are a few variations between urban and rural areas, socio-economic and educational factors could be the more important drivers for acceptance of green housing policies.

Hypothesis 1b: People from rural areas show greater willingness to accept green policies in the mobility sector than people from urban areas.

The findings validate this hypothesis. Majority of interviewees agreed that rural public transport is insufficient and provokes so-called "transport poverty" which creates car dependence. Therefore, firstly, rural residents could be more reasonable in their outlook towards electromobility as it is convenient to charge electric vehicles at home. (However, price sensitivity remains a significant barrier.) Secondly, rural residents would welcome enhanced public transport, which could be environmentally friendly, too.

In comparison, campaigns for sustainable mobility and pilot projects (e.g., car-sharing, cycling) reach more city residents, yet their actual behavior is difficult to change. Demand for rural electromobility and green public transportation exists, but affordability and infrastructural gaps limit its fulfillment.

Hypothesis 2: Populism in Slovakia undermines effective implementation of EU decarbonization policies in the mobility sector more than in the housing sector.

This was strongly confirmed. All interviewees agreed that the mobility sector is more politicized and addressed more frequently by populist discourse. Several respondents mentioned the politicization of subjects such as the EU's ban on internal combustion vehicles from 2035 and how these are typically presented as being top-down, unrealistic, and threatening national sovereignty and economic stability. Contrary to this, housing was regarded as less politicized and more directly linked to tangible gains for people like comfort and long-term investments.

Additionally, some respondents mentioned spread of misinformation through mass media and social media by populist politicians and their supporters, influencing especially rural areas and older citizens. Low public awareness about decarbonization policies and widespread confusion and opposition to it creates a sense of disconnection between EU goals and daily realities. Fragmented media landscape, lack of clear state communication strategies, and poor level of institutional trust are also key obstacles.

Hypothesis 3: Social and cultural barriers create bigger obstacles to be overcome for effective implementation of decarbonization policies in the housing sector than in the mobility sector.

This hypothesis was confirmed. Majority of the interviewees agreed that social and cultural barriers are a bigger problem in the housing sector. Most people, especially rural or poor communities, lack technical competencies and administrative capacities to understand the subsidy systems. There is a sentiment that renovation is too complex or not financially viable even where support is available. In comparison, mobility decisions are more practical and less emotionally driven. Instead of cultural barriers, resistance against laws like those that forbid combustion engines is political and economic in nature.

Respondents also described how homeownership norms and emotional attachment to property disrupt rational choices. Some mentioned that people desire to stay in larger, less efficient homes when their children have flown the nest, rather than downsizing. Mobility changes, on the other hand, might require less individual effort, particularly when they are improvements in infrastructure rather than behavioral change.

Local institutional capacity was also seen as a fundamental issue, with few interviewees referring to the absence of adequate personnel to implement or advocate for green policies. The rural areas were described as especially under-staffed, while cities like Bratislava are in the process of building small but specialized teams.

Overall, three out of four hypotheses were confirmed (see Figure 1). These findings show that decarbonization policies need to be designed specifically to different local socio-economic and institutional realities and should not use a one-size-fits-all approach.



Figure 1: Testing Outcomes for Hypotheses 1–3

Source: Author

CHAPTER 4: DISCUSSION

This chapter integrates the main results of the quantitative and qualitative analysis to tackle the central research question: **What are the main barriers to the implementation of EU decarbonization policies in Slovakia's housing and mobility sectors, and how can they be overcome?** It connects interview data and trend analysis with additional survey data, focus groups data, active research engagement, participatory observations, and collaborative inquiry data. Thanks to a complex analysis, ongoing patterns can be debated together with systemic barriers that shape the pace of decarbonization.

4.1 Financial and Administrative Barriers

Across both housing and mobility sectors, economic constraints were found to be the biggest barrier. In housing, survey statistics, conducted within Just Green project⁷, confirm that although energy-efficient measures like window replacement are relatively common (41% of households), more extensive renovation activities remain rare due to cost concerns. This is consistent with the interview findings, which emphasize the burdens of upfront investments, administrative barriers, and uncertainty about subsidy outcomes.

As was mentioned by Michal Vašečka, “In housing, the demand for renovations is so high, however, there is a problem with administrative management, mainly due to the administrative division of Slovakia. A very small country has more than 2,800 municipalities and it is completely absurd to have that many. There are individual municipalities here that have 12 or 18 permanent residents. All municipalities that have fewer than 1,500-2,000 inhabitants

⁷ Just Green is an EU project being coordinated by a network of research and civil society organizations across EU member countries to study public views about climate justice and green transformation. The project has been conducted in Slovakia by Bratislava Policy Institute, under which the author of this thesis is professionally affiliated and authorized to use the project's data for the research purposes (see Appendix 2).

should be merged because it is unthinkable for anything to succeed in such a small village – administrative abilities are close to zero.”

Additionally, only 7% of the survey sample have received renovation grants, and more than half (53%) have never even considered applying – though 73% of those who did apply were satisfied. A quarter (25%) remains willing to apply in the future which indicates certain enthusiasm and potential capacity not yet reached if administrative and financial barriers could be eliminated (see Figure 2).

„Have you or people from your household ever applied for support from a scheme meant to decrease the energy consumption of your housing? “

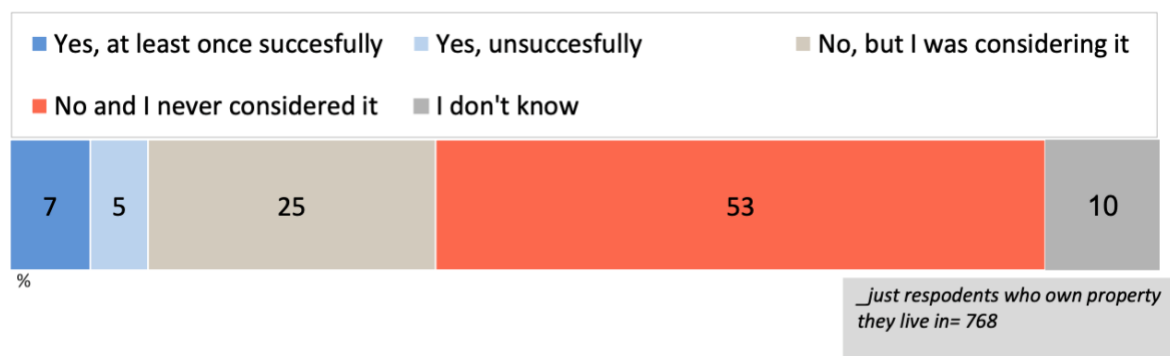


Figure 2: Housing Support Scheme

Source: Europeum *et al.* 2024

This challenge also extends to mobility. Although nearly half of Slovaks (49%) support investments into electromobility, uptake continues to be held back by doubts about financial costs, infrastructure, and actual environmental benefits. Only 25% of the polled would prefer to have an electric vehicle instead of an internal combustion engine vehicle at the same price (see Figure 3). This data confirms an underlying issue where pragmatism, economic conservatism of Slovaks, and low trust in system change policies create the biggest obstacles. Furthermore, public opinion on battery factories (gigafactories) is divided – many people view

them as important job creators bringing economic opportunities for Slovakia, while others express concerns about their potential environmental risks.

„If you had the possibility to choose between a combustion engine car and an electric car of the same price and category when picking a new car model to buy, which one would you likely choose?“

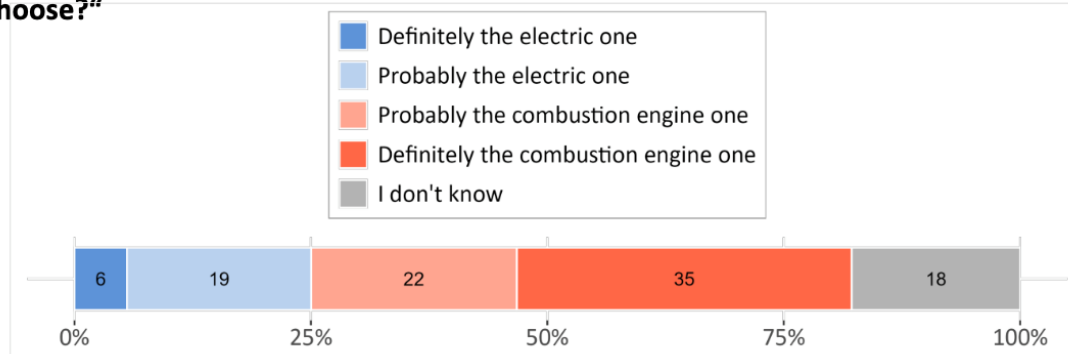


Figure 3: Combustion Engine Car versus Electric Car

Source: Europeum *et al.* 2024

4.2 Climate Practicality

Research conducted by the Just Green project confirms Slovaks are more aware than ever of being environmentally sustainable, but they also view sustainability in practical terms. As the survey found and interviews and focus groups validated, 37% of Slovak citizens use cars to go to work, and for them, cost, comfort, and safety are the most important things to consider when choosing means of transport (see Figure 4). This practical mindset is shaped by everyday financial decisions: many people continue to drive older vehicles not out of preference, but out of necessity.

„When deciding on which mode of transport to use, how important are the following aspects to you? Please choose the three most important for you.“

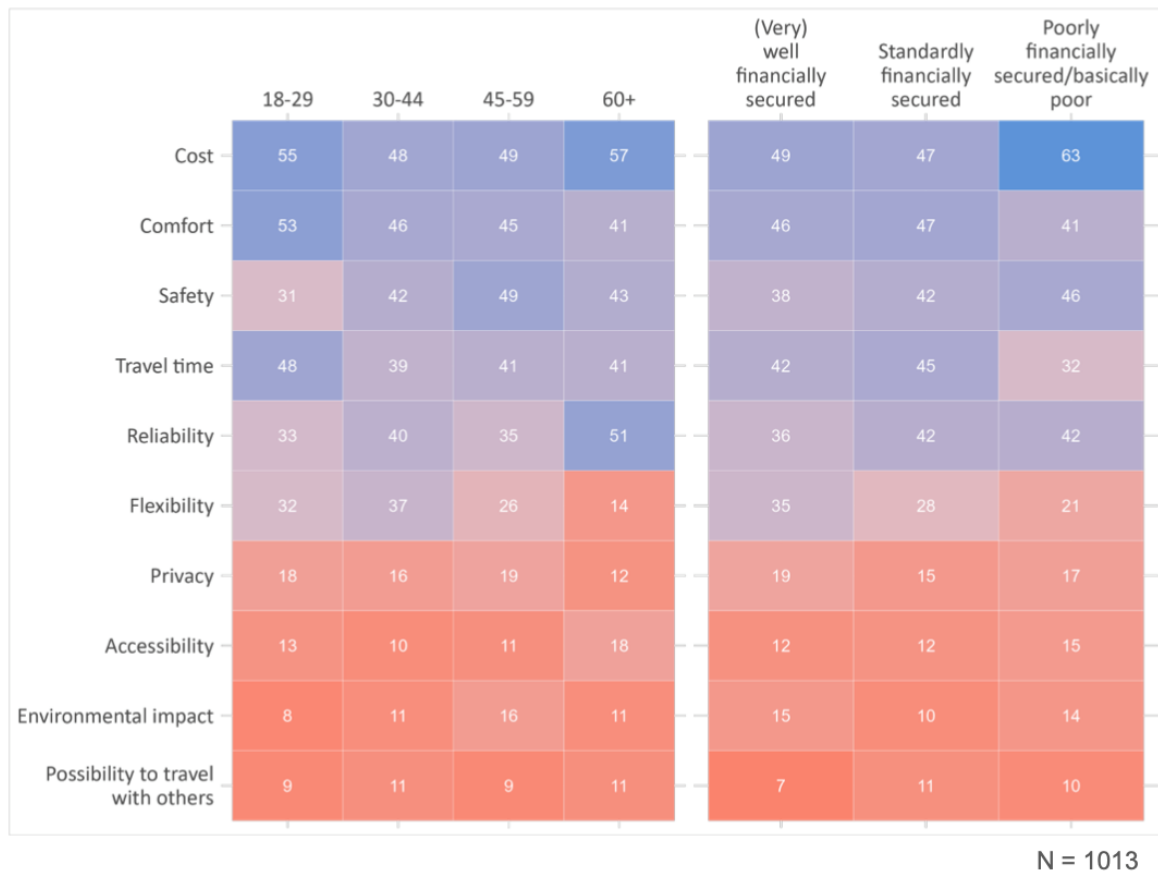


Figure 4: Factors Influencing Choice of Transport Mode

Source: Europeum *et al.* 2024

As Marián Balko put it, “I guarantee to tell you that 40% of people have old cars not because they are their fans; they just cannot afford new, more eco-friendly ones for €45,000. That is just the reality. If we do not support these people, change is hard, and all we will get is resistance.” This pragmatic approach explains why most citizens support investments in green policies by the state but oppose behavior-limiting policies like phase-outs of combustion engines or bans on cars in city centers.

Interestingly, most of the population already thinks their houses are in good condition – only 17% say significant investments must be made to live comfortably, and only 4% state their house is in poor or unsuitable condition (see Figure 5). This can explain the low uptake of state renovation subsidies. Findings suggest that energy-efficient houses are entering the market slowly and people start to decarbonize their houses only when utility bills become too high for them.

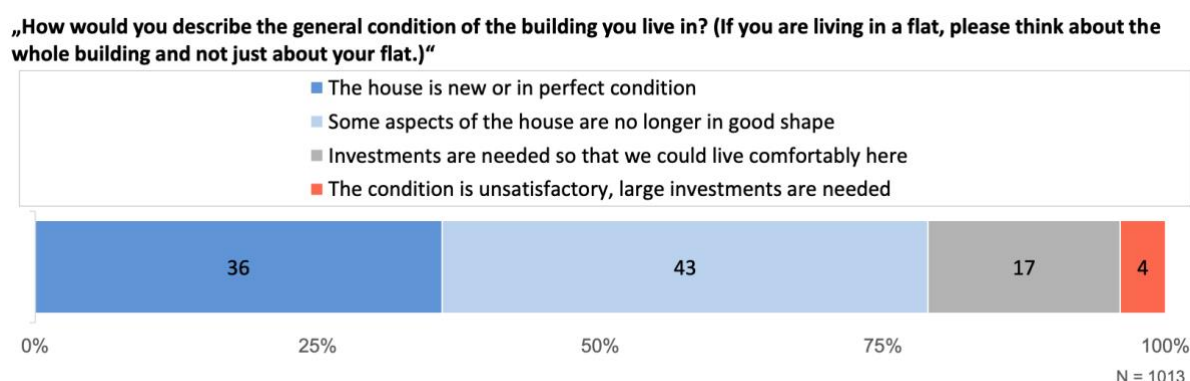


Figure 5: General Conditions of Housing

Source: Europeum *et al.* 2024

Similarly, the experience of Trnava suggests that even "unpopular" mobility measures (e.g., removal of parking places) are welcomed after financial and comfort benefits become evident, confirming again the perception that pragmatic outcomes outweigh ideological ones.

4.3 Social and Cultural Realities

Survey and interview data alike speak of a polarized public perception of climate policies, most often along educational and economic lines. One third of Slovaks have not heard about the EGD, and opinions about it are divided (see Figure 6). On the one hand, EU-driven climate action is more likely to be approved and climate change considered a serious issue by those who have university degrees and are economically secure. On the other hand, people with

lower incomes or rural background are less informed about EU goals and more skeptical about large-scale system changes.

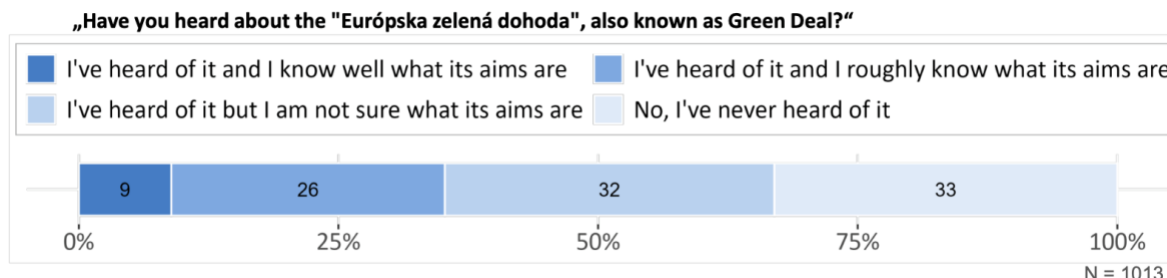


Figure 6: Green Deal

Source: Europeum *et al.* 2024

As Martina Repíková noted, “We are clearly divided into two camps, and bridging this divide will be very difficult. This polarization goes beyond green policies – it affects the whole society. In the context of climate policies, the challenge is even greater because many of the initiatives come from the EU, and people are exposed to conflicting narratives and misinformation. For example, there is widespread confusion about electric vehicles – their value and benefits, charging infrastructure, and overall quality.”

The mayor of a medium-sized town in western Slovakia indicated this divide, “Younger generations are clearly more engaged and open to environmental responsibility, but older people often lack information or do not see the urgency to act. Education is the key – but so is communicating through the right channels to make people understand and relate to these issues.”

This polarization is also evident in opinions about electromobility and combustion engine bans which bring the biggest doubts and policy tension. Even if better infrastructure was developed, as 49% of Slovaks agree with stimulating electromobility and building electric vehicle (EV) infrastructure, lack of trust in state policies and high demand for autonomy remain

major deterrents (see Figure 7). Such worries are not only practical, but cultural. Focus group participants feared being "strange" for adopting green housing solutions which illustrates the social discomfort with being different than others or outside of mainstream norms.

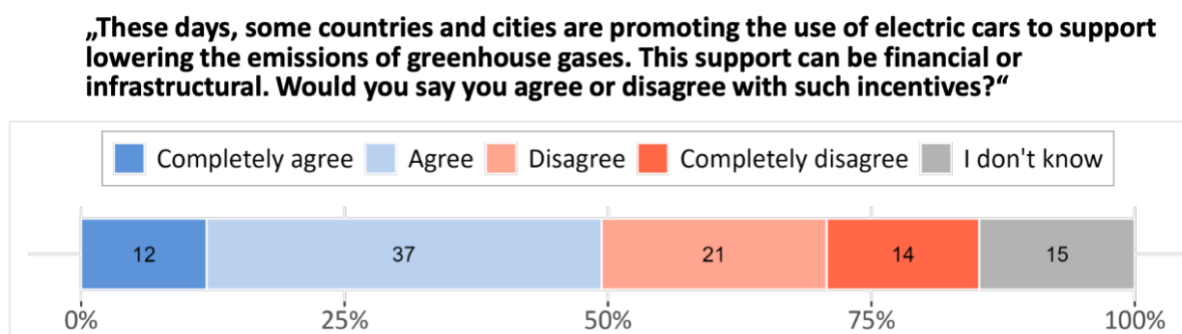


Figure 7: Use of Electric Cars and Incentives

Source: Europeum *et al.* 2024

4.4 Mobility: The Most Contested Issue

Unlike housing, which is more of a problem of practicality, mobility is extremely politicized. Results from the survey showed that 57% of Slovaks disagree with the EU's planned ban on sales of new combustion-engine cars beginning in 2035. Even if offered the same price and car class, 57% would still opt for an internal combustion engine vehicle, while only 25% would go for an EV (see Figure 8). These decisions are driven by doubts about EVs' environmental sustainability (only 38% believe EVs are greener) and concerns about infrastructure, affordability, and access to information. Moreover, populist narratives frame policies like these as threats to sovereignty or national economic interests, particularly given Slovakia's automotive industry.

„The European Union has introduced a policy that will ban the sale of new petrol and diesel cars from 2035. Cars sold before that date will be able to operate freely. Second-hand market will still offer petrol and diesel cars. The goal of the policy is to reduce greenhouse gases emissions in Europe. Would you say you agree or disagree with this policy?“

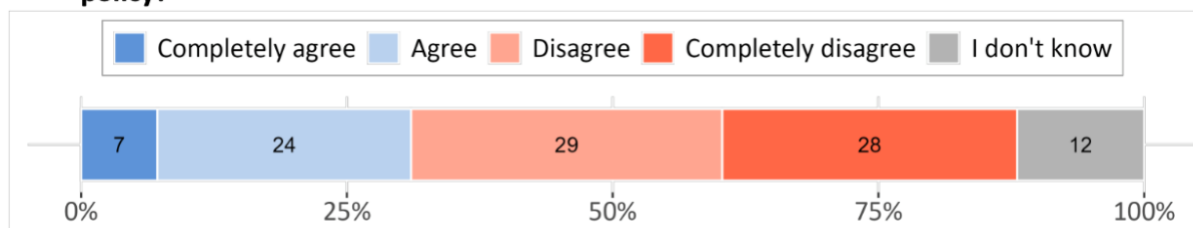


Figure 8: Ban on the Sale of New Petrol and Diesel Cars

Source: Europeum *et al.* 2024

An additional issue was described by Marián Zachar, who said: “Russian disinformation platforms communicate decarbonization policies in a way that makes people think the EGD is against them, and that decarbonization in housing or mobility works against their interests; but that is not true. These platforms are simply more effective in communication – they take things out of context and use them for their political battles.”

Greener mobility in Slovakia is largely predetermined by the state of infrastructure. According to survey respondents, the main reasons for choosing cars over public transport are longer travel times and insufficient infrastructure coverage (see Figure 9). Furthermore, only 30% of people support city center car bans, making them one of the least popular policies. Field observations in Trnava confirm this: while urban planning and participatory governance can improve the uptake of public transport and cycling, lack of intermodality⁸, affordability, and convenience hinders widespread transformation. Rural areas especially suffer from "transport poverty". Their options are very limited – they must use their own private cars, as public transportation is underdeveloped and basically no viable car-sharing or bike-sharing possibilities exist.

⁸ Transport system where at least two different modes are employed in an integrated form to achieve a door-to-door transportation process (European Commission 1997)

„What is the main reason which prevents you from using public transport instead of using a car?“

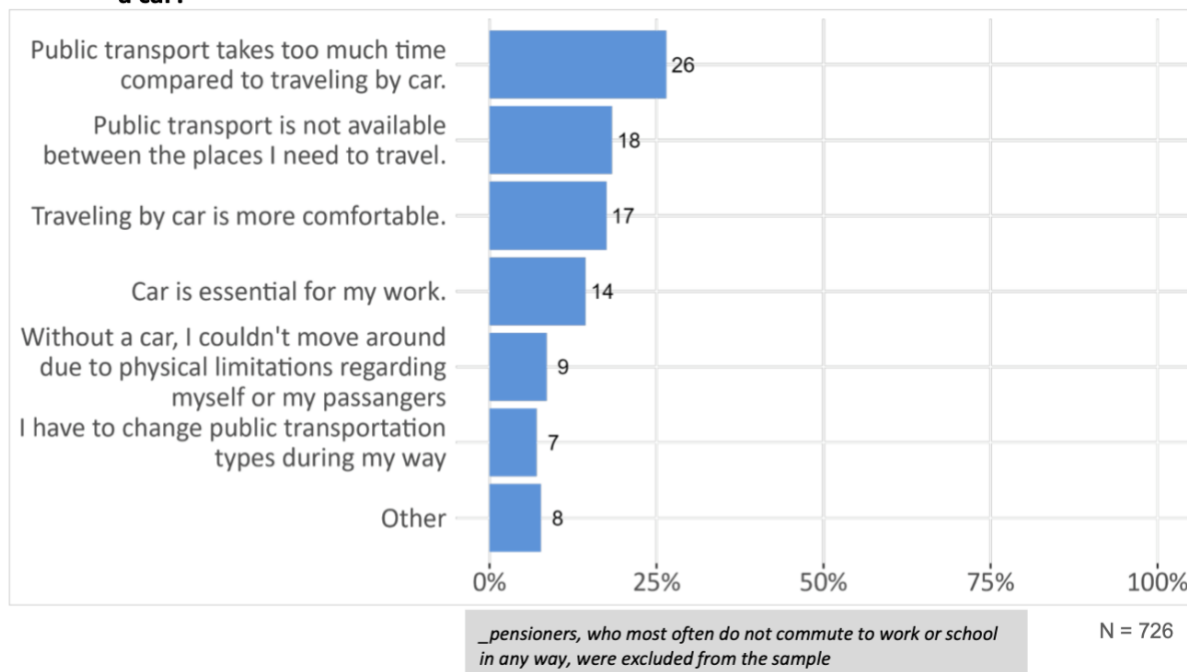


Figure 9: Use of Public Transport

Source: Europeum *et al.* 2024

As Dušana Dokupilová explained, “The much deeper issue lies in the unequal access to public transport infrastructure, which significantly impacts people’s lives. Those without reliable transport options can fall into transport poverty, which often leads to income poverty – and once that cycle begins, it becomes increasingly difficult to break.”

4.5 Institutional Capacities and Governance Gaps

Both sectors – housing and mobility – suffer from administrative burdens, institutional fragmentation and lack of institutional capacities. Expert for green economy and Recovery and Resilience Plan emphasized that overcomplicated procedures and overambitious implementation standards often slow down progress, he said, “There is too much effort to do things for 100%, instead of 90% with simpler steps, which can lead to worse outcomes.” He

also pointed to inconsistencies in the application of EU principles that vary across member states and confuse local implementers.

Discussions with workshops conducted by Bratislava Policy Institute⁹ further clarified that conflicting subsidy schemes, legal restrictions on building materials, and weak municipal capacities – especially outside of big cities – create significant barriers for implementation of climate policies. Even progressive cities like Trnava face challenges when they want to scale up successful pilot projects because of funding uncertainty and unclear regulations. In smaller municipalities, the shortage of expert and technical staff and know-how to access EU funds or to develop inclusive policies generates additional obstacles.

However, Tomáš Nemec offered a potential solution: “I support centralizing certain services – not to take competencies away from municipalities, but to achieve better results through cooperation. If three to four municipalities joined forces on joint projects, procurement, and implementation, they could secure better prices and conditions. It does not mean losing control – it means gaining better negotiating power and aligning procurement with the municipal budgets. Although, grant schemes would also need to allow group applications, not just individual ones.”

This institutional discontinuity was mentioned by other interviewees, too. They talked about long-term problems such as shifting political priorities, changing bureaucratic demands, and poor inter-agency communication. Social Climate Fund¹⁰ and ETS2¹¹ can bring new opportunities but their success will depend on Slovakia’s ability to address these domestic barriers.

⁹ Where the author of this thesis works and helped with realization of the workshops mentioned.

¹⁰ Read more: https://climate.ec.europa.eu/eu-action/eu-emissions-trading-system-eu-ets/social-climate-fund_en

¹¹ Read more: https://climate.ec.europa.eu/eu-action/eu-emissions-trading-system-eu-ets/ets2-buildings-road-transport-and-additional-sectors_en

4.6 Potential of Green Transition

Despite the challenges, results from the research show that Slovaks are ready to move forward and transit to green solutions. The majority (79%) support state investments in public transport and active mobility (e.g., cycling), rather than building electric vehicle charging infrastructure alone (see Figure 10), as well as passive housing – provided it is affordable, accessible, and has clear guidelines. The Trnava experience shows that inclusive planning and explicitly communicated change, even if initially unpopular, can be supported later in time. Similarly, survey reveals that a big portion of the population is ready to apply for housing grants in the future if the conditions are right.

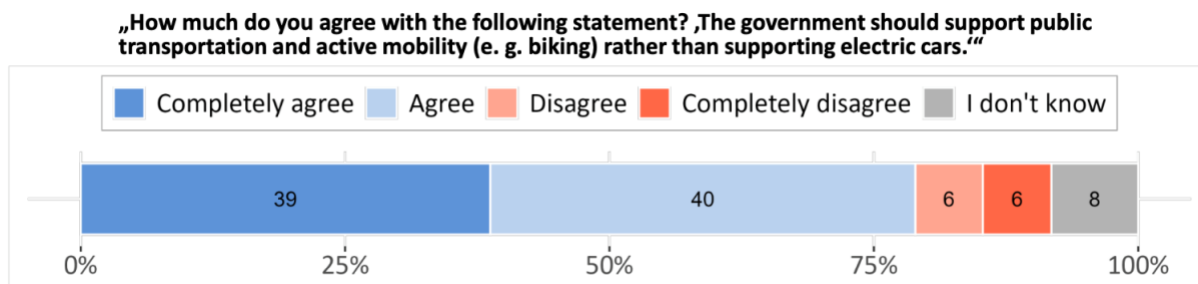


Figure 10: Government Support for Public Transportation and Active Mobility

Source: Europeum *et al.* 2024

The overall takeaway is that barriers in the green transformation are not solely material – they are social, technical, institutional, and psychological, too. Decarbonization is therefore as much an issue of building trust, visibility, and capacity as of policy and finances. Community-based projects, inclusive public spaces, and advanced education about green transition and climate change (from children to the elderly) were all suggested during workshops as socially significant steps forward.

CHAPTER 5: POLICY RECOMMENDATIONS

The quantitative and qualitative data analysis leads to several strategic policy recommendations addressing infrastructure and financial, social, and institutional barriers to effectively implement EU decarbonization policies in Slovakia's housing and mobility sectors. Two main goals they direct are: better public acceptance and improved implementation.

5.1 Simplify Access to Renovation Subsidies

According to both survey and interview data, only 7% of Slovaks have applied for renovation subsidies, and 53% have not even considered it, mostly due to mistrust and administrative challenges. There is unrealized potential as 25% of them are still willing to apply.

Table 4: Recommendations 1 – Simplifying Access to Renovation Subsidies

| RECOMMENDATIONS |
|---|
| <ul style="list-style-type: none">• Establish “one-stop-shops” at the local or regional levels which would be responsible for providing financial and technical assistance<ul style="list-style-type: none">◦ Good example: France Rénov’s successful platform that connects homeowners with qualified experts and simplifies renovation thanks to professional support service (Directorate for Legal and Administrative Information 2024) |
| <ul style="list-style-type: none">• Streamline administrative processes, increase the transparency of qualifying requirements, and at the same time, allow third-party facilitation by NGOs and experienced advisors to assist applicants, especially in rural areas |
| <ul style="list-style-type: none">• Encourage applications and increase awareness through the establishment of mobile outreach teams – which would be established in rural and underprivileged areas with a focus on seniors and low-income households |

Source: Author

5.2 Focus on Deep Renovations and Participation of Low-Income Households

Compared to 81% of panel apartment buildings, only 57% of family houses have already been insulated. Most Slovaks believe their homes do not need big renovations, which hinders deep restoration in the housing sector.

Table 5: Recommendations 2 – Focusing on Deep Renovations and Participation of Low-Income Households

| RECOMMENDATIONS |
|---|
| <ul style="list-style-type: none"> • Increase subsidy rates for deeper renovations (e.g., energy savings of >60%) <ul style="list-style-type: none"> ◦ Good example: Germany's KfW programmes which provide funding based on efficiency levels and climate-friendliness of the residential building attained (KfW n.d.) |
| <ul style="list-style-type: none"> • Offer a “low-income household renovation package” that includes coverage of initial costs and a repayment or cancellation period based on income levels |
| <ul style="list-style-type: none"> • Provide financial and practical incentives to gradually phase out the most polluting housing stocks and set minimum efficiency standards for existing apartments and houses |

Source: Author

5.3 Make Transportation in Rural Areas More Available

Slovaks who live in rural areas rely heavily on private cars because of the underdeveloped public transportation. Additionally, "transport poverty" limits their access to jobs, education, and services.

Table 6: Recommendations 3 – Making Transportation in Rural Areas More Available

| RECOMMENDATIONS |
|--|
| <ul style="list-style-type: none">• Develop integrated rural transport plans that would connect local buses to train stations and implement community shuttle programs with set schedules together with discounts on public transport (which is, based on the survey, the secondly most supported green policy)<ul style="list-style-type: none">◦ Good example: In Netherlands, rural residents have flexible, on-demand mobility thanks to Regiotaxi system (Smart Rural Transport Areas n.d.) |
| <ul style="list-style-type: none">• Establish targeted subsidies or tax credits for the purchase of electric vehicles – especially for rural and low-income households – and invest into charging infrastructure, especially at local public facilities (townhalls, schools) |
| <ul style="list-style-type: none">• Use public-private partnerships to establish shared mobility in big and medium-sized towns, such as e-bikes and car sharing<ul style="list-style-type: none">◦ Good example: Trnava's experience has shown promise for the future expansion of long-term bike rentals |

Source: Author

5.4 Invest in Low-Carbon Public Transportation

Most people (79%) would like to see state investments into active mobility and public transportation instead of EV infrastructure, according to survey. However, the current system is characterized by its limitations in the mobility sector – high costs, poor coverage and lack of integration.

Table 7: Recommendations 4 – Investing in Low-Carbon Public Transportation

| RECOMMENDATIONS |
|--|
| <ul style="list-style-type: none">• Redirect a portion of national climate funds, like ETS2 revenue, to improve train and bus transportation (also tram transportation in bigger cities) with a focus on electrification and intermodality |
| <ul style="list-style-type: none">• Redesign routes of public transport to incorporate schools, workplaces, and peri-urban areas<ul style="list-style-type: none">◦ Good example: The Barcelona Metropolitan Transport Plan in Spain is a great illustration of intermodality and accessibility (Geography Fieldwork n.d.) |
| <ul style="list-style-type: none">• Create school mobility zones – with speed reduction, safe pedestrian crossings, and parking laws – to promote walking and cycling to schools |

Source: Author

5.5 Increase Municipal and Regional Capacities

Majority of Slovak municipalities, particularly small towns, lack the administrative and technical capacities required to implement EU-funded green projects. This results in underspending, project delays, and local disengagement.

Table 8: Recommendations 5 – Increasing Municipal and Regional Capacities

| RECOMMENDATIONS |
|--|
| <ul style="list-style-type: none">• Create a national green center to help municipalities with project development, execution, and monitoring<ul style="list-style-type: none">◦ Good example: Austria's Klima- und Energiefonds for local pro-climate plans (Federal Ministry of Agriculture and Forestry, Climate and Environmental Protection, Regions and Water Management – Republic of Austria n.d.) |
| <ul style="list-style-type: none">• Simplify grant and co-financing requirements, especially for small municipalities |
| <ul style="list-style-type: none">• Offer training sessions for local authorities on data collection, project management, and green procurement through EU technical support center |

Source: Author

5.6 Challenge Populist Narratives with Inclusive and Open Communication

Populist narratives have politicized Slovakia's green transition and provoked reaction, particularly in the sector of mobility (e.g., banning of combustion engines).

Table 9: Recommendations 6 – Challenging Populist Narratives with Inclusive and Open Communication

| RECOMMENDATIONS |
|---|
| <ul style="list-style-type: none"> • Focus on long-term national climate communication strategy that uses plain language, highlight benefits for citizens (like energy savings, health, and jobs development), and directly fight disinformation |
| <ul style="list-style-type: none"> • Use trustworthy local actors, such as teachers, doctors, and priests, as climate ambassadors in rural areas to reduce ideological resistance |
| <ul style="list-style-type: none"> • Encourage participatory processes where you can give the people a voice in planning changes <ul style="list-style-type: none"> ◦ Good example: Trnava has involved locals in the green transition |

Source: Author

5.7 Strengthen Environmental Education and Training for Green Jobs

The awareness and preparedness of demographic groups differ. The likelihood of receiving high-quality environmental education and green skills training is lower among older, rural, and lower-income populations.

Table 10: Recommendations 7 – Strengthening Environmental Education and Training for Green Jobs

| RECOMMENDATIONS |
|---|
| <ul style="list-style-type: none"> • Include mandatory sustainability courses in school curricula that are connected to vocational training programs related to green jobs (e.g., EV maintenance, passive house building) |
| <ul style="list-style-type: none"> • Expand programs that encourage green entrepreneurship in the context of the circular economy <ul style="list-style-type: none"> ◦ Good example: Gröna Jobb initiative in Sweden primarily focuses on job opportunities but it indirectly supports circular economy practices as it promotes employment in industries that often engage in sustainable and resource-efficient activities (Gröna Jobb n.d.) |
| <ul style="list-style-type: none"> • Focus on intergenerational learning through implementation of programs that raise awareness and foster social inclusion, like senior citizens cycle clubs or community reuse stores |

Source: Author

5.8 Promote Civil Society and Community-Based Initiatives

Local civil society associations and groups are extremely important as they support vulnerable populations (despite being underfunded and subject to legislative pressure).

Table 11: Recommendations 8 – Promoting Civil Society and Community-Based Initiatives

| RECOMMENDATIONS |
|--|
| <ul style="list-style-type: none">• Provide essential funding to environmental NGOs and eliminate needless red tape, especially in view of the amendment to the Non-Profit Organizations Act |
| <ul style="list-style-type: none">• Support regional and local pilot projects focused on energy efficiency and e-mobility with small funding and raise public awareness |
| <ul style="list-style-type: none">• Establish local climate assemblies to advance democratic dialogue and better communication between citizens and institutions<ul style="list-style-type: none">◦ Good example: Bürgerrat Klima, or the Citizens' Climate Council of Germany allowed for more open public discussion about Germany's climate policies (Bürgerrat Klima n.d.) |

Source: Author

The policy recommendations presented in this chapter show the way forward for the Slovak Republic to overcome key barriers to decarbonization in the housing and mobility sectors. Slovakia must address: financial inaccessibility, institutional weaknesses, insufficient infrastructure, and citizens' distrust. All recommended strategies focus on strengthening municipalities, better public communication, and ensuring that no group is left behind.

CONCLUSION

This thesis used a combination of quantitative and qualitative analysis to examine the barriers Slovakia faces in implementing EU decarbonization policies for the housing and mobility sectors. As data showed, even though there is an increasing awareness about environmental sustainability, many obstacles need to be still overcome – the most important among them being financial limitations, administrative challenges, institutional fragmentation, and cultural attitudes.

In the housing sector, major renovations are postponed and most of the times restricted to small improvements only, like window replacements. Uptake has been slowed by a lack of funding and technical expertise, uncertainty about eligibility for subsidies, cultural resistance to alternative building materials, and the belief that properties are already in good condition. This is especially true in rural and impoverished areas.

In the mobility sector, it has been more difficult to reduce GHG emissions. People prefer driving their own cars because of the poor infrastructure, not well-connected transportation, and discomfort, even though they support investments in public transportation and alternative modes of transportation. Populist rhetoric and economic instability have also sparked opposition to the political narrative surrounding EU laws, especially the ban on cars with internal combustion engines.

Based on the results, Slovakia will not be able to achieve decarbonization through market or technological means alone. The social, cultural, and institutional barriers of green transformation must be considered if it is supposed to be successful. Special focus should be put on strengthening of the local institutional, administrative, and expert capacities, inclusive planning, reduction of existing barriers to receiving subsidies, and building of trust in public programs.

To conclude, climate policies should be designed in a realistic and context-based way. Slovakia's transition to climate neutrality must be guided by elimination of structural barriers and the degree of change already evident in regional best practices like Trnava. What Slovakia needs to reach a real progress is political will, better communication, and public involvement.

APPENDICES

Appendix 1: Informed Consent Form – Example

INFORMED CONSENT FORM

| | |
|--|--|
| Project Title | EU decarbonization policies on housing and mobility in the Slovak Republic |
| Purpose of the Study | This research is being conducted by Radka Wagingerová. I am inviting you to participate in this research about the main barriers to implementing EU decarbonization policies in Slovakia's housing and mobility sector. The purpose of this research project is to investigate how these barriers can be overcome. |
| Procedures | <p>You will participate in an interview lasting approximately 60 minutes. You will be asked questions about key barriers, social dynamics, and political factors affecting the implementation of EU decarbonization policies in Slovakia's housing and mobility sectors. Sample questions include:</p> <ol style="list-style-type: none"> 1. In your opinion, what are the main barriers to implementation of EU decarbonization policies in Slovakia's housing and mobility sector? 2. What role does public trust, populism, and politics in general have and how they influence the success/ failure of the implementation of green policies in Slovakia? 3. After discussing many barriers that influence implementation of EU decarbonization policies in Slovakia's housing and mobility sector... How these barriers can be overcome? What strategies and steps would you recommend? |
| Potential Risks and Discomforts | There are no obvious physical, legal or economic risks associated with participating in this study. You do not have to answer any questions you do not wish to answer. Your participation is voluntary, and you are free to discontinue your participation at any time. |

| | |
|--|--|
| Potential Benefits | <p>Participation in this study does not guarantee any beneficial results to you. As a result of participating, you may better understand the main barriers in the mobility and housing sectors in Slovakia and how they can be overcome.</p> <p>The broader goal of this research is to provide practical policy recommendations for the green mobility and housing sectors.</p> |
| Confidentiality | <p>Your privacy will be protected to the maximum extent allowable by law. Results of this study will be made available to you upon request.</p> <p>As indicated above, this research project involves making audio recordings of interviews with you. Transcribed segments from the audio recordings may be used in published form (e.g. master's thesis). The audio recordings, forms, and other documents created or collected as part of this study will be stored in a secure location in the researchers' office or on the researcher's password-protected computers.</p> |
| Right to Withdraw and Questions | <p>Your participation in this research is completely voluntary. You may choose not to take part at all. If you decide to participate in this research, you may stop participating at any time. If you decide not to participate in this study or if you stop participating at any time, you will not be penalized or lose any benefits to which you otherwise qualify. The data you provided before you stopped participating however will be processed in this research; no new data will be collected or used.</p> <p>If you decide to stop taking part in the study, if you have questions, concerns, or complaints, or if you need to report an injury related to the research, please contact the primary investigator:</p> <p style="text-align: center;">Radka Wagerová radkawagerova.rw@gmail.com</p> |

| | |
|------------------------------------|--|
| <p>Statement of Consent</p> | <p>Your signature indicates that you are at least 18 years of age; you have read this consent form; your questions have been answered to your satisfaction and you voluntarily agree that you will participate in this research study.</p> <p>I agree to participate in a research project led by Radka Wagingerová. The purpose of this document is to specify the terms of my participation in the project through being interviewed.</p> <ol style="list-style-type: none"> 1. I have been given sufficient information about this research project. The purpose of my participation as an interviewee in this project has been explained to me and is clear. 2. My participation as an interviewee in this project is voluntary. There is no explicit or implicit coercion whatsoever to participate. 3. Participation involves being interviewed by (a) researcher from the Central European University. The interview will last approximately 60 minutes. I allow the researcher to take written notes during the interview and the recording (by audio/video tape) of the interview. It is clear to me that in case I do not want the interview to be taped I am at any point of time fully entitled to withdraw from participation. 4. I have the right not to answer any of the questions. If I feel uncomfortable in any way during the interview session, I have the right to withdraw from the interview. 5. I have been given the explicit guarantees that, if I wish so, the researcher will not identify me by name or function in any reports using information obtained from this interview, and that my confidentiality as a participant in this study will remain secure. In all cases subsequent uses of records and data will be subject to standard data use policies at the EU (Data Protection Policy). 6. I have been given the guarantee that this research project has been reviewed and approved by Central European University. 7. I have read and understood the points and statements of this form. I have had all my questions answered to my satisfaction, and I voluntarily agree to participate in this study. 8. I have been given a copy of this consent form co-signed by the interviewer. |
|------------------------------------|--|

| | | |
|-------------------------------|------------------------------------|--|
| Signature and Date | NAME OF THE PARTICIPANT | NAME OF THE PRINCIPAL INVESTIGATOR Radka Wagerová |
| | SIGNATURE | SIGNATURE |
| | DATE | DATE |

Appendix 2: Confirmation of Permission to Use Research Just Green

Bratislava Policy Institute

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🌐 www.bpi.sk

November 1, 2024

Subject: Confirmation of Permission to Use Research JUST GREEN

To Whom It May Concern:

I am writing to formally confirm that Radka Wagerová a student at CEU, has our permission to utilize the research conducted by Bratislava Policy Institute in her diploma work. We recognize the value of academic collaboration and are pleased to support her efforts in furthering her studies.

The research entitled "Just Green" conducted under CERV granting scheme is available for her use, and we trust that she will provide appropriate attribution in her work, in accordance with academic standards.

Should you have any questions or require further information, please do not hesitate to contact me at + 421915223740 or borarosova@bpi.sk

Sincerely,

Ingrid Borárosová
Legal representative
Bratislava Policy Institute



Appendix 3: Interview – Michal Vašečka

Well, so I can probably start with the first question right away: Which are the main barriers to the implementation of EU policies in the field of decarbonization in the housing and mobility sectors in Slovakia? My whole thesis is focused on these two sectors and at the end of it, I want to offer some policy recommendations.

And I will start to answer very broadly, at first glance, but these are the important things. First, what affects the implementation of EU policies, and not only in this area, but in much wider areas, is the permanent tradition of discontinuity in Slovakia. When someone hears it from the outside, they would say, well, it happens elsewhere too. But me, who has been analyzing what has been happening here since the early 90s, I say that Slovakia has not experienced such a level of discontinuity in 35 years. I have not seen this anywhere else in the EU, because there were several waves of absolute discontinuities here, even so many that if I were to count, maybe six to seven.

The neighboring Czech Republic has never never experienced it to this extent. And if so, very mildly, but really, very mildly. Czech Republic experienced this kind of discontinuities possibly twice. However, they were very mild compared to Slovakia. That is the first block of issues, that simply, once something is set up, it starts to be implemented, and people are relatively sensible, after some time they know what they are doing, they are compatible with Brussels, and then comes the change. And what regularly happens, but commonly, and in the case of this politics it has happened several times already, that all the people who were implementing it are completely replaced, to the last person. This has also happened recently. But that cannot work. Simply, institutions have something called the memory of the institution, and if it is completely liquidated, the institution always regains it again, but it takes years. It is no longer months, but it takes years. And that country simply regularly lags in the implementation of various policies, even to the point where it is first warned about it and then immediately fined for it. And this is what happens in Slovakia.

Secondly, the main obstacle is that on some of those topics, and we will go into detail, there is not enough demand on the side of people, institutions. Or on the contrary, in the case of some – in housing, the demand is so high, administratively is not being managed. So, there is a problem of administrative management, but at the same time, it is also true that there is no demand for some topics. And if there is no demand, things simply will not happen. Not to mention, thirdly, that with

this decarbonization topic – it is not necessarily related to housing, but to some other subtopics. It relates to systematic brainwashing, whether as part of hybrid warfare or as part of some population brainwashing, where for example, the Green Deal issues overall, do not directly relate to it, but Green Deal issues are presented not as for example... if someone disagrees with it, they can say, "I think it is a mistake, that it is a bad EU strategy." Yes, I do not think so, for instance, but I accept it when someone says it. It is completely legitimate. As they say, that is what democracy is all about. But here it is presented as a sick element of the ideologization of public space. Yes, so someone brought a strong ideology which goal is brainwashing of the population. Those who attack it, brainwash that population disproportionately more.

Furthermore, and this is the last, even though the implementation of EU policies often brings money from Brussels. Of course, there is always some type of co-financing involved, or usually it is some type of co-financing or at least some conditions that need to be met, which in some cases are demanding to fulfill. Objectively, technically they are challenging to meet. And that again relates to public opinion in the sense that people feel that something needs to be done regarding decarbonization, as public opinion surveys show that people actually understand that climate change is happening, believe that something needs to be done, but they do not fully believe that they should be the ones to do something and they definitely do not want it to be funded with their money. And of course this affects the story. Even in cases where most funds for certain policies come from Brussels, what needs to be done locally is still seen as a problem. So now I have said something that is terribly, terribly broad, what is the biggest problem, but I see it as there are even more important things than the very first one. Because the first one is about technical skills but those can always be acquired in some way after some time. And even if another discontinuity comes, they can be acquired again. It is such a never-ending story in Slovakia. I argue that it cannot work here precisely because of this. Czechs are not necessarily more skilled than Slovaks. But they did not have discontinuities. This means they are constantly on track, understanding what is happening.

And do you perceive differences in obstacles between the housing and mobility sectors? Since we were discussing the main obstacles to the overall implementation of policies, what do you say about these areas?

Do I see differences in that? No, I probably do not see into it that much. No, I admit it, but that is a fair answer because I watch it from a distance, but no, I do not perceive it sharply, which may be my fault that I do not perceive it so sharply.

You are a sociologist, then perhaps a question for you: How do social or cultural realities or the overall situation in Slovakia influence the acceptance of green policies?

Absolutely fundamentally. And that is my answer that this influences it far more than anything else, than any forms of technical preparedness. There is a problem here because people often, in my opinion, respond very incorrectly globally to what the problem of Slovakia usually is. They search for technical solutions and technical measures to fix the situation. But that is not usually the most important thing. I simply do not see it as the most important thing in the long run. The acceptance of green policies in Slovakia is very low. Very low it is. This is in stark contrast to the fact that people are aware that there is a problem, but acceptance is very low because it affects deep-seated belief of Slovaks that they are very poor and that they cannot afford anything and that it is necessary to cover first the basics. They have such, I would say, a Marxist idea that there is a base and a superstructure. But they need to cover the basics first before they can focus on the superstructure. The superstructure is understood as everything related to education, culture, and of course such, let us say, gentlemanly frivolities like addressing ecology. And that comes directly from this Marxist understanding, that there is a base and a superstructure. And in the base, there are only some basic needs of people that should be covered, because Slovaks have a huge amount of material benefits in basic needs, from large homes, cars, and so on – all of that is basic. So that is the first thing – belief in one's own poverty.

The second is a high level of conspiracy in this country. The conspiracy index is extremely high. But it has an impact on this. So really a large part of the population today believes in conspiracies. They do not have as much power as in the case of some other topics, but conspiracy theories about climate change are also increasing. And it affects the population. And it precisely deviates it in that ideology of the whole thing.

And thirdly, it is also a feeling of a population that is small, feels insignificant, and is deeply convinced that even if they were to do something, it is a broader sense of Europeans, but in Slovakia, it is very strong. For example, in the Netherlands, it is not so strong, despite being a small country, but whatever we do, it does not have any impact on anything, because there are big polluters like China and the USA, so we can all cut ourselves up here and it is completely pointless. So, it is a fatalism of a small population that is deeply convinced that their activity never matters. No matter how the activity looks like. And this is again a very deep conviction in Slovakia.

Do you see any differences between urban and rural populations in willingness to accept these policies? So, if yes, could you explain what differences there are? When we talk about that mobility and housing.

Yes, yes. Well, there I think... well that is the paradox, that maybe it is not so pronounced there because the differences between the countryside and the city are very visible to a huge extent. And it does not relate directly to this – how people in the countryside are shifted in time in accepting some changes. It is just visible but it everywhere in the world, it is nothing specific, that urban population is rather taking on some changes and seeing a little longer range after all. But again here. Considering how big the difference is in other areas, where it is truly a civilization cultural gap, I do not feel it as much in this area. So, I think it would be false to point out the countryside and say, well, first in the broad sense, that they do not perceive climate change, or that they have not adapted their behavior. That is nonsense. And in the case of the housing sector and mobility, people in the countryside, who open some opportunity, and that is really... I understand that finances are a

problem, so many times they really try to improve their homes. I do not see a fundamental difference there. It is a nice answer to how much Slovakia is a one-dimensional modern country that technically these people are modern and can be modern structurally.

Culturally they are not modern, but they often know exactly what they could and would like to do with those houses and how to catapult them into the 21st century. But they also have the technical skills for it. Again, it is my experience that their abilities and their knowledge are surprisingly deep. So yes, there is some financial barrier there, for sure. But they also want to improve their homes. The problem is like with other topics, complying with other things when decarbonizing. So, they can just easily adjust their homes, insulate, do it, secure heat pumps etc. Those are expensive things and very sophisticated and they really understand it, but then they have no problem, yeah, and that is about cultural modernity, then they have no problem in the spring rake the grass and setting everything on fire and it just burns there for half a day, and they mess up the whole valley and it does not seem strange to them. It is strange, and it is very strange, that on one hand, Slovaks are extremely modern, and I have a very good experience with people in this, as they always surprise me again and again with their deep knowledge of it. But then actually in the spirit of some kind of social anomie, they do something that they would not do elsewhere, in part also because they would get fined for it.

Perhaps I will then continue to ask, in your opinion, to what extent do economic constraints play a role, such as the price affordability of housing, or in the case of mobility, we are talking about electric cars, or any deficiencies in infrastructure.

Of course, yes. We all know that. Buy those electric cars that really will not have just Chinese range of 220 kilometers, but you will get somewhere, it is worth it, and you will not charge it on the way. It is good when you live in Bratislava and travel to Brussels, so you know you charge it on the way in Germany and in Austria, but when you want to travel to your grandmother in Svidník, so you know that you have not even left yet, and you already have a problem. So yes, of

course. Examples of countries that are indeed wealthier, it is true that they are also more consciously ecologically, but really that wealth plays a role there like in Norway, speak for themselves. Well, in Norway, almost only electric cars are sold. So clearly, if that country were wealthier, it would probably go in that direction. And again, it would be able to go in that direction because again it is technically surprisingly modern and crave for that technical modernity. This is terribly important.

That in fact, and now I will say it, now I do not know if I am saying it in a good or bad way, because Slovaks really crave their modernity. They crave for their modernity, but they perceive technical modernity as their own modernity. And they really understand that part. Completely old-fashioned people, mentally living in the 19th century, know the technical parameters of the latest electric Mercedes car precisely. They always know how to surprise me. But that they know exactly what they are doing. They know exactly when it comes to the market. And again, young people who are a bit more modern, but there are also some problems because of where they grew up, they know exactly the day in September of this year when the iPhone 17 will come to the market, and they know that they really desire it. And they feel that when they have it, then they will be modern.

And when we talk about these electric cars, do you see it as a future in Slovakia, that maybe they will be as popular as in Norway, that is, only electric cars will be mainly sold?

I do not know what will happen, I am not an expert on that, but yes, I assume it will happen in the order of 30 years – all combustion engines will be gone. I think 30 years, that is probably the time frame that seems realistic to me. Although, of course, there will still be people who will be building their political careers on this. These Czech motorists are a beautiful example of how you can build a whole party – populist, essentially very problematic in something, just because people already have nostalgia for roaring engines. They want to hear the engine roar. Start it up and suddenly the RPMs shoot up to five thousand and the engine roars, so they are completely taken aback by that. So, this will of course remain. I do not doubt that, but yes, combustion engines will

disappear, we know that. It is unsustainable for it to remain this way. And in Slovakia it will be no different.

We have already touched on this, but when we talk about the administrative and institutional capacities for the implementation of green policies, how is Slovakia doing at a local level? Is it sufficient in your opinion?

That is the problem again. When I consider it, and now of course I am only considering a segment, albeit an important one, different types of local governments on a local, regional level... This is different. In housing, the demand for renovations is so high, however, there is a problem with administrative management, mainly due to the administrative division of Slovakia. A very small country has more than 2,800 municipalities and it is completely absurd to have that many. There are individual municipalities here that have 12 or 18 permanent residents. All municipalities that have fewer than 1,500-2,000 inhabitants should be merged because it is unthinkable for anything to succeed in such a small village – administrative abilities are close to zero.

Objectively, this cannot function like this. However, there are those who have created those abilities. And usually, where those people have been in power for some time, where regions, cities, municipalities are governed for a second, third period, the people who run it usually know it very well. Even if they do not have any administrative abilities, they already know how to go about it so that they know who will write projects for them, implement partial things that the municipality cannot. I do not actually see such a terrible problem in this, but I see the problem primarily in the fact that Slovakia engaged in local democracy in the 90s and it revitalized local democracy and went so far that if someone talked about it abroad, people would laugh. They would not even be surprised; they would just laugh. Because here, really, there are separate villages. I specifically remember Gemer villages that had 12 inhabitants. And of course, they had a mayor.

Okay, we can move to the second round of questions. And so, we will discuss the role of public trust, populism, and politics in general. In your opinion, what role does public trust,

populism, and politics play? And how does the success or failure of implementing green policies in Slovakia influence?

Well, it is crucial. The answer is already in the question. Slovakia is a country with an extremely high level of distrust, both horizontally and vertically, among people, as well as towards institutions. It is a country with high anomie. And this has the most fundamental impact on the implementation of these things, because if people do not trust, they constantly look for who actually wants to deceive or trick them – where on page 17 there will be written in lowercase some conditions that they did not notice and are constantly convinced that someone put those lowercase letters there, well then the implementation will not work well. That is just common sense.

And populism, well yes, populism is precisely because it serves any ideology and has a very chameleon-like character. This means that it always very sensitively perceives what is being talked about in society and then feeds on it. It usually does not come up with topics, but it feeds on them. And in a conspiratorial country, if people drink and talk a lot of nonsense, which are often the results of hybrid wars, of course, but then populism jumps on it and repeats it. In this sense, this is a completely key thing, even what we said at the beginning... despite the discontinuities in Slovakia, technical implementation is a disproportionately smaller problem than these social reasons of non-implementation.

We have already talked about this; how do you perceive the current perception of decarbonization policies of the EU by the public. And perhaps I would also ask the second question, to what extent do the media or the political narratives influence the support of these policies by the public.

They support. In the case of the media, you need to delve deeper. Because precisely on such topics as decarbonization, it is very nicely visible. Even, let us say, 20 years ago, there were various types of media, better, worse, I mean, in quality. Public versus private. Yes, those dividing lines were different and some even acted as poisoners while others on the contrary tried to bring

enlightenment to the people. But now we have reached a stage and in this, Slovakia is indeed, I must say again not the only one, but is exceptional compared to countries in Western Europe, that the biggest problem of Slovakia today is not whether public television and radio will be one way or another, because their impact is essentially very low. But the main problem is that traditional media, whatever they were, and were indeed different in quality, still do not play the main role in informing the public. They hardly create even half of what people consume because most of it is made up of some alternatives, they themselves call it civil media, that is, misinformation, various crazy nonsense, sometimes even part of hybrid war.

And of course, many times people do not follow anything at all, but as they say, when asked what they read, they say, we read Facebook. Facebook, which is toxic in Slovakia, extremely political, so it brings a huge amount of nonsense. People would say, but that is everywhere in the world. I would say yes, but elsewhere in the world mainstream media still make up the majority. Only a slight majority in some cases, but still the majority. They no longer make up the majority in informing here. So, the main problem is precisely that most of the information that comes to people comes through completely obscure sources. And in this sense, unfortunately, the media significantly influence the world.

On one side, there are those media, and on the other side, we have those political narratives, how they influence each other that the media maybe create such public opinion, or politicians create public opinion, or they rather just bring up those topics?

That is already interconnected today. It is so interconnected today that few people can distinguish it. So, even before Facebook, that Meta on Facebook deleted Mr. Blaha's profile. Well, that was not Mr. Blaha's profile, after all. That was the editorial team. When you looked at it, you realized it was a profile that publishes one status after another in 15-minute intervals. One person could not keep up with that. And those were statuses, not in the sense of one-liners, but rather significant viewpoints, analyses, whatever I may think qualitatively about it or morally. I would still

say, I do not want to moralize, but immoral sometimes, but the speed indicated that there is a whole editorial team behind it. I do not know how big, but there were several people. So, what is still a medium today? Because in the new age, everyone who operates on social media is the editor-in-chief, editor, investigator, publisher, doing everything.

And have you noticed the populist rhetoric that has influenced either negatively or positively the implementation of some green policy in the housing or mobility sector?

Something very specific, yeah, something like that.

If something comes to your mind.

No, now I dropped out.

We can come back to it later.

Okay.

So, do you think that some population groups, for example rural communities or some marginalized communities, or people working in industry and so on are more skeptical towards climate policies than others? Or do you not perceive this in Slovakia?

It is here, of course. And it is completely natural. People in general with lower education, people with lower qualifications, they can, and therefore quite rightly, feel threatened by policies which can reach their work. And they can reach their work, for example also because they will not understand at all and do not understand what is required of them. It often changes their established ways of working, behaving. So, it is not even that conservatism, it is natural, but it is about someone who actually requires a change from them and these people naturally tend to be, someone might say, maybe traditional, but that is about when you learn something, you already have a feeling... for example, as part of the working class, that you will stay with it your whole life. And today, these technological changes require very fast changes from these people and their behavior. It was not like that in the past. The working class just spent 40 years working somewhere and did not have to change their behavior. And now even from these low-skilled people someone wants them to change

something every three years. And they mind it. They were just used to having a certain type of ontological security.

When we talk about, on the contrary, marginalized communities, well, with all due respect, that is, as I would say, a different story. And how will you explain decarbonization in rural areas where people are exposed to such life conditions? It does not matter; we will look for why they are exposed. I am stating the fact that they are exposed. A severe winter will come, when it is minus 15. But they really need to light a fire in the hut, and at that moment it does not matter at all whether the urban district owns a forest or not, they do not care, they need to warm up. So, they cut down half of the forest, which commonly happens there, and that is a problem. But it is the same as when we look at Africa and say, listen people, you cannot deforest it, the Sahara will remain, it is crazy, you cannot deforest it. And so, they look at you softly, well, but we have no other choice. But I say, let us not make a big deal out of it.

Slovakia is exceptional, that at all there is a part of the population in this state, and it is a huge shame for that country that it cannot move forward with that for so long. But that is a marginal issue. It is a lot of people in the sense that Slovakia as a developed country should have already resolved it a long time ago, but we are still talking about maybe 150,000 inhabitants in the worst-case scenario. They are those who live so significantly on the fringes of society. And yet it is not so much that this is just something that is holding Slovakia back in its growth and development. And when I talk about cutting down the forest, those few old trees that the Roma cut down, it is nothing compared to the deforestation of this country that is happening industrially. I am afraid that when you will be using this, it will be used against the Roma. And that would sadden me, because I repeat again, it is not the Roma who are deforesting this country. Really.

Okay. And maybe which of these groups we mentioned, or possibly another, do you think is the most skeptical towards those climate policies and perhaps also, how to change its perception?

The most skeptical is a relatively widely spread group of people who have a high level of conspiracy thinking index. Because it is not about real rational consideration there, but about the belief that evil Brussels is in control – hegemonistic forces are trying to manipulate Slovakia and therefore they reject anything, any measure. And even those that in some outburst, the last outburst of rationality, they will think are rational, but they will reject it because it comes from that evil Brussels, where bad people sit. So, these are voters primarily of Republika and supporters of Smer, and that group is not small. I would not be looking for characteristics like less educated people, rural people, people belonging to some type of lower working class – some auxiliary forces. They are there, but what is crucial is that they live in a world full of conspiracies, and they are deviations from the realistic thinking. So, what helps, well I would not even bother with decarbonization questions, I would just try, if anything, to try to unravel that story behind the conspiracies, which in many cases will no longer be possible. One must admit that it will no longer be possible. They will die the way they are now.

Good, let us move to the third round of questions...

In the case of those conspirators, and now completely seriously, we know that from the total population of those who are heavily conspiracy-minded, meaning practically everything that happens around them, they see in the category some manipulation of big plans by some elites, that are moving them somewhere, that is at least 15% of the population. These are people who believe in so many conspiracies. And that is not little. We are not talking about some marginal problem here. Then there are others who believe to conspiracies only in some topics. Or they are even willing to talk about those topics, right, and it makes sense to discuss there. In the case of some things that are not related to decarbonization – COVID, that is 50% of the population that believes in those conspiracies, right, but there are a lot of people who, for example, had no problem with vaccination, but had a problem only and exclusively with vaccination against COVID, right, so these are people you can talk to, they have doubts and that is, well it is okay that someone has doubts.

But then there are some hardcore, massively brainwashed people and in the case of Slovakia, the core is huge. We have about 15% for Slovakia. But no one will move with them anymore, and after all these years I understand that it really does not even make sense to address them. We will not achieve anything. But the positive part of the story is that there are many people who succumbed by the magic of algorithms, and they do not know that the algorithms on YouTube and so on exist, these are older people for example, who determine their lives, but there is still something that can be done with many of them.

Meanwhile, in the case of decarbonization, that is, let us say, the Green Deal and so on, there is one positive piece of information, and yet it still holds true that the level of conspiracy in climate change is still lower than in other topics. But beware, that does not mean it will not come. It is just a matter of time. And I think it will come, because now we are at a time when Brussels, due to declining competitiveness for practically anything, pulled the spyglass regarding the Green Deal. That is completely clear. The handbrake has been pulled and the money will go into developing AI to catch up with the USA and China. The money will go to armament. The money will go towards, if so, industrial decarbonization. Yes, let us decarbonize, but not eliminate. That will swallow more money. No money for the Green Deal in the form it was intended. So, it is undeniable that stopping it will mainly trigger strong opposition from the young generation in Western European countries, who will say we do not need weapons, what are you mixing up with AI, etc. This is about our future, let us go back to it. The pressure will be great. Brussels will have to hear it sooner or later. But in these countries, if there is such a level of complicity, there will be pushback. And that pushback will be significantly stronger than today. Because today, complicity lies in topics of a different nature. Even the Green Deal has not reached its peak yet, because Brussels itself has pulled the handbrake. If it did not pull it, it will come very soon, or we might even be there already, I would say.

Also, so that I can understand it correctly, in what sense is that pushback coming from young people that they will push precisely for the Green Deal implementation?

Yes, for it to be implemented, of course. Because, according to me, they will also argue very correctly that simply we do not have time anymore. That you elderly will not be here in a moment. But you have prepared a strange world for us. So, the pressure from young people will undoubtedly come. Because money is only a certain amount and even at the cost of EU debt, I repeat again, it will push for the development of a new type of industry, high-tech, will push for the development of AI and will arm. This will absorb all the money that the EU will have. There will not be space for us to set ambitious goals for decarbonization, zero emissions by 2030 right now. It is simply nonsense. The EU will not do it now. But at the same time, those young people will say, well, wait a minute, but 2030, okay, then I will be older again. So, the whole world is going, like what will I live in then? And this is an understandable race. And young people will say to themselves: I am not interested in any arming against Russia at all. None of this interests me at all, but what interests me is that Europe will be uninhabitable. So, it will come. I am almost convinced that it will come as a response from young people, mainly in Western Europe, because there is less of that here in Slovakia after all.

This is just my additional question; do you think something like green growth is possible? Economic growth?

Well, from what I know, some zero, zero emissions are illusion, but low emissions growth is possible. It is true that there will always be some dirty productions. That is exactly how it is with those electric cars, everything looks great until you find out how those batteries are made. That is the key component, and you will discover that the battery, that it is an ecological nightmare. And that will always be, but again, well, technologies... and now Radka, that this is not actually a problem. We can technologically advance immensely, and I have great confidence in technology. And really, I do not think that people who understand the technological side of it are just talking

nonsense or being unrealistic when they say that almost everything is solvable as high CO2 emissions. Yes, it is solvable. It costs a lot of money, but it is solvable in principle.

Well, it is always actually crucial how people will judge these things. So, this is that the technological possibilities will not actually matter. What will matter is what will people say about it – assuming we are still within democratic regimes. When there are no longer democratic regimes, it does not really matter. Right? And then it is valid that one does what is advantageous. The only problem is that within authoritarian regimes, green solutions may not be the most important. Well, because we have experience in this country with communism after all. I am still from the generation that grew up in Bratislava, which was a chemical city, extremely polluted. However, that was not visible because it was truly a chemical city, but it was just a matter of which direction the wind was blowing from, and we could tell by the smell which factory had just released something. It was truly a nightmare. In contrast, today Bratislava is a beautiful, clean city, almost unbelievable.

Good, so we discussed many obstacles that hinder the implementation of policies in mobility and housing in Slovakia. Perhaps we can overcome these obstacles, or what strategies and steps would you recommend, even though we have touched on that... so maybe one additional question: what role can civil society and non-governmental organizations play in improving the implementation of green policies?

Very big, assuming that there will be an effort for some effect cooperation not only from the state administration and the public, but also from businesses, as it is such a well-functioning society. Some balance of these components, this is a known thing. And especially the third sector always is, among other things, also a space for innovations, and testing. Everywhere in the world the third sector very often tests something and then actually presents it to the state or public administration so that it can implement it as already tested. And in Slovakia, it was and still is like that. It is common. Many times, it needs to be said that things work better in collaboration with local governments than with state administration. Once again, we are getting back to populism and

conspiracies. This government is ceasing to cooperate with the nonprofit sector, precisely because it is convinced that the third sector is harmful to someone or something – what is a nonsense, which has no support in the real world. But if they are convinced about it, then...

And why are they convinced about it, what do you think?

Because they are state paternalistic and are convinced that what is not directly under the control of the state is a bad element on the scene. The state should be omnipotent, and things should be part of some broader coalitions, but the state should always have control over it. The third sector is something that does not fit into their world, and since they also do not understand that world, they are deeply convinced that there is some malicious intent there.

You mentioned that the local implementation or cooperation with municipalities is at a higher level. So how can we better support these municipalities in the implementation of decarbonization policies in Slovakia?

Well, I feel here that I cannot answer differently. I personally support for many years, the decentralization of this country. For example, in the case of drawing money from Brussels – I will mention the well-known fact that everything flows mercilessly through Bratislava and that it does not have to be this way at all. And Brussels does not want that because it does not insist on it. At least counties in the EU could draw directly and it appears that the central government, not because it is Bratislava, but because it is central, does not want that. Because the more it overflows, the more room for corruption there is. And that, we are simply back to the old problem.

Good, are there any international mechanisms or mechanisms at the EU level that you think Slovakia underutilizes? We are still talking about decarbonization policies in that area.

I do not have that much knowledge about it, I admit. Knowing Slovakia, I am convinced that we are not completely the best at utilizing those funds, but no, I am not entirely sure.

What significance does education, dissemination of information and raising awareness have in supporting the adoption of green policies? And is it sufficient in Slovakia?

No, no. That is not true that nothing is being done. But if schools collaborated more with, for example, the third sector, we would probably be somewhere else by now. Definitely. It is also a part of the curriculum, of course, partially, but... But honestly, considering that young people perceive it as a big topic for the future, probably not much. But again, when I am very friendly towards what is happening, if something is a big topic for people, then they will probably find some information about it. Those more educated. Apprentices from Kňažná near Dolný Kubín, they probably will not find any information about this topic. That is the problem. This probably really needs to be explained to them very clearly and firmly. Because then it is they who succumb to complete nonsense from Facebook, where green men from ĽSNS will explain to them somehow about the impact of the EU. And that is just a bunch of complete nonsense. And they believe it.

So, some reform of education is probably needed.

Well, on this topic, it is one of the key topics for the future. It should not just end with explaining how to recycle. That is more like an obvious technical thing. It is more about increasing sensitivity to the matter.

Good, so one last question. What different approaches would you recommend for the housing sector compared to the mobility sector?

I do not know. I deceived you; I know.

No, it is okay, good.

No, but you should have an honest one there.

Yes, I will also have experts directly on mobility and housing, so they will probably talk more about it. Alright, so that is all for now. If you do not have any thoughts on the populist rhetoric that influenced negatively or positively the implementation of green policies, either in the housing or mobility sector, then that is all from my side. If you think of it, you can let me know. Thank you very much.

Appendix 4: Interview – Marián Zachar

The first round of questions will be about what you think are the main obstacles to the implementation of EU policies in the decarbonization sector of housing and mobility in Slovakia and whether you perceive different obstacles between the housing and mobility sectors?

There are several different obstacles. We have Climate Office of Bratislava, where we primarily address decarbonization and very specifically we try to address energy, because this is an area that has not been fully addressed so far. Mobility has been quite intensively addressed – projects focused on the construction works and reconstructions of trams in Bratislava. There are somewhat large projects being prepared in this area and we are entering into it relatively little. But into what we are entering relatively a lot is energy. So, it is not just housing entirely, as the city owns or manages about a thousand one hundred rental apartments. That is relatively small in the context of the whole pool of housing. So, we primarily deal with that energy.

What I am dealing with now is decarbonization in district heating, which logically extends to housing. In the last 15-20 years there have been money available even from the State Fund for the Housing Development, where insulation of homes, apartment buildings in particular, was largely funded. So, it seems like a lot has already been done there. From the perspective of carbon footprint, in the residential sector, I am not entirely sure if that is the term in your language, but in the residential sector, the carbon footprint has decreased by around 25%, perhaps up to 30%, between 2005 and 2022. A lot has been done there, and it was really thanks to very favorable financing from that state fund. Plus, at the same time, the lifespan of a certain part of residential buildings came to an end, meaning that people could no longer operate there, so they needed to somehow repair them. There were not that many obstacles historically. I do not know to what extent this is a nationwide element, but in Bratislava, those houses have been very significantly renovated. But there is still a lot to do, as for example in the production of our own electricity we are very

much behind. In terms of a carbon footprint in heat production, we are basically at zero. This means that there has been no significant decarbonization reform, or reform of heat production. And that is what we are looking at right now.

Can I ask, you said we are at zero, are we behind compared to other cities in Slovakia, or do you think internationally?

I mean in comparison with us because almost 100% of heat is produced from gas. Or there are a few percent of waste heat from waste incineration now, but that is minimal. So today, almost everyone here is producing waste heat. Whereas EU countries and cities across Europe are addressing, more specifically in today's times, from a geopolitical perspective, how to disconnect from gas, as it poses not only economic risks, but also security and environmental risks. This is something we are going to focus on, and there are quite a few barriers in terms of institutional fragmentation and property rights. This means that some central heating systems are mainly owned by the city and handed over to the city districts, which then found operators for these systems. This means that today the situation is such that the great fragmentation, where anything a person needs to do is quite challenging in terms of governance.

The second thing is the whole historical political realities. We have always been historically dependent on gas supply, whether it was from an economic perspective or heating perspective. That sector had not undergone the transformation, as in other countries, where it was very similar, but perhaps they realized a little earlier that it creates security risks and economic risks. Use of the waste heat from industrial processes for heating costs nothing, instead we still must order gas for billions, whether it is from Antarctica, Siberia, or elsewhere, it simply costs us something. But we could technologically withstand the heat we already have here, whether it is in water, in the Danube, in the ground or anywhere else, which is nearby and where cities across Europe can utilize it. So, we want to go in this direction. Plus, of course, not 100% of heat in Bratislava is distributed through a central system of heat supply. We have our own gas boilers. When people decide what to do, what

type of heating to go for, the majority still rely on gas, even with financial mechanisms already in place to support the exchange of gas boilers for decarbonized heat. But still, whether it is from a technological perspective, grid readiness to connect renewable sources for electricity generation and heat production, new issues are emerging that have not been present until now. But there are such problems, like when we switched from coal to gas, there were also some problems there, when we moved towards having a central system and heat connection, we also dealt with some other problems. So, with each new generation of heating, new problems arise that we need to address.

In my opinion, the last thing that we will probably bridge to the next topic is, this has been confirmed through data, it was the Polish counter-intelligence that precisely identified and analyzed which area of disinformation Russian troll farms exploit the most in Europe, namely the fight against the Green Deal and all sorts of concoctions about what the Green Deal is, what the Green Deal is not. And I think that Slovakia also has quite a good ground for it, and they can divide the society in things that are clearly in our favor. It is in our favor to have a source of heat that we already have here and that is free and that we do not need to import from anywhere. This is in favor of people, in favor of lower energy prices. At the same time, it is in our favor and Slovakia should not be dependent on anyone in the context of heating or in the context of energy. Russian disinformation platforms communicate decarbonization policies in a way that makes people think the EGD is against them, and that decarbonization in housing or mobility works against their interests; but that is not true. These platforms are simply more effective in communication – they take things out of context and use them for their political battles.

We have already touched on those social realities in Slovakia and maybe how they influence those cultural realities as well, or within Bratislava, how do you perceive acceptance of those green policies and perhaps whether you notice any differences between urban and rural populations? You probably only work with the urban one, but what about their willingness to somehow accept these policies?

Yes, we have some kind of collaboration with Košice and then with other European cities, so I cannot really compare it in terms of urban and rural populations to that extent. I see what you mentioned at the beginning in the context of those disinformation campaigns. But I do not have the data for it, but the reactions of the population to changes that are in favor of the air quality, in favor of public transport, have a much smaller reaction in other cities than in Bratislava. This means that in five years from 2020, if as much as one can see, in Paris they were able to essentially transform the city into a city primarily based on public transport, cycling transport. In the center, I mean, not of course in the vicinity. I studied there, so I was just there recently, so I can compare, that when I was there 16-17 years ago, when I was studying there, the city seemed to be full of cars, today those cars simply are not there and people travel differently, well, Paris is not now the worn-out city and those reactions I have not seen and perhaps have not heard much about, I do not live there, so I cannot evaluate it from the perspective of someone who lives there. To that I say, it is more feelings-based rather than based on any measurable data.

I believe that even relatively small measures that the city takes in favor of public transport, in favor of having better air quality, which involves some decarbonization, are harder to communicate than in other capital cities. It is also related to vulnerability to misinformation prevalent across Slovakia, the majority here are most susceptible to believing disinformation. We are to the west of Ukraine, and within the EU, we are the most vulnerable. This is also reflected in how people think that diesel cars are almost good for your health. I strongly do not recommend breathing it because there is a 100% risk of death, but people really believe some things. Two posts on social media are enough, and people simply no longer believe the reality. So, the mistrust between people very intensively influences the ability to implement such measures. Today, in Slovakia some measures that in other countries happen routinely are not implemented precisely because of this – because of the expected reactions what will the public think about it. If someone came here and said, let us make a low low-carbon zone in some city now, it is unrealistic in today's

times, because it would mean that a person would just listen for three years, that people as unnamed Czech MEP go there and complain that we oppose cars and are against everything and so on.

Whereas in France it is a completely standard thing which works, in Germany as well, only here it is how it is. I personally think that the biggest barrier is disinformation. If I had to choose one thing that in my opinion has the greatest impact on people's willingness to do these things, it is disinformation and the lack of trust among people. This means that when I do not believe that someone has good intentions towards me, even if they do, then that public institution can basically do nothing. And whether it is purple, green, orange, any color, in such a societal setting, making such fundamental changes is extremely challenging.

Are you as a city trying to fight against this misinformation?

As soon as we solve decarbonization, then we will also fight against misinformation. So very briefly, no, because the city completely lacks the capacity for this, but maybe it will be the only solution if we want to do some things. But we are trying to choose measures with a big impact and not necessarily they have as a condition an extreme change in people's behavior. This means that we choose those measures, through which we want to achieve the same thing, but we want to achieve it with different tools that will not necessarily mean that people will now oppose.

For example, car sharing in France is a completely normal thing, as if, that this nowadays, to require. People traveling to work have a condition from the employer, let us say that they must find some car sharing. These are the measures that Slovakia has not yet seen the time for, and therefore we are choosing other infrastructure measures that will have a similar impact. And I believe that at some point in time we will be able to discuss this with people, to address other measures as well, but the implication for us is that we are choosing other measures.

To what degree do you think economic constraints, such as affordability of housing and availability of electric vehicles, come into play? We are talking about sustainable housing, or some shortcomings in infrastructure etc.

I will stay in the topic of energy, because I do not really deal with transportation, so I do not want to talk to you about something I only know from meetings, but I have relatively little insight into it. I go for transparency for sure. Slovakia is a poorer country than other member countries, but the question is how we can use those finances. Because one thing is that yes, we are poor, but it is precisely the poorest who need to invest as efficiently as possible so that when you cannot afford to buy a new car in five years, you simply use it in a way that the car or the space could be better utilized, for example. For us, the implication is that since we are poorer, we need to invest much smarter than when we have endless money and can buy anything we want. That is one thing.

I will return to the fact that decarbonization measures in energy and especially in housing are measures that have economic returns. This means that when a person transitions to or installs renewable sources, leaving the gas, in the long term, not necessarily from the capex perspective/ investment perspective, these finances will return to him. This is a proven, data-backed fact, just like the fact that the Earth is round. This means that today we do not necessarily need to invest our own money in all these measures, we just need to show those people the context, from the city companies to residents. So, the city struggles with the same problem as the residents, that now I live in some apartment building, so maybe I do not have €15,000 saved up to have some photovoltaics installed on the roof. But what can I do? Well, I can borrow money for that. Because still it will return to me between six to ten years. And I know how to potentially get a loan for this. I know that the city can use some money from the European funds for this. Or I can pay for it with some guaranteed energy services. This means that there are tools available for the city, even if it does not have its own big budget. That is one thing.

The same applies to companies, which means that today large companies, with which we have cooperation within the mayor's climate challenge, also have installations of renewable sources directly in Bratislava, which they should implement this year. And yes, some invest their own resources into it, some borrow money for it, but at the end of the day, it is an investment that will

pay off for them. This means that this is not just some topic of decarbonization, it is a topic of some economic, rational thinking. And the same goes for ordinary citizens, but of course, someone who has a family house does not need to approve it with another 50 neighbors, it is simpler, but the same premise applies, meaning there are public resources available, as well as people who can implement these things, including EU funds.

Today, and even if these resources could not be exploited for this purpose, banks provide relatively advantageous financing for them to realize it, and as I say, these investments are returning to them, so that is why banks, for example, lend financial resources for it. This means that there are some economic constraints, but loans have changed the course of history quite intensively, as we are still able to borrow money on things, especially on those that have economic returns.

When you go to Austria, you will see that every third house has solar panels or some other renewable sources. In Slovakia it will be fewer, but at some point, the potential is the same and economically it will make sense. So, this is my answer to those economic constraints.

As for the affordability of housing prices... how many salaries we would need annually to be able to buy some accommodation, the situation in Slovakia is quite tragic. Of course, it affects when you are renting something, so why should you build some renewable resources on the rented property, it makes no sense. What would the owner do, since he does not live there and only the tenant would supposedly benefit from it, so yes, there is an extremely big difference between people living in their own houses versus residential properties, so there may be such an effect, especially in the city, in apartment buildings. Mostly in those family houses, they live people who own it.

Can I just ask? The trend abroad is that people are no longer buying those apartments and that they still use those renewable energy sources more.

There are also state-owned apartments in cities, e.g. in Vienna it is more massive (220,000). In Slovakia, the city owns around 1,100 apartments with municipal parts, so 1,100 apartments are much lower number than 220,000. Public institution can invest in it because those benefits go to

those people. That means yes, there is an interest from the public institution for the people who use those rental apartments to have the lowest possible energy prices. But for a private tenant, it is not necessary, it must matter to the owners. And with that, it is often the case that individuals buy such apartments for rent as some investment properties.

Here, when a developer builds apartments, they usually want to sell the apartment – get rid of it, they do not want to have to deal with it as their responsibility. In the west, it is completely standard to build and somehow offer it and take care of it. Here, at least in Bratislava, this is not completely standard. The standard is to develop, build, sell, and that is it. I am not saying that it is some fundamental obstacle. According to me, the fundamental obstacle is the volume of those rental apartments, because there the city and public administration can manage it directly.

Okay, let us move on to the next question. If you were able to evaluate the administrative and institutional capacities in implementing green policies at the local level of a city, do you think they are sufficient?

A Climate Office was established in Bratislava a year and a half ago. There are three of us in it. Plus, at the end of last year, in October or November, a team for energy management has been created, which has been absent in the city for years. Today, the capacity of people primarily focusing on these topics is five. I do not know of anywhere that would have employees as specifically dedicated to this topic. Typically, there is at least a well-established Eurofund department addressing some projects. Certainly, there are energetic experts in places, but they are rather scattered, not centralized, and not any unified policy exists, either green or climate policy, at the local level. I can just be grateful that in the city of Bratislava, the political leadership is so enlightened about this, that it understands that without such a team it will be difficult to know how to implement these things.

At the same time, from a practical perspective, as you probably know, when it comes to the topic of drawing European funds, nowadays without the European fund projects that are to be drawn

from the European funds meeting the taxonomy conditions, which are in translation some technical tools, how to condition the drawing of finances so that they are directed to climate transformation solutions, it is not possible to implement it. And this is something that those departments dedicated to European funds do in other cities. I think that such teams focused on climate policies operate in every European city which aims to become carbon neutral, as we see in the horizontal project Net Zero Cities. The aim of the project is to coordinate the implementation of such things that will help transform that city.

Are the teams in those other cities somehow bigger?

My colleague was talking to someone from German city, and they also started as one person and today there are 15 of them, so it is evolving. It is also our responsibility to show how things can be done and to seek finances, so that we can implement those changes and show that it can be done and that it makes sense for cities. If we show this, then there could be more people. But the goal is not to have more people, but to have a greener, healthier city.

Good, so can we move on to the second round of questions then? We have already touched upon this, but what role does public trust, populism, and politics in general play in the success or failure of implementing green policies in Slovakia?

Well, I mentioned that it is important. In countries and cities where trust is greater, where disinformation has less success, those green policies are implemented there, and we see that people live healthier in those cities. They can use better infrastructure for public transport, they have greener heating, and they can generate more energy themselves. When I was in Paris, I saw the impacts of very strongly implemented green policies and climate measures. And that sees even a person who would not want to see it.

Okay, so I will ask another related question. We have already talked a little bit about the current perception of decarbonization policies by the public. To what extent do you think the media or political narratives influence public support for these policies?

The media in Slovakia focus on this topic – some have been dedicated to it for a long time, there are media outlets that have their own experts who specialize in these topics. You can see that in about ten years, the issues related to green policies resonate more. But of course, there are media that have some standards, and then there are media that have a different role than informing people and in those they basically resonate with political narratives, narratives of disinformation campaigns, or communication campaigns of other countries, which aim to break unity and those aiming to undermine human trust in Slovakia, and thereby also interfere with this issue. It is not the media's topic, in general in this topic is increasingly sophisticated. That is one thing and those political narratives of course throughout Europe and the world is that faith in scientific facts is declining because it does not suit various political interests.

However, from the perspective of those barriers it is as society is unable to respond to disinformation campaigns. It is not about specific political parties, but mainly about foreign intelligence services that are trying to influence public opinion through campaigns. Just look at which embassies communicate the most on social networks and the narratives they spread here. So, in my opinion, it is not a question of media and necessarily political narratives.

Have you noticed populist rhetoric that has influenced, negatively or positively, implementation of green policies in the housing or mobility sector in Slovakia?

Vajanského Embankment is the most popular and most famous embankment in Slovakia, so you know about it. I think I probably do not have much to add to what I mentioned earlier, but like, there are topics that have been targeted by disinformation campaigns and also by some legitimate criticisms within both mobility and housing, and in my opinion, it is crucial to conduct a debrief on this what worked, what did not work, how the city will deal with it better in the future. It is important for Bratislava to do it as best as possible in the future also from the perspective of communication, which is evidently important in these matters as well.

Good, do you think that some population groups, for example, rural communities, with whom you may not work completely, but marginalized communities, people working in industry, and so on, are more skeptical towards climate policies than others? And if so, then which group is the most skeptical and how can their perception be changed?

I honestly do not now, but I have seen that there are some survey questionnaires for that. In my opinion, it is not in a way that is group-based. I see it more as people who are more inclined to believe disinformation versus those who are not so prone to believe disinformation. People who are willing to trust other people who are not willing to trust other people. And I do not perceive that there are such big dividing lines there, but maybe something else is coming from those questionnaires, but I do not have data for that. But it seems like it is also very much about how those public institutions communicate what the goals are. People are least interested in decarbonization. People know that this is a complicated topic. If you were to ask ten people, only one would be able to tell you what it means.

But the topic of how much I pay for energy, everyone understands that because they know when 150 euros leave their account, and when 100 euros leave instead, they save money. So, it is important how public institutions and we, the people who implement these climate policies, communicate. This means that we are trying to communicate the fact that this is an economic opportunity for Bratislava. Cities can save money, people can save money, which means that less money will have to be spent on energy in every city. It is an economic opportunity from the perspective of city development, which means that when we invest in changing heating to heat pumps, there is a huge production of heat pumps in Slovakia, which means that we do not have to rely on importing heat pumps from China or anywhere else, but we would import them from Senica, for example, where there is a huge factory. So, it is also an economic opportunity – more people will be employed, they will have jobs that contribute to some change and the same applies at the European level of decarbonization.

Decarbonization is an opportunity from both an economic perspective, but also from a security perspective. I think every person agrees that when we are not dependent on anyone, it is better. Decarbonization in translation means that we will not be dependent on anyone from an energy point of view, but we will know how to handle those energies ourselves. These are three things that, when you ask people, I would bet that the vast majority will agree with, regardless of whether they are from marginalized, rural communities, they work in industry, or have voted for the coalition or opposition, they will agree with that. And that is also our responsibility.

Good, can we move to to the third round of questions? We have already discussed many obstacles, and how they influence the implementation of EU policies in the housing and mobility sector in Slovakia. How can these obstacles be overcome? What strategies and steps would you recommend? And perhaps I will also add, what role can civil society and non-governmental organizations play in improving the implementation of green policies?

I have been involved in the civic or non-governmental sector for about ten years, but not in the implementation of green policies but in education. So, at this point, they will probably have a better idea of where they see their role. I perceive it as the boundary between citizens and public administration. The public administration is not the best or does not have the greatest experience and skills in directly communicating with citizens. Politicians yes, but public administration is not just politicians, but also officials who implement various policies. They are not the best at it and in my opinion, the non-profit sector is excellent as a bridge between public administration and citizens.

I can imagine that they can play a huge role there, and non-profit organizations also have played a long-term role in this issue in Slovakia in the context of explaining those topics, as well as in the context of linking and especially providing feedback on various strategic initiatives to those public institutions. If we come up with something, it does not necessarily mean it is the best thing the world has ever seen. And that kind of critical feedback is excellent from people who may have a different perspective and who have been functioning in that subject from a different angle for a

longer time. So, in my opinion, this is also important. We are also trying to work with non-profit organizations in the city and actively involve them, discuss with them.

How can we better support municipalities and cities in implementing decarbonization policies in Slovakia? What would you need?

Other than money and people, the ability to explain these things to everyone. But it takes time because it is a thing that has already become a complete standard everywhere in Europe and it is as any change that is being implemented either in Slovakia or anywhere else – it takes some time. There are some people there who are against it, then some things are successful, and people understand that this is a good thing, and the mass builds up, and then things happen, and, in the end, people are satisfied. But today it is about how we know what we need to do. It seems like there is a quite significant mismatch between the available funds, for example, for implementing the Climate Plan, versus what we would need. And these are finances, but I am saying that these finances are from different sources, from where it comes, so it is more about our skills in this regard – how to get those finances or how to get some investments, loans, and so on. But that is one topic and then of course the know-how.

In Slovakia there are a few people who understand these topics and mostly provide services to foreign countries or organizations and to people who would be interested in it. In this market, as the demand is not automatic, the sophistication of these solutions is relatively small compared to what is happening. Let us say, for example, in district heating, somewhere in, in Denmark, in the Nordic countries, in the Netherlands, in France, and so on, it is somewhere else than here, and it is not just a question of finances. Of course, it is also a financial issue, but it is a question of to what degree we know how to pair those technologies. There is not completely know-how here in Slovakia to tell us how to do those things. For example, even the know-how how to support municipalities.

Frankly, we had already x opportunities to build up professional capacities on various topics from the Eurofunds. The city climate team is also funded from various European projects, which

means that tools are there. It is the conditions for drawing the Eurofunds. What would make it better is state administration with which we are able to discuss these topics in the long term at both the political and professional levels, and at the same time it is also about listening to such specific problems that cities have. For example, from allocations for sustainable urban development are allocated some money, also in the budget of Bratislava, for the installation of renewable energy sources. However, the conditions are set at the national Slovak level in such a way that we are unable to realize it because there is simply a requirement of at least, I think, 80% of energy. But basically, that energy cannot be used for any economic competition or for units that are for competition. That means if you have a public building, let us say one ATM owned by a bank, then you cannot, under those conditions, put renewable sources on that building. The only possibility is that the ATM will have a separate outlet and a separate cable from the entire building, which I have not seen anywhere yet.

This means that there are things that have happened somewhere during the process. Even if we say that this is a problem, changing anything in public administration is a huge problem. However, our colleagues from the Union of Slovak Cities know very well about such things. It is like trying to make things happen so that we do not create even bigger barriers than those that are already there.

In your opinion, are there any international mechanisms or mechanisms at the EU level that Slovakia underutilizes? We are still talking about green policies there, especially in the housing and mobility sector.

The modernization fund is largely used for what could be seen as transitional solutions within heating, meaning that we are not really addressing use of residual heat, fully decarbonized heat, we use it only for gas infrastructure renewal or biomass boiler installation, which are transitional solutions, not long-term. In my opinion, we use that funding, but we use it in the wrong way. That is one thing.

Secondly, mechanisms at the EU level, the Social-Climate Fund is a topic that you probably also know about, and how it is being created. We would be pleased if they could finance something from that place with common sense. That is how I would diplomatically conclude it.

Alright. And what importance do you think education, spreading of information, and raising awareness in society have in supporting the acceptance of relevant policies? Do you think it is sufficient in Slovakia now?

Yes, like what the non-profit sector, especially in education, is doing, is huge. The goal is to make people want to go to schools and learn something meaningful there. For example, organizations have a program called Green School, where they try to raise awareness about green policies from a young age, but it is not about green policies, but about protecting nature, how we can operate more sustainably, so that the generations after us still have a place to live and what air to breathe and what water to drink. So, I think they are doing a tremendous job there and it is important in two contexts.

One is that the younger generation, people in compulsory education up to their 30s, see that this is a huge issue – the way we function as a society and that it is not entirely necessary to completely persuade them. There is a great understanding about what is happening today, or there is a great space for education from these people towards the elderly. It is also important to think about how to explain it to people who are currently in decision-making positions, in positions that seem to influence those final decisions, whether it is in the public sector or in the private sector, because it is not just about whether the city will build windmills or something similar, but that decisions influence everything. In my opinion, it is precisely this connection, there is a great opportunity for connection between the young and the elderly and the nonprofit sector and education can play a big role there. But I think that sector is working more than any other sector if we look on the financial resources it has today.

Good, so this will be my last question. What different approaches would you recommend for the housing sector compared to the mobility sector? Considering that you may not be entirely focused on mobility. But perhaps some different strategies?

Honestly, I do not know if I can come up with something, I really do not know.

So, it can only be for this sector of housing, what would you recommend? How to improve it?

The two key things from the perspective of decarbonization and the environment and better air quality are producing your own electricity and having heat that is not dependent on import from other countries but so that I can make it at my place. That is, in my opinion, the basic principle. More renewable sources and heat and cold that I can basically produce at home. That, in my opinion, is some basic approach.

Well, thank you very much for everything.

Appendix 5: Interview – Dušana Dokupilová

The first round of questions focuses on the main obstacles to implementing EU policies in decarbonization. In your opinion, what are the main obstacles when it comes to the housing and mobility sectors in Slovakia? And additionally, do you perceive any different obstacles between the housing and mobility sectors?

I think that the most important obstacle we have in Slovakia is that people do not realize the importance of decarbonization. They do not perceive decarbonization as a problem. What is the importance of decarbonization can be perceived in various areas, for example, independence from Russian gas, or we want to mitigate climate change. But people in Slovakia do not perceive climate change at all.

Secondly, independence from Russian gas, as some really do believe that it does not bother them, that we are dependent on importing fossil fuels from Russia and thus actually supporting the

aggressor, they do not mind. People do not understand why we should decarbonize. So, this is the kind of view I see from the perspective of people, why they are not pushing themselves to decarbonize, but also on politicians, to lead the decarbonization. On the other hand, from the government's side, there is an absolute lack of interest. They just tick off their checkboxes where they are pushed by the European Commission, they will do it, but they are not proactive.

You asked if there are differences in obstacles between the housing sector and mobility. I believe there is a big one. The housing sector is something that people seem to perceive completely differently from mobility. In mobility, it is about transitioning to electric vehicles or transitioning to something much better, which is either public transport or active transport. There are these two. There are two levels to consider.

People perceive the housing sector as more intense and are willing to decarbonize because when regarding their housing, they are focused on decarbonizing, so it should mostly be associated with them primarily insulating their household. This means increasing energy efficiency and subsequently taking further decarbonization steps, such as transitioning from solid fuels to, for example, heat pumps. They perceive this as more essential. In that it touches their everyday life and everyday comfort.

But in that mobility, it is irrelevant to them what car they are sitting in. Whether they are sitting in an electric car or sitting in a car powered by fossil fuels. And another major obstacle is that they do not see the effect there. The effect in living is seen in the fact that their quality of living increases, or overall life, when switching to an electric car – what is the effect? At the beginning, they must put a large sum of money, but they are transported in the same way. They do not perceive that emissions are increasing. Expenses may be lower, but already someone who has in an electric car, is someone who can afford an electric car and no longer perceives the lower fuel expenses.

There is a very significant difference in the approach to decarbonizing transport and decarbonizing housing. Decarbonizing transport, when we want to move towards electromobility,

is more difficult than decarbonizing housing. Moving people away from fossil fuels and transit to decarbonization in the form of a shift to mass transportation or active transportation, there is a big emphasis on the comfort of people and the fact that people are lazy to move and need very strong incentives to change their behavior. The pressure must come from a completely different side, it cannot be financial, but it must be in people realizing the importance of that decarbonization and then they are more capable of making such significant shifts, towards changing behavior.

Alright, and in your opinion, how do social or cultural realities in Slovakia influence the acceptance of these green policies?

No, the problem is that we have a very poor social background. Like, the social background in Slovakia is much worse than in those Western countries. And people mainly focus on how to transport themselves and how to heat their homes. That means they heat with anything. They do not think about it, that yes, this should be something reasonable, we should try to decarbonize, people do not think about this at all. And that social feeling, or that social situation is very important, and it throws us back. We are not moving forward towards decarbonization, but we are only staying on the on fulfilling the basic needs of people. That means heating, transportation. As for cultural realities, I cannot say. I have never studied how cultural realities influence the acceptance of green policies.

Do you see any differences between urban and rural populations in their willingness to accept these green policies? And if yes, would you be able to explain what these differences are?

The big difference between urban and rural residents is that they have different incomes and different expenses, because rural residents have lower incomes and at the same time people in rural areas also have higher expenses on traveling, as well as on securing heating in their households. They have houses, they are not in apartment buildings that is the main difference, and heating costs per square meter are much higher than in apartment buildings.

Suburban population also has higher transportation expenses because they must commute, simply that distance that they must travel to the workplace is much bigger than in the city. In the city, it is possible to use public transportation, which is much cheaper than individual transportation. And in Slovakia, there is a significant lack of transportation. This means that people cannot use public transportation from those rural areas to the nearest city. This also causes the differences between the urban and rural areas which are big.

To what extent do you think economic constraints play a role? You have already touched on it to a large extent, such as the price affordability of green housing or electric cars, or perhaps we can still discuss the deficiencies in infrastructure.

Infrastructure like in the form of charging stations, my guess, but I do not have it confirmed by any research yet, is that charging stations are not important. People who people can buy that electric car, then the charger is already the smallest problem for them. Because there are already some charging points, they can then secure it at home. Those people who secure an electric car are ultimately mentally capable of securing a charger as well. So, this is what I mean, for example, that it is not a problem at all. The much deeper issue lies in the unequal access to public transport infrastructure, which significantly impacts people's lives. Those without reliable transport options can fall into transport poverty, which often leads to income poverty – and once that cycle begins, it becomes increasingly difficult to break

Could you evaluate the administrative and institutional capacities in implementing green policies at the local level in Slovakia? And do you think they are sufficient?

No, they are not enough but they have already started trying. For example, with the Reconstruct Your House initiative, some administrative capacities were created there to support it, but they are not sufficient in Slovakia. I focus mainly on energy and transportation poverty, and I am talking mainly about these people, that these people who are in energy and transportation poverty, they really need a lot of help to even think about those green policies. Many of these people

are poor also because they have lower education and that means it is harder for them to understand what some green policies or some changes will bring them. When they understand it, then they are willing to do something about it. So, we must work on them to come and change their behavior or insulate the household because you will have benefits from it, and we need that administration which will help them understand this.

I did some research on top of that, in essence these capacities are weak even for people who are not poor, because we still have many people in Slovakia who do not understand and not only in Slovakia, but worldwide, the technicalities in the background to go through some transformation, to start taking actions that lead to increasing energy efficiency or changing the fuel mix or anything like that. So yes, administrative assistance and institutional support are needed and certainly need to be increased. And mainly at the local level. We need those people to function at the level of municipalities and almost knock on doors, or to know those residents. What I mean is to have some help at the level of a district town, and claim that it covers the entire district, does not work. This person either must function in a way to commute to those towns and villages regularly, or it does not make sense.

We can move to the second round of questions. What role do you think trust of the public, populism, and politics in general play when it comes to implementing green policies in Slovakia, and how do they influence their success or failure?

I believe that everything, including whether we will have successful green policies, is influenced by the people. But I do not want to say that education depends on whether these people have a university degree or high school diploma, but on how they use their common sense. And that common sense is often influenced or drowned out by all sorts of things. You have labeled this as populism in politics, where people in politics spread incorrect information and people also pick up incorrect information from politicians who spread nonsense and hate which undermines, for example, green policies. So, it is, in my opinion, very important, and by the fact that in Slovakia,

but also within Europe, politicians are already crossing the limits of decency, public trust is declining, no matter what. Many Slovak politicians are stepping on the EU and many green policies are coming from the EU. Therefore, those green policies become unpopular. Although those people often do not even understand what green policies are, they automatically say, no, I do not want it, because it comes from the EU.

This leads us to the sub-question, how do you perceive the public, or how do those people perceive the decarbonization policies of the EU? So, I would add, the next question – to what extent do you think the media influence the support for these policies by the public?

Well, in my opinion, the media can also significantly influence these policies, but on the other hand, in my opinion. Some media must fight against disinformation that is spreading. It is as if they are fighting on a different front, not fighting on the front of green policies, but for example human rights, minority rights, or all sorts of other things, but I feel like those green policies are kind of neglected. We have some media, like Euractiv, that also mentions green policies, but that is one of the few. And I think that people in Slovakia really have very little information. They need that information, they need to know why green policies are good and important, because they are important for them also from the financial side, which people basically only listen to. So, something like environmental – most people do not really care when they hear this word. But those green policies can also lead to savings and thus greater comfort or higher living standards for them. And people do not have information about this, and that information could also come from the media, but it does not come. Or it does not come in sufficient quantity.

And why do you think it does not come? Why is that?

Because I feel that the media simply do not focus on it. They do not focus on the issues of green politics. I am a person who reads some daily newspapers. And there they discuss completely different things, like occasionally there appears an article about green policies. And those media, in my opinion, lack people for it, like they do not have editors who would write about it properly, who

would understand it. However, they are trying to address what they prioritize more. And they do not give greater priority to green policies. Although I think that it really, as I have said before, could be good for those people. It would help them. It would be good for all people because transitioning to green policies would reduce emissions, reduce air pollution in our country, where we have a big problem in Slovakia. So, the comfort of all populations would be improved. But those journalists probably do not realize that. I try to communicate with them about it, that they could talk about it, but nothing. I do not know why.

And have you noticed any populist rhetoric, I will return to that populism, which has influenced either negatively or positively the implementation of green policy in the housing or mobility sector?

I thought about that, it seems that there were such. I do not dwell on the negative too much, anything that is bad, I tend to forget pretty quickly, but I have a feeling that at Repower EU, they really messed up, I mean on the whole Fit for 55, what a nonsense it is, what negative economic impacts it will have on Slovakia, and then I feel like we stopped thinking about it as something that will move us forward because a few unreasonable people said information that was unsupported, untrue, and everyone then started to believe it. So, it was such negative populism. But I follow Slovak politics only on the fringes because there is a lot, there are false information being spoken there. And it seems to me that one cannot really follow it so much anymore. We need to focus more on what is important for Slovakia, and not only on what is said in Slovakia.

And so, do you think that some groups of the population, for example rural communities, as we have already discussed a little bit, or marginalized communities, or then people working in industry and so on, more skeptical towards climate policies than others? And in case, which group do you think is the most skeptical and how to change their perception?

I think that there is no such division at that level as you say, for example that rural communities are more skeptical or marginalized communities. There is rather a different division at a completely different level, that those who believe in hoaxes and those who have the common sense. I have walked a lot in the field, I meet with Roma people, I walk in rural areas. And there are a lot of very reasonable people there. And I think that division is very similar to urban areas. So, I cannot say that apart from that division, those who believe in hoaxes are more skeptical than those who do not, there exists another one.

We can probably move to the last round of questions. We have already discussed many obstacles that affect the implementation of EU policies in the field of decarbonization in the housing and mobility sectors in Slovakia. So now I would perhaps move on to how these obstacles can be overcome, what strategies and steps would you recommend?

Personally, I think that in Slovakia, without the help of NGOs, we would not have moved forward at all. Really, what still works here is many non-governmental organizations, but those play a completely key role, because they also inform, they meet with people, directly address problems, and I consider it to be very good that civil society also non-governmental organizations do this. What the state and all that state administration do not do, they have taken on.

I would also ask about those municipalities. How can we better support municipalities in the implementation of decarbonization policies in Slovakia?

They would need people to help them also promote decarbonization, but then also administer various schemes that we announce for decarbonization, because they do not have the capacity for it at all. Towns and villages should receive additional people who will both spread information, truthful information, reliable information, and at the same time help people in implementing various decarbonization strategies or measures.

Do you think there are any international mechanisms, or rather mechanisms at the level of the EU that Slovakia underutilizes when it comes to discussing green policies, particularly in sustainable mobility?

I do not know. I truly pondered for a moment, and I cannot tell you. I do not know what international mechanisms exist that Slovaks do not utilize, but it is terrible that we do not use the Eurofunds. We cannot use them, so really what other mechanism could we use, when what is truly offered to us and is simple, we cannot utilize.

What significance do you think education and thus the dissemination of information, increasing awareness, have in supporting the acceptance of green policies, and maybe how do you perceive it, in what condition is it currently in Slovakia?

In my opinion, we have organizations that spread some information, mostly NGOs, but now even the Slovak Environmental Agency is trying. Slovakia has problems, for example, with air pollution, they have their air quality managers who travel throughout Slovakia, hold discussions, and they complain that people are not very interested in it. It is very important for them to have a very close relationship with the mayor of the municipality, to cooperate and give lectures, inform, etc. But when this is missing, when the mayors are not interested in this topic that it, they cannot do anything. Those managers of air quality are funded from the LIFE project. So, it is also European project. Education and spreading information are crucial. We must start from this otherwise we have no chance to change people's behavior and make them to be interested in those policies. So that is the first step, we must first do this and then we can start implementing some policies.

One more concluding question, what different approaches would you recommend, if at all different, for the housing sector compared to the mobility sector?

For the mobility sector would be needed a completely different approach, because there is needed mainly a change in behavior. I still think that decarbonization in transport is not about switching to an electric car but changing our approach and using public transport. And to start using

public transport, those people must gain awareness of why it is important to rather use public transportation and they must also experience the fact that they can utilize public transportation because they can reach the stop. This means that a much deeper analysis must be done to create conditions for those people to be able to use such decarbonization measures. That means, for example, the mass transportation. We must establish a network for public transportation or a network to facilitate active transportation. This means encouraging people to start cycling. Therefore, this is something where the state must conduct a thorough analysis and invest a considerable amount of money into the infrastructure. But at the end, it will be very useful because we will not have a lot of cars, we will also have healthier people, because they will have to walk a little for public transport. They will not be able to just sit in the car and take 100 steps all day. So, this is an approach that must come mainly from the state to ensure it at all – to provide the basis for people to start.

And decarbonization or some green approach in the housing sector is completely at the individual level. It is much easier because as I mentioned at the beginning, people want to live more comfortably, they want to be warmer, to have a nicer home. So, there is also a much simpler motivation to make living more pleasant, to decarbonize the housing sector. Because it is explicitly stated that it can be done at an individual level. Every household, if it has enough financial resources for repairs which is most households, can start decarbonizing, or if a household does not have enough financial means, it could possibly get a loan. For those who are poor, on the other hand, we must provide partial subsidies or partial loans. And they are also very happy to agree to this because, as I said, everyone wants to live in a nicer place. They do not want to live with mold and cold.

Good, that is basically all from my side, unless you have anything else you might want to add on this topic.

Probably not.

In that case, thank you and have a nice day.

Appendix 6: Interview – Tomáš Nemec

Alright, so the first question is, what do you think are the main obstacles to implementing EU policies on decarbonization in the housing and mobility sectors in Slovakia?

At this moment, I will rather take the position of a skeptic from the village. Currently, I work in an environment where I have about 90% of clients, mayors, and local citizens who are currently reacting very critically to these decarbonization efforts. So, the biggest obstacle that I perceive from citizens and these mayors is availability and administrative complexity of subsidies, assuming subsidies as part of that decarbonization policy. And then as a problem I perceive intervention in property rights, because to some extent the financing and sustainability of those measures in households and monitoring are something we are not used to today in Slovakia. Someone gives you €70,000 and then monitors it with the risk of some kind of retaliation or other possible sanctions, which are either written directly or spread in some intermediate space among those citizens.

Also, what I perceive as a problem is then the pricing, not the affordability, but rather the extravagant prices of suppliers when they know they are implementing a subsidy. It is more expensive than standard. I had such an experience where actually two family members assembled pellet burner through a subsidy. And in fact, it turned out four times more expensive, the whole investment along with the renovation cost him four times more with the subsidy than his neighbor, who bought it with his own money. And it was even more amusing that in fact, the first neighbor dismantled the old stove, sold it to the second neighbor, and the second neighbor installed his old stove and mounted the pellet burner into it. So, he essentially did it at a much lower cost because it did not require such huge additional accompanying investments, which, however, were not justified expenses. We have a lot of preparatory documentation, a lot of accompanying costs that are not justified, so basically those people do not want to go into it. Whether it is photovoltaics, heat pumps, or we had subsidies for small wind turbines, where the subsidies were up to 45%.

When that person in the village calculated it, he did not want to get involved. And when we are in cities, where most cities have residential housing or apartment buildings, cooperative ownership is common there. We were also preparing a project for an apartment building. And in the end, basically thanks to connecting to the central heating demand, we were not able to justify the renewable source on the roof of that property, but at the same time, we also failed to push the heating distributor and producer to optimize their source and distribution. It means that we did not receive the renewable energy sources, but at the same time we were not able to build them, because those citizens could not create sufficient pressure for their connection, to carry out any regulation, insulation, which would reduce costs.

So, I think these are the practical experiences of people who may also want to get involved. They are negative and then those negatives spread faster than the positives. Negative advertising spreads faster, and it is harder to overcome positive advertising.

That is always the case. Do you perceive any different obstacles between the housing and mobility sectors?

Basically, I do not perceive the difference, because both have a common point and that is a wallet/ finances. This means that first, we look at whether we have money for it and the next steps depend on that. In terms of housing, these are long-term investments, maybe some lasting 18 to 25 years, without subsidies. With a subsidy, it may be up to 15. And we are not accustomed, in Slovakia, to invest long-term. Whereas with that mobility, it could be said that it is shorter than in the case of those properties, but again it is about either those who know how to count it will count and go for it, and those who either cannot get involved in it or cannot figure it out, they will not get into it.

However, I also met with a paradox where the same person who did not go for the refurbishment of their family house due to some risk in recalculating, went for a new car, I think it was a plug-in hybrid. And there, essentially, he went, I should say, emotionally dynamically,

because he had money in hand. Someone advised him that it would be good to make such an investment, and he did it without considering what value the investment would have over time. In four to five years, cars are depreciated, or over some other period of the projected lifetime of that electric motor. So, I do not see the differences, because everything starts, from my point of view, in the mentality of those recipients or users.

You have already touched upon it but how do you think any social or cultural realities in Slovakia influence the acceptance of those green policies?

Cultural realities for me relate to ownership. Ownership of property, ownership of a car. I must have property; I must have a car. It is some form of independence. It represents some form of independence. Whether that independence is genuine in mortgages and in leasing electric vehicles, I do not know if people can consider. But this mentality, this culture is very present here in Slovakia or Czechoslovakia. The question is, how they perceive it... I think that those who can understand that the subsidy does not have a fundamental impact on their ownership rights or can secure it, will go for it. However, if that person cannot imagine it or if nobody can explain it to them sufficiently clearly, the person is concerned if the grant or the lease affects their ownership rights. In this case, they will simply not go for it. So, there is this basic fear that the person will lose their ownership rights in this lease, or their house will go into execution.

And do you see the differences in willingness to accept these green policies between urban and rural residents? And if yes, could you explain what differences are being referred to?

You know, I will admit honestly that I do not think there is a fundamental difference in thinking between urban and rural residents, so I want to strongly differentiate myself from such differences. I rather believe that these differences arise from the availability of information that is the first thing. This means that the question is whether the information will be conveyed through the internet, social networks, or municipal newspapers, or friends in the pub, and so on. So, the

difference between the city and the countryside lies in the availability of relevant information. I deliberately did not say the word true, because even that can be debated, what is true in those matters, but I think the relevant information for his specific decision will be found rather by the city resident.

Also, the availability of those experts, maybe even the city's decarbonization policy is or could be better, but at the same time, I also dealt with the fact that let us say, low-carbon strategies were more prevalent in some small villages rather than in some towns or regional cities. The extent to which they were then able to implement and execute them is another matter. It is then up to the mayor, the local leader whether only that general representative or also the assembly is active, or if there are also some civil associations, non-profits, that can act differently in that main political arena or in that mainstream. But we are probably revolving around the availability of relevant information for the person's decision. But I do not think that there is a fundamental difference in mentality, because both in the countryside and in the city, they still use the same Facebook, the same Google, the same social networks, and that information and misinformation spread there in my opinion equally.

Good, to what extent do you think economic constraints play a role? We have already touched on this, but maybe some examples. So, we have the affordability of housing, or electric cars, or then some deficiencies in infrastructure when we talk about electric vehicles.

You know, I cannot answer that exactly, what economic constraints there are besides subsidies. If we were to focus solely on job availability, then that person in the city probably has a greater chance of finding employment more quickly, has more available work, and consequently, lower commuting costs. As a result, they have more to put into savings and then perhaps invest that money in real estate.

On the other hand, if I have 80% of people in residential buildings, so the cost per resident or per family in the city is lower, because if, let us say, I live in a 48-apartment panel building, 48

households can more easily pool resources to renovate the residential building than individual. On the contrary, that one property owner will make that decision faster than 38 co-owners on that day. I admit completely that this is a bit beyond me. In any case, you need to build charging infrastructure in cities with the city's permission or involvement, whereas in households, you can run a cable to the garage and have an electric charger there. Since we have 48 cars here and cannot currently pull that charger through municipal land to the parking lot.

Could you further assess the administrative and institutional capacities in implementing green policies at the local level? Do you think they are sufficient?

You know what, I do not want to completely comment on this, and instead I will direct you to look up on the internet the concept of regional sustainable energy centers. This is supposed to be a government project to build currently insufficient institutional and administrative capacities. It was established by the Slovak Innovation and Energy Agency, I think Mr. Zamkovský oversaw that, but I collaborated on the concept with Mr. Zamkovský, so it adequately reflects the situation in Slovakia, and I do not think it needs further attention, so let us move on.

Good, so can we move on to the second round of questions? In your opinion, what role does public trust, and possibly populism and politics in general, play when discussing the implementation of green policies in Slovakia, and how does it influence the success or failure of this implementation?

I already partially addressed that in the first question, that bad publicity spreads faster than good and you need a lot of good publicity to outweigh one bad one. That is one thing. Populism and public trust... generally, we have an issue with public trust in institutions in Slovakia. We have a predisposition for it to go slower over there. At the same time, when you meet with mayors and hear about how another mayor received funding faster from a different source than my mayor, who is my client, sorry, it is hard to listen to that. And at the same time, this information spreads further in those communities, whether they are urban or rural.

So yes, there is populism, but not just as if someone is shouting at the press that this is happening, this is bad, this is good, or greenwashing, or the EU's green dictate and so on. In cities, there are problems related to accessing EU funds, which are appropriately linked to the complexity and size of those projects.

Alright. We have already touched upon it, but maybe you want to add something else. How do you perceive the current perception of society or the public regarding the decarbonization policies of the EU? Alternatively, I may add another question, as we have already more or less discussed this. To what extent do the media or political narratives influence public support for these policies?

This influences it significantly because the media reproduce and convey what politicians say, and they present it in a way that generates interest, simply creating a public opinion or certainly shaping the public opinion. So, it can be said that the influence is extreme and mainly extremely negative in Slovakia. I have some projects in the Czech Republic and there the mentality is similar, I am not saying the same, but similar, but precisely the positive campaign about available subsidies essentially improves perception of those decarbonization policies of the EU.

It is a bit excessive to say that it is the EU's decarbonization policy, as it is like someone giving us something from above, but what I want to get at is that if we ourselves could come up with something at a national level, that is from our own pen, it would be perceived better in society. Slovaks did it, they did it for Slovaks, they were inspired by some things from the EU, okay, but it is not just a cascading collapse or waterfall effect from the EU into national legislation, etc. If this could be captured and slightly guided. I think that even a Slovak native would accept it much better, because it would be something ours and something for us. Inspired by, but ours, but for us. I think this would be positive.

Have you noticed any populist rhetoric that has affected either negatively or positively the implementation of green policies in the housing or mobility sector in Slovakia?

No, I admit. I am not saying that it is not, just that I did not notice it myself, except for those two that I used, greenwashing and that green dictate from the EU. Those are kind of like two things that I picked up on. But by looking at that energy and energy policy from the other side, I do not pay attention to these narratives and therefore I do not know either objectively or directly assess that impact. I just know there is populism.

Do you think some population groups, whether rural communities, marginalized communities, or people working in industry and so on, are more skeptical towards climate policies than others? Do you perceive it that way? Which group do you think is the most skeptical? And how to change their perception?

There were probably about two questions, so I consider those more skeptical or less accommodating who are directly affected by those decarbonization policies in terms of meeting mandatory targets. So, if someone works in steelworks or in the chemical industry, where I deal with green, blue, gray hydrogen, the impact on those people is because it is immediate and direct. When we compare it that consequence of decarbonization policy on my household, which I evaluated, renewed with a subsidy, I have at least 15 years to catch up. So, we went all the way down to a minimum. And maybe in some heat pumps let us say four to five years, but with large, large impacts, there immediately quotas or impacts on the energy balance or energy costs are reflected in the salaries of those the citizens, the employees. And then for that insufficient communication, there is a direct negative impact on that opinion.

These are also the people who are supposed to renovate their homes with those subsidies. These are the ones who are supposed to spread that good representation. When you give him a subsidy, you also take his salary, because some trouble has befallen his business – some sanctions or some carbon quotas or emission quotas – it is then difficult for those people. And it is logical that they do not know or do not want to react positively when they already have one negative direct experience.

And the second thing, I cannot judge whether it is only rural or marginalized community. I see it more like, how the change or concentration of that stream of thought is according to the employer. For example, here people from Žilina, Martin, Kysuce, whether they are in the city or in the countryside, come to me. It means that it would not be completely accurate to say that it would be just a city or just a village.

So how to change the perception of such population groups? Do you have any ideas, suggestions?

I must admit honestly that I started by being more of a skeptic. Besides a good information campaign, I cannot imagine how they would do it, because I see the difference in information in the Czech Republic and Slovakia. So there, the level of information is much, much better. When I gave a lady some flyers about new green savings, at the beginning she only had a photovoltaic heater and after three weeks she came to the office to see my colleague, saying she wanted to completely renovate the property. And this was because I had to oversee the implementation, like the construction of that solar water heating system, and at the same time, I also gave her the flyer with the options.

On the other hand, if the state did not invest in that information campaign and did not create those leaflets for me, then I have no leaflets to provide, and that person has no way to study it. In an understandable simple form and with various examples, where the person can succeed. What I will gain is important, what I will gain for myself, being in the logic that every communication campaign must focus on what I will gain, because that is the first emotion that the communication campaign conveys, what I will gain and what I will lose – we try to avoid that, but at the moment with others, we only have that we are losing. We feel that we are losing sovereignty because it is from above, it is not our own. We lose money because I must put in a lot of my own money for unauthorized expenses, as the subsidy may not be set correctly, or my expenses are being cut, etc.

So, the communication and process setting for those grant mechanisms has been completely would be great.

At the same time, the question is whether something could be done also against banks, because in the Czech Republic we have some grant titles that are banks' intermediaries. This means that based on the call for a subsidy, the bank writes a project, and then it can further lend that money through subsidized green loans if it is successful with it. Here is the thing, which is again a question whether it would be suitable for us in Slovakia considering the level of Slovak debt. Process setting, communication strategy, and as I said in that second part, those regional sustainable energy centers have the ambition to continuously support precisely the direct practical feasibility or implementation of those measures in those regions, directly in those villages and directly in those cities, because it is not just for citizens.

Well, we can now move on to the third round. So, we have already discussed many obstacles that affect the implementation of decarbonization policies in the housing and mobility sector in Slovakia, but how can these obstacles be overcome? What strategies and steps would you recommend? And maybe I will add here, so then, the question, what role can civil society and non-governmental organizations play in improving the implementation of green policies?

I answered that third point, which is communication strategy and process setting. The question is what a civil society can do. The civil society will either believe that what it is doing and does not yet have is good because it will bring us something. It will bring us more water, fewer costs, a healthier world, I do not know, whatever. But it must be believable. Those groups that provide this education must be believable, and there are quite a few of them. Or at least how I perceive it, they must be credible that if it is something we only talk about but cannot practically substantiate, then we will probably be hardly credible, or that group, civic associations, or initiatives will be hardly credible. So, they must be believable. What to do to make it credible, I do not know.

Keeping track of funding sources, for example. So, it is not just about having money from European sources and therefore defending European decarbonization policy. It might not be like that.

But in terms of Slovak skepticism and also now in the last six months, with what actually flooded with non-governmental organizations in Slovakia, this question is very interesting, I was thinking about how to respond to the question, because even good organizations that have money from EU grants, or Norwegian funds, or from abroad, basically from anywhere outside of the borders of Slovakia, are perceived as untrustworthy. Even if they are doing a good job, doing it in Slovakia for Slovaks, they are perceived as untrustworthy, or directly labeled as untrustworthy. So, it is possible to look for funding or to be sufficiently transparent in how to utilize those resources. And perhaps defend the policy of why a foreign donor gives money to a Slovak non-governmental organization to act for the benefit of Slovakia. What is that foreign donor aiming for? I got an idea, it is enough for me to introduce myself, to defend myself.

At the same time, we as Slovaks should be able to ask about it. Where do you get the money from? What is your donor aiming for with this? And so on. Why is it good for us? And why is it good for that donor? So, be transparent and be able to defend it. Despite the campaigns that are being organized, the civil society should be more involved. It needs to go out more. We have dealt with this several times in Žilina, when we planned projects for a certain community, support from the community representatives was essential. So, I have some experience with that. Those people must go out. As soon as you get that person out and turn off the TV, then they start thinking completely differently.

Well, and how can we better support municipalities in implementing decarbonization policies in Slovakia?

Motivate them to make joint investments. I support centralizing certain services – not to take competencies away from municipalities, but to achieve better results through cooperation. If three to four municipalities join forces on joint projects, procurement, and implementation, they can

secure better prices and conditions. It does not mean losing control – it means gaining better negotiating power and aligning procurement with the municipal budgets. However, grant schemes would also need to allow group applications, not just individual ones. You cannot do that now, because the applicant is always an individual. That person. No more people.

Are there any international mechanisms at the level of the EU that you believe Slovakia underutilizes? When we talk about those green policies, particularly in the areas of mobility and housing?

Personally, I think that both the Slovakia program and the Recovery Plan are international mechanisms. These are financial mechanisms and we in Slovakia have a problem with sufficient exhaustion. That means that if someone gives you 800 million to exhaust in four years and you have a problem exhausting 400 in those four years, then it is not a problem. It may be a few months ago, or last year, when evaluations of ministries were being carried out about how much of the mandatory recovery plan has already been used up. Look at the assessment of the Ministry of the Environment, I do not know if they have even reached 15% at all. The Recovery Plan ends next year. It is physically impossible to fully utilize it. Then the money will either be returned, or we will not be able to use it. So, we need to look at this, how realistically we can use them at those upper institutions.

And then those international mechanisms at the EU level, so those are then those state grants that finance various measures, but they are not directly EU mechanisms. Those are the Norwegian funds, Liechtenstein funds, and some other funds. We use them when we have full access to them. Then we still have access as Slovaks to grants or mechanisms of the European Investment Bank. This is the so-called Elena Fund, which is for preparing energy efficiency projects funded by the European Investment Bank. That is also something which we are not using it enough.

Today, I do not know, maybe it somehow deceived us, mistrust grew, or there was a shortage of experts, but we do not use these mechanisms enough. And then Engineering,

Procurement, and Construction projects that are also a good tool for implementing decarbonization policies, especially in the housing sector, residential sector, and buildings in general. There is still enormous potential there in implementation, utilization, but we also do not know precisely because of that failure to utilize these mechanisms.

And what significance do you believe education, information dissemination, and awareness-raising have in supporting the acceptance of green policies in Slovakia? And perhaps another question, in what state do you think it currently is in our country?

Education is inadequate and at the same time inconsistent. I must admit that I perceive this only from the perspective of the activities of some non-profit organizations and the environmental education of my children, wondering how it is probably done in their school. When my daughter comes home and says, you know what, dad, we cannot go to grandma by car because it steams, so I told her, you know what, stay home. It is not a problem of that child, I do not know if it is a problem of that teacher or the curriculum, but if the child does not know the broader context, that it affects me in this way. And she somehow restricts herself to visit her grandmother, because she will not go by car, only by train, where halfway through the route we do not have electrification, so we will go on a diesel locomotive, which has probably higher emissions than my car. So, it is kind of strange.

It would be great if the education was consistent, coherent, where really those children and those people, those recipients, could understand it. Whether they perceive it in the context of their own lives or in the broader meanings. Because to me it does not make currently any sense. I will give an example; we were renovating an apartment building. We talked about it, there will be new footrests, new pipelines, everything is going rust-proof and so on. Let us also give back the reuse of rainwater for washing. No. It is strange to me that on one hand we are educating children who will come and say that I cannot go to grandma in a combustion car. On the other hand, a group of parents, they will not approve the use of rainwater. I think it is important to consistently educate

teachers on how to educate children. And then educate households or citizens, according to their age and social status. When it happens to the green skeptic, it will fall exactly into that box – look, greenwashing is here, it is already at school. And look at how it affects our children.

We flush toilets with drinking water, when you go abroad, they will look at you if you are serious. It is something unrealistic that we can flush toilets with drinking water in Slovakia, in the Czech Republic. And if you want to solve it, if you want to remove it, you struggle with the city, with the streets and subsidies and everything. You may have a good idea, you may have support perhaps in the Slovak legislation, and Slovak norms, but the enforceability is minimal.

So, education at all age levels, tailored to age and social status is a key. We need to educate not just children, but the owners of homes, as well as citizens, and retirees, adjusting to their age, adjusting to their understanding, adjusting to their life circumstances, because even that lady in the Czech Republic also has her own life circumstances that led her to get the solar heating first and then came up with the idea that, oh well, she would also like the other measures, but she needed to hear it appropriately to her age and life circumstances and her understanding of the world.

Well, and then one final question to conclude. What different approaches would you recommend for the housing sector compared to the mobility sector?

Well, I must admit honestly, I have been thinking about this question, I cannot answer it directly because the mobility sector is quite interconnected with the housing sector in so-called 15-minute cities. Whether, or how exactly should that difference look like, I would rather say I do not know.

I thank you very much. It was definitely very helpful, and I will use this information. So, have a nice day. Goodbye.

Appendix 7: Interview – Marián Balko

The first question is, in your opinion, what are the main obstacles to implementing EU policies in the field of decarbonization and mobility sectors in Slovakia? I am writing my entire thesis on the topic of European decarbonization policies in the housing and mobility sectors in Slovakia. So, if we could somehow stick to it.

Sure. Those two areas are significantly interconnected from my point of view, of course, but the approach to those policies differs, which I do not consider to be the best solution. The area of housing, in my opinion, is better addressed within European policies because it focuses on support systems. This means that innovative solutions are supported more, rather than resorting to restrictive measures.

From the point of view of municipalities, the problem is introducing some restrictive measures, as people justify refusing to adhere to them. So, that is exactly the negative impact that I perceive particularly with electromobility. If we start modeling the system in a way that those who cannot afford newer vehicles because of financial reasons will suffer, then simply that population will not accept those measures, they will reject them. It will help exactly such haters of the whole issue. So, the opposite approach that has been chosen in the housing sector, where innovative solutions are supported and this cheapens technologies that are imported, is in my opinion a more correct way to promote it, rather than with some policies of restrictive measures. I would perceive this as the most fundamental differences.

And how do any social or cultural realities affect or overall, the situation in Slovakia and the acceptance of these green policies?

Education also has a significant impact because, of course, more educated people are more likely to accept new solutions, lean towards them, understand that it is some kind of progress and technological development. And again, those less educated of course are more susceptible to negative campaigns. They reject it, therefore there is not much interest in transitioning to such

innovative solutions. Culturally we have a problem with this, as our population is predominantly rural, while in the rest of Europe there are more urbanized inhabitants living in settlements and that is probably the most sensitive issue that the attitude there is completely different between the rural populations and urban, that is why choices need to be made very carefully.

Political communication needs to be very different and solutions as well with a focus on various support mechanisms to make the technology naturally acceptable as a new technology, as was the case, for example, with cars with a catalytic converter, nobody had issues with those restrictions, but simply switched to some technology and everyone gradually accepted it, and no one bashed it. That hate comes even more strongly when people feel some reciprocal action from the state, the European Commission.

And so, do you see the difference, you already hinted at it, between urban and rural populations in Slovakia and in their willingness to accept these green policies? And maybe if you could explain what differences there are, if so.

Certainly, the urban population is more sensitive and perceives better the implementation of those policies, so it is much easier to implement such changes there. Just by seeing which technologies they consider modern, they also accept them easier from the point of view of energy savings, unlike the rural population, which is predominantly less educated, as there is a noticeable flow of skillful labor force to more developed, stronger economic regions, at least to some district towns, so there is clearly a difference. Different approaches must be taken towards different people. The same system of politics cannot be applied to everyone.

To what extent do you think economic constraints play a role, such as the affordability of housing or the affordability of electric vehicles, or any deficiencies in infrastructure when it comes to electric vehicles?

As the average salary in Slovakia is one of the worst in the whole EU, which is not a secret – nothing that we would not know. It is simply relevant because these people need first and foremost

to finance their basic needs and again, such changes in the field of electromobility or changes in electromobility or housing may not be considered priorities a priori and secondly, they may not even have the means to finance them. Because the reality is that until recently, a car could be bought for €12,000 with a combustion engine. The average price of some electric vehicles is around €45,000, so we really need to consider implementing some form of, perhaps a successful scrappage scheme used in the past, or introduce some form of repugnant mechanisms for those production capacities if we want to actively deploy these electric vehicles so that technology will gradually become cheaper. Because the reality is that those electric cars will become cheaper as they are produced more, sold more, and the costs of research into some scientific aspects are covered.

Sales volumes need to be increased, so the money we have in savings needs to be invested in supportive measures and purchase incentives, so that people can afford it. Specifically, it was very appropriate in the housing sector. My house was repeatedly renovated, where subsidies were provided for improving the energy efficiency of buildings and into a photovoltaic panel. This certainly helped because people went for it, had it pre-financed, there was interest, some even understood it later that those who had it installed, that they have those benefits, it is all about financial savings in energy. Neighbors see it too, which is the best advertisement, and then of course they are also happy to join in when they see that it worked for someone, and it works. The best advertisement is success, so it would be good to draw inspiration also in electromobility, the same way as has been applied in the housing sector.

Based on any of your experiences, could you evaluate the administrative and institutional capacities in implementing green policies at a local level? And do you consider them sufficient?

I do not hide the fact that I am more of a supporter of territorial reform, so I am more of a fan of reductions in the capacities, so I may not be the most optimal sample, but in this case I even think that some form on the web, where a simple request can be submitted with attachments, as it

was, for example, with some opportunities that were announced in the area of housing, is sufficient. I believe that it is important to focus not so much on building a strong administration, but more on some repulsive programs, some funds that could contribute to it, to shed light on such activities and mainly to offer a good leader.

Also, I think that it is important to have a leader who can communicate topics and who is accepted in the community. He needs to act credibly because many people will adopt some ideas only if they believe in their leader and if they identify themselves with those topics. Not only in the political field, but generally it is important that those people have something to say in public life. So, this is a proven mechanism, and I would rather focus on this than on building some large structures, a terrible apparatus, because we excel in it and we can shock Europe by creating such administrative capacity that nobody can barely submit applications anymore, so this is not the path for me anymore.

Good, we can probably move to the second round of questions as well. So, what role do you think public trust, populism, and politics in general play in the implementation of green policies in Slovakia and how do they influence the success or failure?

We have recently become the most prominent hostage in this regard of some campaigns of various interest groups, political groups, and people from outside the EU. And they have focused very strongly on this area, which does not seem entirely rational, but maybe it is because it was such a mainstream European policy, so they are trying to sabotage it. It is completely irrational because if I want to talk about energy savings, which for example we as a city feel, that with those solutions we may have saved 20% on energy, which is not negligible at all, yet it is almost the same as Value Added Tax, as when we essentially bought energy without Value Added Tax, and we will go to even better numbers.

These arguments are meaningless, the worst is that politicians are credible for many people who act for them faithfully and when they spread such hate, it is very easily accepted. So, this is

what I would see as a very fundamental problem, that people who should perhaps lead in the right direction, do exactly the opposite. And I am deeply convinced that since they are largely educated people, they themselves cannot be convinced of what they are saying, that they claim the truth, because it is nonsense. As a technician, I look at it and watch those things, I simply cannot even internally agree with it because they are simply absurd from a technical point of view. So yes, it is influenced, it is politically influenced, and it is influenced by the external environment outside of the EU.

The second thing is, I say, the nature of the reactions should be appropriate, that means, let us not trap those people who are already under such pressure, maybe under some systematic payments, even from abroad – which I may also be convinced of. It does not help to promote a restrictive policy, which will be further enforced, because this is the worst. In fact, I will convince them that what they are being fed through those paid random advertisements on Facebook, is some kind of truth. Because they will experience it through various sanctions, such as tolls on highways in every annual vehicle technical inspection. This is not a good path, someone should finally realize that they are helping the opposing side, they are not helping us who want to promote the decarbonization, but it is the exact opposite.

What I am saying was effectively done was the policy of residential buildings, where the support was reasonably set up, technologies from third countries were accepted – that were imported and cheaper. It will open up the market, I am not for its closing, I am for no restrictions, for no additional duties, simply my inner conviction has always been set for the opening of the economic system, let the good survive and the bad have problems, it is just a classic life and it cannot be somehow distorted, so it should be part of this area as well.

And how do you perceive the current society or the perception of those ordinary people and the population... how do they perceive the decarbonization policies of the EU?

They do not even perceive it as decarbonization policy. I think we need to see and realistically, that what they see is that they saved money and into what their money went. Basically, all our buildings have reduced energy demand, that they are fully insulated and have replaced windows. So, we as a city, do not need to deal with it. We have photovoltaics. Now they see that we have established a connection, saved, undertaken some reconstructions for them, so they see a real benefit.

I look at it so foolishly technocratically, like technician, that simply a new solution has been applied, a modern solution, which is ecological, more economical, so I do not entirely rely on the ecological side of it, but maybe through the fact that it is a new solution, which is better, so it is better from a technical perspective as well, not just from an economic one. People see it, for example many households in our country have already installed solar panels, many photovoltaic systems, many companies, for example, also have larger photovoltaic systems than we do in the city. Although we belong to the leaders in this matter and we are already expanding such photovoltaics, but bigger in nature, of course some are small, and the point is that they are accepting it.

And to the issue of electric cars, we are trying and want to build our own charging infrastructure. State was not helping us. Rather here the support would be needed, not the opposite, that we are trying to be better, more accessible and build a wider charging network, and state is ruining our effort. Instead, interests' groups are now advancing in the market and setting prices, so Slovakia supported the opposite monopolistic position of some larger companies, so this is not correct.

To what extent do you think the media influence support of these green policies from the public? Do you perceive it in any way?

I think that they have not deeply familiarized themselves with this topic. Some yes, but they are rather those called print media, but most of them act maybe more on some web interface, and it is not now that quality print. But I rather perceive it as not focusing on more complex topics like

these. It is sad that then classic television broadcasting often leans towards populist themes, which are easy for society, easily perceptible, and it does not lead in a direction that it is also ridiculed, because now actually even the politics of the American administration, powerful man slams the table and says that we simply do not need to address some Green Deal, it is a nonsense. And now we will all pretend that someone finally said what everyone is thinking. And yet it is nonsense because we can all see that at least in our region, the impact of climate change is apparent, as we have not had winter for several years, unnecessarily having ice skates ready for winter that could be used on the pond, but it is simply not possible. I see that in summer, there is thirty forty-degree heat, which has never happened before. It just does not rain for two months. So, people really see that. Despite seeing it, they can react positively to such nonsense when someone influential says it, and that has a big impact.

Maybe the media could play a bigger role in communicating it in a friendly way, and we would believe in the media, especially those who are generally perceived, maybe not in political environments, because that is not entirely proven here. Sooner or later maybe also from the cultural spectrum, it may be presented through personal stories that feel close to them, that green policies function somehow, maybe what it brought to that person in life, maybe that he or she saved something, because our people like to hear advice, they like to hear that some money can be saved. So, I would rather turn it like this.

I do not think that the media work well at all, and mainly they should not polarize, because it is not good when they are set up in that way. Green policies should not be communicated in a way that I have just heard now... People who have old cars, as the European Commission prescribed, will drive every year to go to check their cars to car mechanics and I am sure they will get angry. I guarantee to tell you that 40% of people have old cars not because they are their fans; they just cannot afford new, more eco-friendly ones for €45,000. That is just the reality. If we

do not support these people, change is hard, and all we will get is resistance. That is my subjective opinion.

Have you noticed any populist rhetoric that affected the implementation of green policies in the housing or mobility sector, either negatively or positively?

So overall the rhetoric of the American administration, the rhetoric of our mainstream political spectrum, it comes from all sides. We are starting to take the irrational route, in everything, and maybe it would be rational to admit that after all it is a normal contribution, a new contribution of science. However, about solar panels, they were already essentially implemented even in space from the beginning. So, I do not understand why we want to switch from something that has been used here for tens of years already. And exactly like this is also an electric car, it is nothing strange, as one might say that even an ordinary carriage had electric power, so it was basically an electric vehicle in its deep sense. And no one pretended that it was nonsense and had a combustion engine there. So, it is certain that populism is present there, and these leading representatives, especially from the political sphere, are worsening the situation.

And do you think that some population groups, such as rural communities, marginalized communities, or people working in the industry, are more skeptical towards climate policies than other groups? Or do you not perceive this?

Yes. They also perceive it from the perspective of the unavailability of some material, that they cannot afford or supply it. At the same time, they do not understand at all what it is good for, because many, especially those from marginalized communities, they see it as okay, I am connected to the network, to electricity, why should I solve it differently, give it to me cheap, give it to me for free. They do not want to search for some other technological solutions, this is unacceptable to them. Level of education has a significant importance and maybe the approach toward these communities should be chosen.

Which group do you think is the most skeptical? And do you have any suggestions on how to change its perception?

The most skeptical? It is hard to say because there are two different areas, because if I said that the older generation, for example, and perhaps lower education level, it might not be completely correct to say, because they might have no problem installing a photovoltaic system on their house, for example, which they received now or subsidized, or to reduce some energy through building insulation or window replacement, roof constructions, they certainly have no problem with that. I would rather say that these are exactly the two important areas, as it is separated, one thing is the housing issue, the other thing is the mobility issue, because mobility is more difficult for them, I will say openly about it, whether due to the unavailability of charging infrastructure, understanding of that solution, and overall price affordability. So, the poorer rural population, older population, less educated people, are those who perceive green policies the worst.

How to turn perception around? It is what I started right at the beginning, with targeted incentives. Simply put, we must tell ourselves that it is falling on us, it could fall on us, or there could be a significant shift in the automotive sector. We need to stimulate it. On the other hand, we should target to stimulate and not make a populist push towards plug-in hybrids. We need to get more electromobiles on the roads in the future. So, this should be so targeted and aimed that those who cannot afford it can finally buy something like this. And at a price as they were used to pay, unfortunately, half of the electric car may have to be financed by state until production costs will not fall because as soon as battery factories in the EU are built, they will go down. Simply put, it will not have to be transported from China as it is now. We pretend that we are not transporting it from there, while cheerfully transporting everything from there and pretending when some other company dilutes it for us that it is not from China, even though as a technician, I am not fooled, I know exactly where it came from, even the panels that are being assembled here in solar many are from China. So, the reality is that it comes from there, and we must know how to support targeting,

so that the technology can simply reach the poorer ones. It will be better accepted, there is nothing better than if they see that it works, then there is no problem.

Technology is also essential, there must be some technological changes – greater range, better accessibility to infrastructure, and those are key things. And I see the most fundamental problem in the distribution system, because we want to implement solutions and the distribution system does not react to it. When I want to address the charging stations in our city, I face issue of reserved capacities, because they do not have a pre-built network, they do not have it reinforced, and they do not have real capacities to connect as many charging points, especially not fast chargers. If I do not connect a supercharger, then it loses all meaning, because those people need longer ranges and, in that case, a supercharger is key. So, these are the things that will also require reaching into legislation. And to push even those distributions so that they simply go in that direction and strengthen their capacities.

I will even say something about the housing issue. When we want to deal with heat pumps and similar things, there I also need electric energy again, so I need to strengthen those capacities for the transmission system anyway. This is exactly the point of collapse in some countries that it simply was not resolved, and you must deal with these problems. Before the greatest burdens come, one must think about it.

Good, can we move to the third round of questions then? So, we have already talked about many obstacles that influence the implementation of these EU policies in the areas of decarbonization in the housing and mobility sector in Slovakia. Maybe, do you have some suggestions on how to overcome these obstacles, or what strategies and steps would you recommend in those individual sectors?

In those individual sectors, it is necessary to completely revamp support for electromobility from top to bottom. It will be necessary to focus, as I said, on some investment incentives, incentives for the purchase of those electric cars, so also on the development of technologies, and on some

incentives for purchases, to promote and successfully transition to those new electric vehicles. It will be necessary to thoroughly investigate, which I have not mentioned before, but those distribution points, because if this is not done, those chargers will not be available. And that is a big negative, if some people who are interested in criticizing this issue will know that you will not have to charge with it. This is just a big advantage that they have up their sleeve and that they can use, so this needs to be changed.

As for the policy of housing, I would not see such major problems there. In fact, I think it is currently going in a pretty good direction, it just needs to be maintained, it works on some level. However, we can debate about scheme for those more socially vulnerable, so that they are not somehow burdened with extreme duties, even from China, that are currently accessible precisely for that population. Because many, for example, higher-income individuals, simply purchase those things – it is already a reality. And if we want to have availability of green solutions, even with the largest producers in this area, we cannot fall behind. We will also have those capacities in Europe, or we simply must accept that China is in that market.

What role do you think civil society and non-governmental organizations can play in improving the implementation of these policies?

They can rather lead some debate and generally some dialogue on these matters with local governments, those institutionalized regional forms. That has importance from my point of view. I do not want to say that it does not have such importance directly within the population but in the context that is set, I am afraid it could provoke some opposite reactions. There is something working there – how it collaborates with the youth, with kids from schools, because they really think completely differently there, those kids, they see what the ecological problems and they want to do something with it, and they also accept third sector.

The rural population perceives it much more problematically. The urban population is now something completely different. As for the level of education, of course, it also applies here, but I

would not completely intertwine it, because even in Slovakia there is polarization both among educated people and the perception is not the same. Considering that for what kind of scientific research is currently being paid for, some university alumni should not have a university degree at all, even though they are in the systems, I have to say that.

Okay. How can we better support municipalities in the implementation of decarbonization policies in Slovakia?

Well, for us, the methods that are currently being implemented are very suitable. Some opportunities related to this have been announced. But what we need, we need some stability and readability of the environment. This means it cannot end up like with that charging infrastructure, that after a few months or two years in this case, we find out that someone by some administrative decision will cancel it, about which we did not get information. And we actually have taken measures because of course, I knew that we will be setting up a charger so I have already placed guides under the road, so they are now sticking out where the road is from the ground, because I had thought ahead that if someone sends me a message that I have followed all the rules and sends me the contract to sign twice, I expected that both parties would sign it, so this surprised me, I would not think, not even in my wildest dreams, that this would be canceled. So, stability, readability, and simplicity, so that we can budget these things somehow, because they are quite expensive things, even with co-financing, even though this went through the Recovery Plan.

Despite that, we have costs there. We need to say that it never builds on a green field and there are always complications that we need to solve, costing some additional money. So, we mainly need stability and to know what will come and not play with challenges as it was last time when two opportunities were announced for more infrastructure on Friday afternoon, and it was said until the exhaustion of financial resources. This is how it should not work, so it smells like that those who already knew on Friday that they should submit, will do it and those who did not know will find out about it on Monday, so it can be calmly stated here that they will no longer be any financial

resources and they will not succeed despite having their things ready to submit. So, it cannot work like this. Simply, it is necessary to clean up this environment, at least to some extent. And we must know what awaits us, because we have some visions.

For example, we did not go into electromobility just with the intention of building infrastructure for citizens, but we had the idea that when we have decently built photovoltaics, we wanted to use, for example, the method of a battery storage on wheels, because why then do it just like that, why build a static battery storage when we can also consider buying an electric car for the city police, or perhaps for our city. And on a short distance, it is more ideal than any combustion engine, because it simply will not suffer from a particulate filter or catalytic converter. So, we had some vision that we will charge for free, it will be beneficial for us, and we will basically drive for free. So, we knew what we wanted. We did not do it just because there was an opportunity announced and we wanted to get money. So, there was some purpose from our side. Basically, our country has now delayed it for us until the end of our Recovery Plan period in 2026, so I do not know how quickly it will be possible to achieve it now, I absolutely have not even a rough estimate, but readability is essential.

Are there any international mechanisms, you have also mentioned different opportunities, or any mechanisms at the EU level that you think Slovakia underutilizes?

It is not enough precisely within that drawing, as these are resources that, I would say, and I always point out to my colleagues, to the self-government of the council members, that we may be in the last such period of programming when we can draw on such hard infrastructure projects. So, if this is not taken care of now, real drawing will not be good, we will not get money for such binding projects. We will be giving more to the system than receiving, and we will be receiving more on various technological things or such larger, of larger scale, bigger policies, than for such small hard solutions, that we need to address within regions.

This is exactly the problem that we waste time and exactly that is what we think within that charging infrastructure. Something that we could have already partially implemented this year, we are moving to the end, where we risk that something may happen, and we will not be able to conduct it. So, we are irrationally concerned about these things – often also for some political reasons, because someone may feel possibly offended that it was initiated during some previous governments, which I do not understand, because it is state administration, so it should function continuously and should not depend on who is managing it now. And this is something that I see as a crucial issue, it is the setting of the spending and the spending itself, which is threatened by some such unstable elements in decision-making. Whether it is certain politically controlled bodies or bodies of a state administration, which are once again politically controlled.

And what importance do you see, or how should it be perceived, what importance does education, spreading information, raising awareness have in supporting the acceptance of green policies in housing and mobility? Do you have any experience with that?

We have experience, even within the Climate Scan we are working on now. One of the indicators came out that perhaps it is necessary to change the rhetoric of communication in green-focused policies towards young people and declare a regional or city-wide brainpower competition, where we will try to obtain solutions from children for those problematic areas that emerged as the worst in that climate. We are trying to enlighten them on the issue so that they contribute to solving it themselves. So, they will also present these solutions.

Another thing is that it is one thing to come up with something, and another thing is to communicate and offer it to people, because that is the most difficult part, to get them to accept it. So, we are trying to get those kids, and young people, into the issue, so they feel it is something significant, something that they enjoy. And I heard it very positive feedback. And even school directors have approached me themselves, saying, listen, we see what you are doing, we could do

something together that might also touch some of our children in schools because they would also like to do it.

For young people to be inspired, it is necessary to start with education and if it is accepted as a technological change, as something good that will help the environment that is something that could help. Also, the catalyst and particulate filter which I so fondly mention again and again... If I want to install something new in the car, but I want to improve the quality of the air, but at the same time we are making some technological change and that is to simplify the things.

An electric car is not any enemy, but maybe some x reasonable for vehicles, so that I can achieve maybe some better ecological results and maybe for example in the case of our municipality where we mainly drive shorter distances, as I mentioned, it is even a technological solution because current combustion vehicles are not realistically usable for us, because after 80,000 km real issues occur, even before that small damages appear. So, it is a new technology and before the children can understand it, accept it, we must educate them, guide them to perceive it as normal, reach an acceptance.

Good, so here is my final question, although we have already touched on that, but perhaps what different approaches would you recommend for the housing sector compared to the mobility sector?

Well, step by step, it is exactly what I mentioned, that mainly we need to change the mobility sector, it has not clicked with me yet. Despite I am a fan, these things still need to be addressed. Certainly, it is necessary to address the charging infrastructure, which means supportive mechanisms for everyone it concerns – municipalities, national highway company, simply at those highways, people need to charge their electric vehicles, strengthening the transmission system, economic incentives into science and research, because we need to achieve lighter batteries, with greater range, we need to increase capacities, so we must invest in development, this is not a simple

matter. The priority of research should not be solving RNA vaccines now, but perhaps the development of batteries. That is what I think. This is important, this is how it should be done.

At the same time, support low-income households so that they can also afford that technology, because it is a common occurrence, at the beginning, what is new is expensive, it needs to impress some high society, they buy it to show that they have something, and then gradually it becomes cheaper as it is produced in larger volumes. So, there is no need to worry that any initial incentives that we must give or spend now for two to three years will have to continue after these two to three years. It is nonsense, everyone knows that whether it is mobile phones, anything, batteries with higher capacities, everything gradually becomes cheaper, it is just reality. Technologically it will start to be produced more massively, research will be paid for, so these things will become cheaper. Here it is, in my opinion, about these fundamental changes, especially in terms of financing and launching the whole system so that it is as functional as possible, so that people feel that compared to those combustion engines that you refuel every ten km at a gas station, there will be also such places in the electromobility. This needs to be built, this needs to be done.

And I say, when it comes to housing, unless some major geopolitical mistakes are made at the European level, I do not know in what all, I think the current trend is not bad, you can see it when you walk around the city and see that people have insulated houses, they have heat pumps, many have photovoltaics on their roofs, so this seems to work in reality. We see fewer electric cars than the sustainable houses. Logically electromobility demands some regulatory intervention and to do something about it right in this area.

Good, great, thank you very much.

I thank you for letting me talk.

It helped me a lot, it was interesting, and I learned a lot of new things. So, thank you for taking the time and I wish you a nice day.

I hope it will help. I believe that through such conversations and work in this area, we will come to some better solutions.

That would be great. Have a nice day. Goodbye.

Appendix 8: Interview – Martina Repíková

Yes, I am recording it on my phone so that I have everything in one format. Okay, so the first question is, what do you think are the main obstacles to implementing EU policies in the decarbonization of the housing and mobility sectors?

Okay, how should I put it, a broader question, that is, the housing and mobility sector has several obstacles. Some of them are things they have in common; some are different. The common ones are more of economic constraints, which means that it requires a lot of finances that are simply not often available. There are also shortcomings in terms of regulations of administrative barriers, but it is slowly starting to differentiate from there. I would quickly summarize the provisions regarding housing and the actual implementation of policies.

Regarding housing, so basically, there is a very low intensity of building renovation, and this is also influenced by people's education, various support schemes, and the lack of professional capacities that would address these things. We use very few renewable energy sources, intelligent systems, and the coordination between these individual policies, and in what way it is transposed – it takes quite a while. And there is a certain gap between, that when the directive of the EU is transposed, then essentially it takes time until it adapts.

As an example, I will say that basically, when you want to renovate a building, you should first do an energy audit. And that energy auditor comes, and it depends on how much they got involved in that change. And often it happens that the energy auditor does not suggest the latest, most modern trends and they just propose what they are used to. So that is why I mention those professional capacities. There are some obstacles there that is just the whole big point. This point is

essentially how the transposition of the directive is carried out to the actual practical implementation.

Regarding electromobility, apart from the transposition, there are several things that I perceive there, such as financial and economic problems, because people would buy electric cars if they were not so expensive. But what I see as a problem is, for example, announcement of calls for electromobility. Now there was a problem because the Ministry of Economy announced a call for the construction of electric charging points. In June 2023, cities could start applying for this. And they did request it. And two and a half years later, that is a year and a half later, the ministry canceled that call. But there was, for example, written there, that eligible costs will be subtracted from the requests. This means that cities started implementing electric chargers and the ministry canceled that discussion, so they lost money. And now they have announced a new call that does not make any sense. So, there is a problem of administrative, institutional barriers, as if they do not understand what is happening.

Add another one that comes from European countries, which I observe more in the practical world, that people who already have electric cars, for example, as I would say, basically those restrictions for electric cars, or cars with large batteries, for example when an electric car takes part in a car accident, or starts burning, and so on. We are not prepared for this. Our emergency services, nor the state regulations on how these cars should park, when someone is designing a building, or when a company is simply building a residential building and constructing an underground garage, in what way should security actually ensure the security of that building, or in case electric cars are parked in the garage and they happen to catch fire, because extinguishing those batteries is completely different. So, for instance, we are very behind on this.

There was one example where that electric car was simply burning in the garage, and the electric car was just there. It is not possible to get the shipping container in there to load him in so you can pull him out because it is an underground garage, very small spaces. So, we are behind

here, that these safety issues are simply not considered in Slovakia, but abroad they are. That is all I would say.

So, we have also covered the first sub-question, the different obstacles between housing and mobility sectors, so maybe I would move on. How do any social or cultural realities or facts in Slovakia influence the acceptance of those green policies?

That is an interesting question. A few things that come to my mind regarding this. From the perspective of social and cultural aspects, one is the awareness. Basically, both in housing and in mobility, it is about the fact that these pieces of information should be so accessible to the people that when they need them, they simply take them. And similarly, the solutions should be so accessible that, for example, that there will be some advice that will advise them directly, help for example in the reconstruction of homes process. They simply will not have to think very much right away, that person will not have to go to ten different experts. If he had to, he would not reconstruct. Those few euros, regarding the costs they will save, it is often a smaller item for them in the reconstructions than the time and energy and effort. So, this is probably one of the biggest barriers.

Then, as a second one, I would say is “not in my backyard”. I do not know if you are familiar with this abbreviation. It is such an effect, that people simply often reject some progress, just because it happens next to them, in proximity. Even if they do not realize that it could just help them in some progress and simplify their life. For example, it might happen that if municipality wants to build a parking space with an electric charger, but if it is close to a private house, the private owner may object, because people will often park their cars right under the house. But they do not realize that when they have an electric car, they can just park it right in front of the house, they can charge it. And this happens most often especially with these large renewable electric sources.

For example, those wind parks, we have very strong resistance from people towards wind parks, but that is no longer related to housing and mobility that is strictly related to energy. But I perceive that often it is rather connected to some misunderstanding, low awareness, or explicitly,

just fear. Fear of change. And when I think about it, another idea comes to my mind that basically in Slovakia, it is very peculiar that everyone wants to have their own housing.

In Vienna, it is not like that, there are many people who comfortably live in public housing. And in Slovakia, it is very common homeownership, meaning that person lives in their own house and often older people, whose children have grown up, are not willing to move to a smaller apartment or house where they would have lower expenses, comfort, spend less time, etc., because it is simply their home. Also in America, ownership is looked upon differently, people simply buy that house and then sell it when they move somewhere. That house, that ownership keeps you in one place. Such moving is just not common here, and it somewhat limits the electromobility and renovation of building stocks.

Good. Do you see any differences between urban and rural population in their willingness to accept these policies?

Yes. Good question, because when it comes to buildings and mobility, I think there is greater acceptance especially among urban population, but when it comes to things like green agriculture, using bio-products, and so on, it is also very strong in the countryside. People there prefer it because they can do it themselves. Then it really depends on the socio-economic situation of each household. Whether in the countryside or in the city, it is about how people approach these individual policies, that if it is a household with a higher income, they are less resistant to it compared to households with lower income, and in fact, they do not resist it, but they do not think about it, they have completely different problems. So, I see there a bigger dichotomy than the city and the countryside, I see more of the household's socio-economic status.

And so, this already leads me to the next question, that to what extent do you think economic constraints will play a role, we have talked about this a bit already. So, we were talking about the price of electric cars, but maybe also the affordability of housing, deficiencies in infrastructure. Maybe you would like to add something else.

As for the economic aspect, regarding housing, I think we will soon reach the peak in demographic crisis. In fact, there are different analyses, some say that we are not building enough new apartments, but then there are other analyses that say that essentially by reducing the population or lowering birth rates and immigration, there will be not enough people to live in the already existing houses. It depends more on how the housing policy is implemented. But it is true that essentially households, or young families, or individuals living alone often do not have the chance right now to get mortgages to buy their own housing in the location they want. So, often it is also a trade-off between the distance for commuting and the actual price of the rising property. Then also accessibility, for example kindergartens, schools, shops, and so on. It really depends on that. You mentioned countryside, so there, it is strong also in the sense that there are those family and friendly connections or neighborly connections that sort of help with that a bit. And we are still in a situation where basically people buy land and build their house themselves.

Good, we have also touched on this already, you mentioned some institutional barriers, but could you evaluate the administrative institutional capacities for the implementation of green policies at the local level and do you think they are sufficient?

I will tell you the same, it is not sufficient. Because when we look at institutions, basically the most experts, it can be said, work in private companies, and then in state institutions at the higher level. And at the local level, in terms of cities, not villages, there is an effort to have experts on green policies and looking at energy, environmentalism, life, and the environment. It is usually faster to find expertise in environmental issues than in energy. And when it comes to villages, absolutely, because those villages have such a small budget that they cannot afford to pay more than three, five people depending on their size. And so, that person does not specialize in expertise, but specializes in paperwork administration. He does what comes. So, they often work on social issues, education, culture, and even energy there. No, there are not enough capacities.

Okay, so we can move on to the next round of topics. And that is, in your opinion, what role does public trust, populism and politics in general play when implementing green policies in Slovakia and how they influence their success and failure?

I will start with public trust. The problem is that public trust in institutions as such and simply in their concern for the well-being of the population is much eroded. At least that is how I perceive it. Because we see that people very often not only challenge our state institutions, but it is also happening in local governments, where people simply come to shout and challenge what the mayor decides. And this is going upwards, basically through state institutions all the way to Brussels. That we have a big questioning of the Green Deal, a big questioning of politicians from the EU, and so on. I would probably agree with one percent of those comments, because Brussels does not see into those regions and those specific problems, but they are aware of it and trying to solve it. Overall, I think that we in Slovakia, after Covid, but it started before that to a certain degree as well, have erosion of trust of the population towards politicians and institutions. So, it is not just about decarbonization policies, right, it is overall.

Since Covid, we also have a problem of trust towards experts. I am glad that now, thanks to Mr. Kotlár's qualities, it is returning, and people trust experts more (irony). But it is still somewhat on the edge. Politics in general... We are clearly divided into two camps, and bridging this divide will be very difficult. This polarization goes beyond green policies – it affects the whole society. In the context of climate policies, the challenge is even greater because many of the initiatives come from the EU, and people are exposed to conflicting narratives and misinformation. For example, there is widespread confusion about electric vehicles – their value and benefits, charging infrastructure, and overall quality. These people are sharing information. Everyone has an opinion, and everyone has a different opinion.

When I say that I want to buy an electric car, I get ten different opinions from ten different people and not even one will be saying yes, go ahead and buy it. But most will either have something

against it. Often when it comes to municipalities, it happened to me that when I was an official in the municipality, people just came and started shouting. We wanted to make a green park, and a woman came shouting that she wants to park there because she has no place to park. So parking is more important than a view on greenery. And then I told her that I will take care of the parking lot and for people to be able to enter that parking lot, we need to cut these three trees. And then she started complaining again, saying that she has a view of that one tree from her apartment and she will not allow it to be cut down. So, I looked at the woman, what do you want, do you want a parking lot, or do you want greenery? Right, so this is it, that people just do not know what they want. This unfortunately goes against those people who are closest or those officials in municipalities.

How does the current public perceive those European decarbonization policies? We have been circling around that.

I will divide it into two parts for you. You have people who are not interested or who have other problems. There are three groups. Some who are not interested, have other problems, and just mind their business. When it comes to deciding between a green or non-green product, if they can afford it, they will choose the green one because they simply have that awareness. Then you have people who resist change. You are what you are, they will simply resist it. And then you have people who go along with the changes, and they are very progressive. So, there are three categories here that I encounter, and are balanced in my circle.

Okay, and to what extent do you think the media influence support for these green policies from the public?

A lot, it is about where these people get information from. There are a lot of people who are not willing to pay for quality media, like we used to have, that we subscribed to newspapers. Now that it is available on mobile phones, people are looking for free information. This free information may not always be of good quality. Unfortunately, this is precisely related to the whole issue of

public trust and the like, that it does not bode well for people's decision-making because they do not have all the information.

Similarly, the state's communication strategy or respectively the state's communication regarding these policies also influences that. They simply do not give it any priority to educate people, inform them about what it is about, and unfortunately now it is about bad Brussels rhetoric. The perception is quite influenced by the media and politics.

Have you noticed any populist rhetoric that has influenced both negatively or positively the implementation of green policies in the housing or mobility sectors?

There is a very negative narrative now, for example, the scheme EU ETS2, emission allowances for heating and transportation worldwide. Even the Minister of the Environment himself is against it. So far, the partial transport of the Directive has been approved, which considers the reporting of emissions, eliminating it. But there is currently no mechanism in place for the purchase exchange rate of these permits and so on. So, this is an example, and this is also an example of the previous question, which concerns those policies because government does not even communicate about it. Many people do not even know that they should start paying for it and Minister Taraba is trying to avoid it. So, we are delaying it as much as possible. This is one of the examples of political activism, you could say.

On the other hand, there are non-profit organizations that try to do control, so I would say, whether it is accepted or not. For instance, also that reform of national parks or agricultural reform (also bears). These are examples of how the political narratives influences how it is done. There is quite a lot of it in this present time.

And do you think that some population groups, for example rural communities, we have already touched them, but we also have marginalized communities, or people working in the industry and so on, are more skeptical toward climate policies than others? And possibly, which group do you think is the most skeptical and how to change their perception?

I do not know. I admit that when it comes to this, I simply do not differentiate whether I am talking to a Roma or talking to a worker, because to me, someone is just a human being, so I do not see it that way. But I do notice the difference more in the sense that people who live their life in a simple way, and they do not have enough finances or are looking for work or simply have other problems, these are always more important for them than green policies. Every person perceives it from their own point of view and from their own perspective.

If we were to take, for example, those people working in industry, right, then basically it does not matter, right, whether it is the industry they work in or whether it is simply the position they work at, but basically when you give them the opportunity to simply commute to work by company bus, they will use it because it is easier for them. Or you give them the opportunity to park in front of the company, so they also use it. Whatever is more comfortable for them. So, when you as a company start taking them to work by electric buses, which is already the climate policy, they will not comment on it because everything is still comfortable for them, so they can then focus on other things.

We need to get it to such a level in climate policies that people will not have to think about it. Whether climate or no climate, whether climate or my comfort, it must be a part of life. The same applies to other categories that you mentioned as marginalized communities. For them, it also must be part of their lifestyle because often, we simply reach the point where they cannot change their lifestyle. We should accept and create conditions for them so that they can live as they want, but at the same time live in decent conditions.

Good. Can we then move on to the third round of questions? Hence, we have already discussed many obstacles that hinder the implementation of EU policies in the field of decarbonization in the housing and mobility sector in Slovakia. But how can these obstacles be overcome? What strategies and steps would you recommend?

I also recommend one main step in this from my own experience, and that is coordination between departments and various levels of state administration and public administration. Because this is what I deal with daily. Lately, a very big problem. Often, we know, that transposition of some directive in some EU country and basically the resort responsible for the transposition does not communicate. They transpose it and then actually request comments in the legislative comment procedure. And sometimes even that process does not take place, they just submit it directly to the government.

Many times, however, those people with practical experience can propose simpler, more reasonable things, so some form of participation would be nice, and engagement of local stakeholders too. This is something the European Commission is also trying to do – committees of basic stakeholders should be involved in the creation of these individual policies in member states, and we are skipping that. And often it ends up that the government approves something, and most activities are thrown onto municipalities, but they do not provide finances, education, or professional capacities for it. This refers not only to climate policies, but also to climate policies.

An example can be electromobility, that there simply must be electric chargers, and they divided it into regions, they determined exactly which city must build how many chargers and now they expect those cities to make applications, but those cities often had no idea how to prepare those charging networks. We did the study, different places where it can be done. Then we spoke with the distributor who told us, well, but it should be up to 20 meters of the distribution station, because otherwise it does not make sense. And now we are looking at them like, okay, good, and that is the information we were missing. We simply have the whole city coverage plan, and we can rewrite it from scratch because first we need to know the locations of the stations.

This is, such a contradiction how the policies work, the problem is that they should overlap, the peripheral aspects should also be visible to them, and then everything connects. And then, lack of professional capacities, I deal with this at work. Just as I mentioned to you at the beginning, that

is the same argument. There are experts available who work in private companies or at the top, such as the Ministry of Economy having energy experts, but as you go down to local government, there are no longer expert capacities, neither well-paid jobs.

What role do you think civil society and non-governmental organizations can play in improving the implementation of green policies?

They already play a very significant role. A lot is currently being moved in these policies also because there are organizations and active people who are trying to improve data and provide the information to people. They strive to be members of working groups on in various transpositions or preparations, for example a Social-Climatic Plan, which is now being prepared for ETS2 and they are trying to extend a helping hand to connect with residents. But for now, skepticism prevails towards these intergovernmental organizations, and even the recent law actually lacks validity outside the government and is more likely to harm these organizations.

Okay, and how can local municipalities be better supported in implementing decarbonization policies in Slovakia?

Professional capacities and finances.

Are there any international mechanisms or mechanisms at the EU level that you think Slovakia underutilizes?

There are many such mechanisms. For example, what was the Just Transition Fund, the mechanism for decarbonizing coal regions in Nitra, Košice, and Banská Bystrica regions – they were authorized to draw. Slovakia transposed only one part of the three branches that the Just Transition Fund allowed. The other two were simply ignored, although there were financial options that would help both municipalities and private companies. For example, Horizon Europe. We have very slow preparation of projects. Also, funds for private companies, academies, research academies, and so on. I think we could be better at this.

What is the importance of education, spreading information, raising awareness in supporting the adoption of green policies? And perhaps at what stage is this in Slovakia?

I believe this is one of the key things that the state should partially oversee. And that is education and information, not mentoring. It is more about raising awareness, providing information about benefits, information about what will happen if we do not do it, and so on. Also, it should give information about what advantages people can have from it, so that it is implemented conveniently for those people. That this is one of the key things, in my opinion, not only for support, but also for implementation.

And such education in schools, for example? Do you think it is sufficient there?

I think this is very important and it quite positively surprises me, being 40+, when I meet teenagers, they have a much better awareness of many things, theoretically than me now. This is moving forward, and it also depends on that school community, teachers and group of friends, in which direction they will go. The problem is that we have very few teachers in schools, so their education is also quite demanding, and they simply teach a lot. I have friends who teach 28 hours a week, while the usual recommendation is 22. They just do not have time for this education or for that change in the educational structure.

It must also come from the top, from the ministry, with change in the curriculum. But I think that this is happening. I am not very worried about education; rather, I am worried about the older generation. There, education simply must be even bigger. Young people would rather need, in my opinion, education for them to distinguish well between facts and opinions, to be able to form their own opinion based on what they read, what information they gather, and how it will help them. And I think this is largely happening, so it is fine. I am not worried about that. Some critical thinking will lead the young ones.

Good, what different approaches would you recommend, in conclusion, for the housing sector compared to the mobility sector?

It is different in terms of accepting those policies. In my opinion, the EU has it set quite reasonably. It would be good to choose from it what suits Slovakia. And there, I would not recommend very different approach between housing and mobility. However, when it comes to implementation or education, I would put great emphasis on a behavioral change there – to influence the behavior of population. That is why I say it must be a comfortable change for these people, so they do not perceive it as a change, but simply as greater comfort. And this applies to housing as well as mobility.

Regarding housing, I would probably add that the availability of rental housing would help a lot, but the availability of rental housing is not just in some dilapidated flats, but in some passive, low-energy buildings, so that people can quickly get used to these new climate-friendly ways of living, using various things. And in terms of mobility, it is easier, even though there needs to be a greater emphasis on the behavioral change. You need people to prefer active movement. I do it in Bratislava, but I do not do it at home in Piešťany. When I come to Bratislava, I park the car in the parking lot and buy a daily ticket for public transportation and go by public transportation, because it is easier for me to get from one end of Bratislava by the public transportation in 15 minutes or 30 minutes instead of driving in traffic jams and look for parking. That is an explanation.

For example, in Piešťany, even though there is traffic, the public transport does not run as often. It is not comfortable with that public transport, you know, so I prefer to drive and figure out where to park and so on, even if I must go through traffic jams. That is just an example, a short one.

Okay, so that is it from my side again, if you do not want to add anything else. But I think we have covered everything. Thank you very much, then.

Appendix 9: Interview – Mayor of the Middle-Sized Town in the West of Slovakia

So, the first round of questions, starting with the main question: In your opinion, what are the main obstacles to implementing EU policies on decarbonization in the housing and mobility sectors in Slovakia? I am writing my thesis mainly on these two sectors. Do you perceive different obstacles between these two sectors?

I personally think that there will also be a large turnaround in the economy and the economic dimension in Slovakia in the second area, that is, the costs of decarbonization and meeting the conditions set by the EU. I really think so. These are the cardinal problems or obstacles.

How do you think social or cultural realities influence the Slovak acceptance of these green policies?

As far as some cultural realities are concerned, it is very difficult to express oneself, but at first glance, I do not see any fundamental obstacles or resistance from people in terms of certain cultural aspects. From those social, again as if we were entering into the economic level and maybe even when we evaluate that socio-economic structure, some social classes of the population may be less informed, less educated, less aware of the impacts on quality of life, in connection with the quality of the environment. So, this topic may be less significant and important for them for this reason as well.

As we descend higher, but this is my subjective opinion, after those individual socioeconomic or social layers of society, we will probably encounter economic impacts again at the middle level, meaning that these solutions are harder. In case of any higher social class, it may be associated with some discomfort in the application of these measures or solutions. But personally, I think that the younger generations, perhaps from a generational or demographic perspective, would look at the topic with more intense interest and responsibility for the

environment and in connection with the implementation of various measures. We see a higher level of adaptability and acceptance of those measures related to the impacts of climate change, as well as those regulations that essentially aim to reduce the impacts of climate change which we face, whether it is decarbonization measures or other.

And do you perceive differences between urban and rural populations in their willingness to accept these green policies?

I think so. Also, considering the functions of rural areas, where agriculture, but mainly animal production, brings a certain level of burden, especially regarding decarbonization. It is more complicated in this case, and once again the economic aspect will certainly play a role there. How to deal with decarbonization? We can also often encounter local solid fuel heating sources in rural settlement areas which are often outdated or do not contain any elements that would lead to reducing their own carbon footprint and of solid substances that are released into the air. Of course, this also causes complications related to decarbonization in rural areas. So, probably two dimensions: Firstly, the function of the countryside as such, and then also some pathological things themselves which happen in accordance with the way of life in rural areas and especially in terms of heating of those signal areas.

Good, to what extent do you believe factors like economic constraints, affordability of housing or electric vehicles, play a role? We have talked about this a little bit, but also the economic constraints, like the affordability of housing or electric vehicles, if we can touch on electric mobility, or some deficiencies in infrastructure, or a lack of charging stations, or public transportation.

Today, inadequately developed infrastructure regarding charging stations certainly complicates the expansion and development of electromobility, but in a way, it will also be a lifestyle that we have today in connection with the economic situation and the way of functioning here in Slovakia. We are unable, so to speak, to adapt in terms of these working conditions, and

mainly I dare say that for the broader layers of the population, the regime of essentially charging an electric car in, for example, individual residential construction is somewhat simpler, but in complex residential construction, I mean in the apartment buildings, the missing infrastructure is a major obstacle. And as I mentioned, those work and life habits, where even charging an electric car brings along a much longer time frame than in the case of vehicles with internal combustion engines running on fossil fuels.

There I see, regarding the development of electromobility, perhaps this obstacle – it is the missing infrastructure of charging stations and then also those lifestyle habits that we have as well as work habits, that we do not have space for like 40-minute breaks for recharging the electric vehicle with the possibility of doing some work during those 40 minutes at a more distant location. There are certainly professions that allow this and there is also a more positive view of electromobility, its acceptance, and its use, but in the case of larger populations, I think this is one of the complications.

Could you evaluate the administrative and institutional capacities for implementing green policies at the local level and whether you think they are sufficient?

I do not think they are sufficient. On the contrary, I feel that there has been significantly less focus on this topic recently, significantly less resonance in the mainstream, in the media, as well as in periodicals and the press. Whereas surrogate subjects are somehow coming to the forefront, and they revolve around the impact of climate change on our commitments regarding either the Paris Agreement or other commitments, to which we, as an EU member state, have pledged, this topic is simply overshadowed by other surrogate subjects. And therefore, naturally, less attention is also paid to the entities involved in the creation or extent of the carbon footprint that we leave as a country.

Well, we can now move on to the second round of questions. In your opinion, what role does public trust, populism and politics in general play in the implementation of green policies in Slovakia and how they influence their success or failure?

I personally believe that the role of politics in this regard is extremely important, if not crucial. And it is precisely these proxy political issues that can cause the fact that decarbonization commitments that we have as a country in relation to climate change are simply not being fulfilled and we are not managing to approach them at a pace that would allow us to meet those commitments in the milestones set, or to get closer to them within a few years' time frame. I think the political situation... or respectively communication through political leaders could significantly propel and advance this entire topic. Certainly, inspiring examples of implementing various measures aimed at decarbonization or reducing that carbon footprint could contribute to their support.

However, this happens very rarely, and I personally believe, and I will repeat it again, that it is precisely because these significant and extremely important topics are overlapped by other substitute ones. And specifically, those politicians, whether regional leaders, or then at the national level, pay very little attention to this topic. They replace it by various other topics that come to the forefront, and this topic simply remains overshadowed.

How do you think the public currently perceives these EU decarbonization policies?
Do you have any experience with that?

Yes, as I said, it depends on demographics, if we look at it from a demographic perspective, younger age groups perceive this topic much more positively and I think they are also taking many measures themselves, which are aimed at increasing recycling, using electromobility, sustainable lifestyle and work habits, as well as using various technological measures, technical measures, utilizing renewable resources, using some other tools that have a decent share in reducing that carbon footprint and also their relationship with the environment is noticeable. They perceive this topic more intensively and are more environmentally responsible. As we gradually move towards

the older classes, the topic is losing momentum, or its intensity is decreasing both in terms of how often it is communicated and how deep the knowledge about it is, as well as how much they want to focus on it, how much time they want to devote to it – during, for example, a conversation, also, when organizing an event on this topic, it can be seen that predominantly younger generations or some local environmental activists or people who, of course, live with this topic are coming to it.

However, within the general lay public it is noticeable that depending on the demographics, they lose interest in this topic. During the year, especially during those summer months, it is noticeable that serious things and changes are happening with that country, which are not positive for our climate. However, it is a non-sufficient impulse for those people to deal with the topic more seriously and approach their life decisions more responsibly in relation to the environment and use more sustainable tools. Some examples are, as I mentioned, those heat sources, what form of propulsion they will use for transportation, public transportation whether people will use it more, or for example cycling, which is quite popular today and is developing in terms of building infrastructure. However, there is also a growing interest among younger age groups in both utilization and these topics as such.

To what extent do you think the media influences public support for these policies?

We have already touched on the topic of media a bit.

I think that in the past it was much more intense and back then it was also noticeable that the public reacted better to challenges or competitions, activities, participatory projects that we as a municipality were announcing and inviting them to participate in, whether they were competitions in recycling or donations, e.g. collecting of fat from households, of burnt oil or of any unused or no longer used electrical appliances.

All of these were essentially tools that we used to build that civic society and to deepen people's relationship to the environment and responsibility towards the environment. It was more supported in the past also by the media, both through the press and television broadcasting, it was

noticeable that people were more interested and more engaged. Today, other topics resonate more, a decrease of people's interest in these topics can be seen. However, overall, demographically, it is more prevalent among older people. And as we progressively move down the age groups, the interest persists, and it is evident that it is more intense. Which could also be caused by education through educational institutions. And perhaps, another reason could be that this younger generation has been working more on this topic. It has its certain positive results. It is tangible.

Have you noticed any populist rhetoric that has influenced either negatively or positively the implementation of some green policies in the housing or mobility sector?

Yes. I have noticed from some government politicians who deny climate change, who purely economically justify an irresponsible approach to the environment, to fulfilling obligations that today also apply to private business entities in the construction sector, which directly concerns housing through defense of an economic point of view, which I think again negatively affects public opinion, also in relation to electromobility and many other measures that are agreed by the EU for member states. Personally, I consider them important for us. I think it is extremely necessary for the country, as well as for the world, considering the situation we are in regarding climate change.

Do you believe that certain population groups, such as rural communities, marginalized communities, or people working in industry and similar sectors, are more skeptical towards climate policies than others? And which group do you think is the most skeptical and how to change their perception?

It is certainly related to the standard of living. This has been said many times already. A lower standard of living means an economic appeal or a motivation when deciding what product to purchase, how I will approach it in its use and, how I will dispose it after it becomes unusable for me. So, in the lower layers of society, decision-making is explicitly based on that economy, and they overlook those impacts on topics such as the environment or reducing their carbon footprint. As we will go up on the social ladder, there is clearly visible, and I will probably repeat myself,

higher level of responsibility, but even there it is of course connected with some economic thinking, viewing, paradigm when making that decision about what product I will buy, how I will use it, and how I will dispose of it.

So, the question of how to change the perception of these groups, is there anything else that comes to mind than increasing the standard of living?

I think that simply raising the standard of living would not bring a satisfactory result. It can help, but it must happen in parallel with education and with tools that will make the use of such approaches more comfortable for people. That means, available waste infrastructure focused, for example, on recycling, separating biodegradable components, and in a way that is comfortable for people, meaning within accessible walking distance and with a well-defined periodic schedule, with some timeframe for the export and import of municipal waste, so that the trash can stands were clean and basically always accessible to those people as for the capacity. That is, in terms of some waste habits, in terms of electromobility or mobility as such, again it relates to comfort.

If cycling transport was more comfortable, faster, statistics show that people would use it more and would appeal more to the use of this mode of transport, the same goes for walking. And also for public transport, if it is available, comfortable, meaning there are enough stops, it has well-set schedules, and connections that connect to each other, and possibly are also connected with other public mass transportation vehicles, not only with road transport, but for example also with rail, air or sea transport, all these are things that can encourage people to use this mode of transport more, which of course will also help the environment and fulfill those commitments we have pledged as a member state of the EU.

I will repeat it, education will also remain important, meaning that the media should inform that this topic concerns us all. Each of us as subjective, individual human beings can contribute to whether this problem will be solved, whether we will be able to slow down the impacts of climate change on us and when this will happen.

We can then move to the third round of questions. So, we have already discussed many obstacles that affect the implementation of EU policies in the housing and mobility areas in Slovakia, but how can these obstacles be overcome? What strategies and steps would you recommend? We also touched upon that. So, maybe I would add one more question. What role can civil society and non-governmental organizations play in improving the implementation of green policies?

I think a significant one, as they can assist with education, awareness-raising, and participation in projects introduced by municipalities or the state. They create opportunities for residents so that they can be the initiators and can implement such projects themselves, thereby spreading awareness on this topic. Also, through tax policy in terms of reducing fees or administrative charges in construction proceedings. When it comes to implementing certain tools, such as green roofs or charging infrastructure for electric vehicles, investors or builders could be motivated to utilize these methods and tools precisely by reducing fees.

How can we better support municipalities in the implementation of decarbonization policies in Slovakia?

I think through calls for accessing European funds, which is already happening today. And here I would certainly commend that it has very good results. The calls being announced today make it evident that there is support for use of renewable sources, that for the fulfillment of those conditions, as they are written, the use of renewable sources is practically obligatory, causing their more intense utilization. And again, with support, or then applying sanctions in the form of possibly higher fees, higher tax burden, or some tools that will have an economic impact on residents, there may be an improvement in the utilization of these methods or tools.

Well, are there any international mechanisms or mechanisms at the level of the EU that you believe Slovakia is underutilizing? You mentioned those Eurofunds, so maybe we can touch on that as well?

There are also various other grants or schemes, such as Horizon or Norwegian funds, Swedish fund etc. I think utilization is weaker there compared to the case of the operational program Slovakia or Recovery Plan. Certainly, worth mentioning is also the language barrier, as these projects are of an international nature and as described – both the application request and the realization, implementation, and everything happens in a foreign language for us, and therefore this could be an obstacle for municipalities, where we may more often encounter people who see this obstacle as insurmountable.

We have also talked about it a little bit, but what importance do you believe education, dissemination of information, and raising awareness have in supporting the adoption of green policies? And is it sufficient in Slovakia?

I think that education is of paramount importance. And I do not think it is sufficient. Younger generations are clearly more engaged and open to environmental responsibility, but older people often lack information or do not see the urgency to act. Education is key – but so is communicating through the right channels to make people understand and relate to these issues. Economy and education are, from my point of view, two key things that are crucial in all of this.

And what different approaches would you recommend for the housing sector compared to the mobility sector?

I think that the current legislative norms regarding achieving energy efficiency push people today to think about the implementation of renewable sources when building something, also about energy prices, people are forced to think about the economic side, to think about the construction of passive houses or properties with low energy demand, and that certainly helps in meeting commitments in terms of decarbonization and reducing the impacts of climate change. What I think could help or what is missing is a reduction in the administrative fees, and a possible shortening/speeding up of the proceedings if these methods were implemented.

What would also help are green roofs, rain gardens, water retention measures, construction of infiltration basins, and management of stormwater in the builder's village rather than discharging it into the sewer system. There are certainly measures that could still help, but it is necessary to motivate those builders, whether from a time perspective or again with some economic tool, a fee reduction or conversely an increased taxation of households that have not implemented or used such methods or tools.

And what about that mobility sector?

As for the mobility sector, as I mentioned, the infrastructure of charging stations can also be economically supported through European funds, to support the purchase of electromobiles, and to assist municipalities in building charging infrastructure. Again, changing legislation regarding construction of new buildings certainly helped. With residential buildings, there is an obligation to also build a charging station starting from a certain number of housing units. From the moment of passing this legislation, these charging stations are being built and are more densely distributed in those cities, and as a result, the use of electromobility is also increasing.

For people living in or residing in complex residential buildings it is currently simpler and more comfortable to use an electric car. But given the work habits mentioned, there is still a certain level of discomfort and therefore it must go hand in hand with an ideological setting that can certainly be deepened or at least stimulated through education and spreading of information.

**Good, that is everything from my side. So, if you do not want to add anything else...
But I think I have everything I needed. Thank you very much. Goodbye. See you later.**

Appendix 10: Interview – Expert for Green Economy and Recovery and Resilience Plan

The first question from my side is, what do you think are the main obstacles to the implementation of EU policies on decarbonization in the housing and mobility sectors in Slovakia? Feel free to mention any perceived specific obstacles between each of these sectors.

Well, so I would probably start with the fact that those policies are relatively complex and often in both cases, they are based on various legal regulations, whether they are EU regulations, directives, or also guidelines on some lower levels and so on. I do not always perceive those obstacles in relation to the broader package. I perceive them more on a practical level in relation to individual requirements. As for housing and mobility, when we simplify it, we are going to talk about improving energy efficiency and energy management in the building sector, as well as transitioning to low-emission or zero-emission forms of transportation, in practice this means electrification. Other technologies like hydrogen are much less prevalent in that sector, at least for now.

What I perceive within the mobility sector as a certain, let us say, not an obstacle, but rather an inherent mistake that accompanies some EU policies, is an insufficient emphasis on technological neutrality. For example, in the mobility sector, the way that the regulation, which de facto requires a transition to electromobility or hydrogen transport is written. It talks about tailpipe emissions, which are, for instance, the exhaust emission levels from the vehicle itself. I consider it slightly unfortunate, because we see that there are also other technologies, for example technologies of synthetic fuels, that are not emissions-free at the level of the given vehicle, but thanks to the way they are produced they are in the emissions-free category. And that is because you are already using once released or emitted carbon. This is one specific example that concerns mobility, and we can then also give examples in the housing sector.

Often those policies pursue some goal, which in my opinion in our society is not considered problematic, but sometimes they may choose only one path to that goal, even if the paths to that goal could be different. And if we are to delve into such specifics, we can come to that a bit later, but I would say that in the housing sector, the chronology of the implementation of policies was such that policies that brought benefits to residents were primarily supported.

For example, a subsidy for a reconstruction or in the residential sector various interest-free loans that have been functioning for XYZ years through the State Housing Development Fund. And the primary goal, from the perspective of that inhabitant, is many times not to have a more energy-efficient or cost-effective house or apartment. It is more about being simply renewed, insulated, and having a nicer facade, new windows, and so on. And more about, the net costs in the housing sector are yet to come in the form of expanding the ETS to the building sector as well. So, at the time we are talking, which means May 2025, the policies so far have been more giving than taking.

In the mobility sector it is a little different, because in this sector the transition to electromobility is, so to speak, like an instant net cost, because those electric vehicles have traditionally been more expensive, we can talk today about the fact that we are essentially getting closer to the price parity. A different topic is what role does China play in it or does not play and what implications it may have on the European industry. But from the consumer's point of view, when deciding to purchase an electric car, the electric mobility does not have to be a net cost anymore, but we can also look at it from the perspective of what way do I use a car and where I live, simply that electric vehicle can also be more cost-effective.

For example, I have a family member who drives a lot but drives the range of western Slovakia and lives in a house. For such a person, when they buy an electric car, they save maybe €300-400 per month on fuel alone. But the fact remains that from some sort of perspective, about 10-15 years ago, mobility was more like a net cost, whereas the housing sector was a net benefit.

Currently, we are in a period where these vectors seem to be working against each other and mobility could instead be a net benefit while the housing sector could be more of a net cost.

And as to the obstacles... There is too much effort to do things for 100%, instead of 90% with simpler steps, which can lead to worse outcomes. So, that is a bit of a broader introduction for me but for me it was important that you maybe understand from what angle I look at those things. Not only from the perspective of those goals and policies as such, but from those partial steps that exist in every area of those policies and one partial step which may just not be achievable or you make it too ambitious, too complicated, can simply slow down a huge number of things and can have negative consequences on achieving those goals.

Thank you for such an introduction. Maybe I would move on further. You have already outlined some social and cultural realities in Slovakia and the differences maybe also between the urban and rural population. We also talked about economic constraints. Perhaps I could follow up on to what extent do you think economic constraints, such as the affordability of housing and electric vehicle or the shortcomings in infrastructure play a role.

When we start from the end with those shortcomings in infrastructure, this is exactly one of those points, when we are talking about, from the electromobility transition point of view, where the shortcomings in infrastructure were at the beginning of the problem. They were an expense even though it may not have been expressible financially, but it was some cost in using that vehicle. I think this is changing for the better and the vector reduces those obstacles in using those electric vehicles. Because the infrastructure keeps developing and will continue to develop further. It is a type of expense that is fundable even from those European funds and so on. Of course, we still have a slight problem there where you have a closer concentration of residential buildings. That this is a problem that does not only concern Slovakia, but it also concerns the whole world, all of Europe.

What little advantage we in Europe have over the United States, is the functioning of the electrical network itself. We have de facto double the voltage and charging directly into the socket

is significantly faster than it would be in the US, where you have, let us say, 120V in the socket. In my opinion, this however, opens space for the infrastructure projects to be far less demanding. You do not need to have a public charger everywhere. Because the chargers that are mostly installed are chargers that do not have to be an ultrafast charger, they can be regular chargers, but they are already using the one-way current charging. De facto all electric cars have an integrated on-board charging system where you can plug them into electricity and they simply charge and you can make these mini chargers, or sockets, for much lower costs.

For example, on a public lighting pole and so on, where you basically just need to install some extra box, which will be a payment gateway. Essentially it will be slow charging, but you will not mind because the car will be charged overnight. And when you put it on a strong current, it will not be weak at all and will be able to charge 11kW or 22kW without any problems. This means that this is, in terms of the infrastructure, also a way to simplify the use of electric cars also for people living in apartments.

The economic constraints were certainly a major issue when it came to electric cars in the beginning because those electric vehicles were comparatively more expensive than regular vehicles, and we mentioned that we are also saving money as the price of those electric cars keeps decreasing and in principle, we are moving towards price parity and at the level of some Chinese imports we might be surpassing them. When you look at some of those new Chinese cars that are coming in large quantities lately, they may be cheaper than a comparable car with a combustion engine from a European, American or Asian car manufacturer, but we when we are talking about Asians, we are probably talking about the Japanese or the Koreans.

Could you evaluate the administrative and institutional capacities in the implementation of green policies? Perhaps both at the local and national level, are they sufficient in your opinion?

I will get to that, but I just wanted to add something concerning the difference between the urban and rural population. I honestly do not think that there are such big differences between them in relation to the electromobility. It is more about the fact of how it is being utilized. If someone drives little or drives in an operational manner, which is okay for the car, then they do not have to worry whether they are in the city or in the countryside. Conversely, perhaps there is greater potential in the countryside, because that person will be living in a family home and will have less trouble with charging. I really think that today charging from a socket is not such a problem.

When it comes to the housing, yes, but again we are talking more about the difference between those family houses and those apartment buildings. In simplicity, you can probably say that at the level of the countryside, there may be some skepticism in accepting the goals and policies, but from a practical point of view, I do not think it is such a problem. As for those capacities, that is a very broad question. We have, in my opinion, always room in to improve the functioning of the public administration, because some areas are being addressed, so to speak, very cross-retort.

The sector of buildings is being covered within the Ministry of Transport, as well as within the Ministry of Economy, to a certain extent within the Ministry of Environment, plus their respective departmental organizations, such as the Slovak Innovation and Energy Agency for example or the Slovak Environmental Agency. That means that yes, there are some areas for improving the efficiency and possibly also cooperation between these individual organizations. But personally, from my experience, I do not think that we lack those capacities.

What is perhaps a broader phenomenon, which I felt in the state administration, was that for some reason, and we can only speculate that for which one, for some departments, sections and maybe the ministries or organizations, it might be simpler not to enter certain conflicts with the Commission, respectively, they may not realize the implications it will have.

I would move to the second round of questions. What role do you think public trust, populism, and politics play in general in implementation of green policies and how it affects the success and failure of these policies in Slovakia?

It is far more political question. In my opinion, in both our and the Western society, the last decades can be marked as decades of polarization. Sometimes, it seems like the aim of politicians to delineate themselves in relation to individual things just to be different than the rest of the political spectrum for example. And sometimes such delineation, whether from one side or the other, seems to contribute to that polarization. At the end of the day, in my opinion, there is a consensus on those policies, the debate is in the middle and we should lean a little more to one side, a little more to the other side, but the “big politics” and today's way of politics through statuses, press conferences, social media almost always tends to twist the debate into one extreme or the other. And that is unfortunate, because it does not help to achieve the goal even if there is one present. And it is being operated with elements like Green Deal here, Green Deal there, but the Green Deal is so huge that it has its inherent flaws, and the debate should be in the middle and about how to fix this and that.

However, it is legitimate for some member state or some part of society or the industry consider some demands or specific steps resulting from a huge legislative package as problematic. In my opinion, it is legitimate to discuss them, even if they could mean that we are not going for 100%, but we are going for those 90%. But the unfortunate thing is exactly that the politics is so vulgarized. It is vulgarized and the language of the politics is not professional. There is a big effort to simplify very complex subjects for the voters. And now we really getting to the point that we are not talking about the essence, but we are talking about extremes of opinions, whose only aim is to delineate itself against the rest or the specific political party. And this is really something that is not just specific to Slovakia, in my opinion it is similar across Europe.

How do you perceive the current perception of the public in Slovakia of these decarbonization policies set by the EU? And perhaps another question, to what extent do the media affect the public support for these policies?

I am afraid this is another area where we get into a polarizing political debate and the media somehow copy it. That something is only good, or something is only bad. Personally, I think that it is a great responsibility of the European Commission and major member states to implement policies in a way that follows the completion of the goal as much as possible and in the smallest possible way submits requirements that can be perceived objectively as problematic by the population or industry. This may be controversial, but even the group that is in favor of decarbonization and supports these policies is very polarized and perhaps overly ambitious and it pushes some demands forcefully although it may have some negative implications, which could be relatively significant.

This only contributes to the fact that in the end, those partial steps will have negative implications, and it will simply create greater pressure, which seems like it does not just affect that specific thing that is, let us say, problematic, but touches on the entire area. It is like those electric cars. It is de facto an arbitrary target until 2030, 2035. Maybe it could maybe be extended to 2040, 2045, 2050 when it is net zero. There is a possibility of some calculations, what net impact would it have in terms of emissions, or they could far more support plug-in hybrids and so on and those people would perceive it less sensitively, right?

But when you communicate it to a, let us say, population with a secondary education in a way that prohibits buying a car with petrol fuel and commands to have an electric car “because Green Deal”, there you have that extremely simple link that will tell you that the whole Green Deal is bad. And yet it is one sensitive area that maybe could have been made simpler in a different way. And the net impact, which it could have had and might turned out to be negative, could have been much smaller than when you make one third of the population angry. And you do not make them

angry towards this one matter; you make them angry towards 17 orders and directions. This is the whole problem. The expertise is simply disappearing from the debate, maybe searching for that consensus. And unfortunately, on both sides, more and more extreme views are pushed to the forefront.

Have you noticed any populist rhetoric that has influenced either negatively or positively the implementation of green policies, either in the housing or mobility sector?

There are probably a million of them at the level of all states. I perceive that today's political debate is in fact always populist, whether it is on one side or the other. It is all about simplifying complex things. But I just turn the question around. For example, when I was talking about the housing in the introduction, the net benefit in that introduction could have been greater, but people perceive it more directly – “I will have a renovated house. That is what interests me. I do not care if my carbon footprint will be lower now.”

Of course, the goal of EU schemes is to improve the energy efficiency of homes, but you will not be running an advertising campaign saying, “Hey you, reduce your carbon footprint!” right. You will go like, “Hey you, come, fix your house!” So, it is more about searching for those benefits for the people. Why should they want to accept any kind of politics? Because it can bring something positive for them. It does not have to be just because they must.

We have already mentioned some rural communities, but we also have marginalized communities or people working in industry and so on. Do you perceive that a specific population group is more skeptical towards climate policies than another? And perhaps, which do you think is the most skeptical and how to change their perception?

In my opinion, it is the classic pyramid of needs. Someone whose daily or monthly main need is to cover the costs of living and food; such a person probably has less motivation to deal with an abstract concept of some global warming or the worsening of the climatic situation. For such a person, of course, it is too abstract at the level of his life, too exceeding his daily world. When it

comes to marginalized communities – if we mainly talk about the Roma – this is the example. For those people it simply is not the topic of the day. But for completely natural reasons, because they simply have a million other problems.

For example, if we talk about, I do not know, that you support them in building some of those own little houses, you help them build a house, assist them with some technical issues, deal with financing it and so on, of course, this has an impact also on the climate. Suddenly they are not living in overcrowded apartments and are not heating there with an open fire, suddenly they have a small house where they can have a home. And again, as for such, let us say, communities, it is not about you having to tell them, “Listen, you are burning garbage here and causing global warming.” You have to say “Let us look together at how to improve the situation you live in.” And within that, it is relatively easy to slip there something, and the side effect will bring improvement concerning also the climate.

We can move on to the third round of questions. We have already discussed many obstacles that affect the implementation of policies in the areas of decarbonization, as well as in the housing and mobility sectors in Slovakia. How can these obstacles be overcome? What strategies and steps would you recommend? After that we can move on to the sub-questions regarding civil society, non-governmental organizations, what role they can play in improving the implementation of green policies.

The impacts of those mentioned partial steps, whether on the population or also on the industry must be balanced. It is necessary to find ways how to implement them in a less confrontational way or in a way that brings fewer negative implications, say, for that industry or for those residents. And what strategies and steps would I recommend? Again, it may sound a little controversial, but if someone's goal is to achieve something like climate neutrality, then that person really cannot be radical. They must look at it from a perspective of the goal and not from the perspective of wanting to do absolutely everything possible and as soon as possible. A lot of times

good intentions can also cause negative outcomes. If influencers, maybe some NGOs and some media will be too radical, even though the intention behind it is good, it can only increase the amount of confrontation and delineation in relation to the policies. It is hard to formulate it in just one sentence, but that is what it is all about.

For example, the local action groups in the Czech Republic, but it is relatively developing already also in Slovakia, those work very well. These local action groups, they represent the parts of the population that know very efficiently operate as a link between public and city administration and the residents. On this topic I am not a professional, but these local groups are important. They help to increase trust in institutions. And another thing, often at the level of the municipalities themselves, it is about the mayor, how proactive or not they are. Simply put, if the mayor is proactive, they have access to the information they need. And to their voters they can communicate things in a way that is beneficial for themselves. It really can be about the work in the regions and these towns and municipalities have their place and role within all of this.

We have already touched the next issue about how to better support municipalities in implementing decarbonization policies in Slovakia. Would you be more in favor of some kind of decentralization, or perhaps do you have any other ideas for this?

I do not think that decentralization is the solution. It is more about the individual mayor himself. And of course, there are associations of cities and villages that can be worked with and are worked with, we did not discover the wheel. It exists and it is important to go through such associations when some calls are being prepared and presented and try to explain it also at the level of those municipalities themselves, to let them know.

Are there any international mechanisms or mechanisms at the level of the EU that you think Slovakia underutilizes? We are still talking about the area of housing mobility and overall decarbonization policies.

It is not a secret that Slovakia has its gaps in utilizing those Eurofunds and it is a bit of a different topic why and how it can be improved. Of course, it can be improved, but it is a very bad period to improve it. The mechanism that is utilized in Poland or to some extent even in the Czech Republic rests in simply massive pre-financing of the state budget and the subsequent refinancing of the funds used. What is not entirely possible with our current deficit, but it may be a possible way in the future. For example, you have a policy XYZ, I do not know, it could be development of railways. You use for it a billion euros from the state budget and at the end of the day you refinance it with the Commission. The Commission may will tell you, "This project does not meet some requirements," or "this one does not meet some requirements," and you may end up not refinancing the whole billion but 800-900 million instead. 100-200 million is just that additional cost which will increase your co-financing rate, but those 800-900 will already be used super effective, because you can use it was you want.

For example, what, sadly, happens in Slovakia, and it is happening across sectors, it does not concern only mobility and transport, is that everything is waiting for the resources and only after you have the resource coverage confirmed you go for the projects. And that is not a completely suitable approach. You must do just the opposite. Clearly, you must have some indication that this and that type of costs are eligible, but you need to go for it, use state money for it and after that try to refinance what can be refinanced. So, this is probably on the topic of using those funds as such. As for the "soft things", I recommend, if you have the time and a space, to study the functioning of those local action groups.

Good, thank you. I still have two final questions. What do you think is the significance of education, spreading information and raising awareness in Slovakia in support of green policies, and perhaps what is the current state of it in your opinion?

I am probably not entirely eligible to answer this question. I was born in Bratislava; I live in Bratislava and the only other place where I have lived in Slovakia is near Bratislava and this is

always a “bubble”. Personally, I am of the opinion, based on information maybe experience I have, that there is a social consensus on the goal or the need of protecting the environment, of protecting the climate, adopting policies to improve the climate situation, whether adaptation measures or directly decarbonization. And I really think so, and I might be naive, but I do not believe that there is currently a significant group of people who would say that climate change is a hoax, and we do not need to protect the environment.

Many of the green policies are actually very beneficial for the development of regions or for the protection of nature in those regions – building some water retention measures, revitalizing watercourses. I may be an optimist, but I do not think it is as bad as it might sometimes seem. But I could be influenced by some bubble I live in. Education is important, but I do not think we are that bad off. But of course, it is important when we talk about it from the perspective that each subsequent generation is more aware of the realities of climate change.

When I was in Salzburg lately, it was towards end of February, and it was 19°C there. This is something that people can already see, and it is hard to just not see it. It is hard not to see that when you walk along the promenade in Bratislava and have some idea over those x years about how much water is in the Danube in the summer and spring when it melts in the Alps, and you walk there during that time and see small islands. And you had not seen those islands before if it was not August. Yes, education has meaning, it will always have it, but I do not think it is the biggest problem we are facing. It is more about that the spreading of information must be, from my point of view, far less confrontational.

Someone says they do not want an electric car – it does not mean they are a barbarian. Maybe they are afraid that it will break down or they will not know where to charge it, maybe they are aware that they drive routes that are long. And it is okay, you can communicate with them, and you can explain those things to them. And it is not our goal right now, at least what I personally

think, that we should all be 100% electric. The goal is simply to have that transport mix so balanced that its negative impact will be significantly lower.

A hybrid model could be perhaps a way to go for such a person.

Exactly. And this somehow brings us back in a circular way to those demands at the level of the EU Commission. Sometimes maybe we can just be a step less ambitious and realistically achieve our goals and not to be delineated and extreme in some areas and then bumping into lower acceptance from the industry or the people.

Now the last question. What different approaches would you recommend for the housing sector compared to the mobility sector?

I mean, essentially, that is probably what we said at the beginning, right? The housing sector was initially about bringing more a net benefit and now the period of 2027, 2028 is yet to come and we will experience the negative side. The sector of sustainable mobility seemed to bring more costs at the beginning. The change of that thinking that I am now transitioning to a car that works on a battery was less acceptable and less accessible to a narrower population group. Yes, the price affordability has improved, the availability of infrastructure has improved, and it continues to improve, in some outlook, just as in the housing sector, an expansion of the EU ETS awaits us in the mobility sector, which of course can be seen as another challenge. You can imagine it from the perspective of having an old car at home. Now someone snaps their fingers and suddenly your house is renovated, and the car is replaced. Having your house renovated is just good. The fact that your car is replaced with an electric vehicle may pose some inconveniences for you.

Thank you very much, it was very beneficial. Have a nice day.

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