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Rurbanization—Making the City Greener: Young Citizen Implication and Future Actions

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Abstract: City life has become the norm for most of the global population and building sustainable cities is a growing trend, together with an increased focus on healthier lifestyles in urban settings. Given this framework, the concept of ‘rurbanization’ is gaining momentum as more and more people are interested in bringing natural green spaces within the urban setting. For this purpose, a research (online survey on a sample of 500 respondents) was developed to discover youths’ perceptions on what a sustainable city means, their perspectives on the urbanization problems, and willingness to take action towards improving the green aspects of their urban life. Results revealed that sustainable life perception vary a lot across the young generation, but opinions on what are the city life issues tend to converge to similar points, such as air quality, disconnection with nature, greenhouse effect, urban heat islands, and water quality. When it comes to rurbanization solutions for a greener urban life, young people lean more towards individual solutions, be it an easy and short-term one, such as endowing their home with more green plants, or a more drastic one, such as moving altogether from the city area towards greener locations. Results were also used in designing a conceptual model for actions towards rurbanization.

Keywords: city greenspace; rurbanization; sustainable development; youth citizens

1. Introduction

Urbanization is a long-term process. In most cases, it started from the historical center of the city, then expanded outside of it, thus giving rise to urban densities and new ‘outer’ cities in places which had previously been suburban areas and green fields or rural sites [1]. Today, 55% of the world’s population lives in cities. The United Nations Department of Economic and Social Affairs, Population Division estimates that by 2050, this percentage will reach 68%, although growth will not be globally uniform. India, China, and Nigeria are expected to constitute 35% of this growth (about 2.5 billion people) [2].

In this regard, urban governance is increasingly important, capacity consolidation and institutional strengthening of local authorities becoming major strategies for urban productivity growth, increasing local income levels and improving social and economic conditions [3]. Improving living conditions in urban areas must also include the green spaces that support human health and wellbeing, in awe of the nature and benefiting from its services for the people.

Starting from this desideratum, the present paper aims to analyze the ‘rurbanization’ process and identify the interest that inhabitants of cities have towards this process. More specifically,

the current paper presents the results of a research project aimed at evaluating young individuals' willingness to engage in making the city greener from their own initiative, aligned with the European policies' tendency towards empowering and engaging the citizen. Within our research, the concept of 'rurbanization' refers to the influence of a rural way of living on the urban areas. The term can also be employed in reverse, indicating the urbanization of the rural life, an idea proposed by the two concepts of 'new rurality' [4] or 'new rusticity' [5]. The present study, however, employs the first notion stated above, trying to highlight the translation of some aspects related to rural life in urban areas, and the contribution of this process to the sustainable development of cities. Moreover, in the context of the present research, the concept of green city refers to a narrower perspective of a city with extensive green spaces, the foundation of the broader perspective that refers to environmental and/or sustainability performance [6]. Going even further, the nature-based solutions approached in this research project were defined by the European Commission as it follows: "Solutions that are inspired and supported by nature, which are cost-effective, simultaneously provide environmental, social and economic benefits and help build resilience. Such solutions bring more, and more diverse, nature and natural features and processes into cities, landscapes and seascapes, through locally adapted, resource-efficient and systemic interventions" [7].

The added value of the current paper consists of its focus on the young generation (as a source for sustainable development) and the evaluation of their openness towards engaging in activities that will result in a greener city. This type of approach addresses challenges related to rurbanization from the young generation's perspective and involvement. In this way, this paper aims at unraveling the potential of rurbanization developed based on individuals' actions.

The paper proceeds as follows: The first section discusses, on the one hand, the link between the 'rurbanization' process and the sustainable development of the cities, and on the other hand, it addresses the aspects regarding people's lives in large urban agglomerations, with a focus on young people's quality of life in the urban setting. This is followed by research aimed at discovering youths' perspectives on their green life aspects together with their willingness in bringing rural experience within the city in order to gain a better connection with nature that is likely to generate positive outcomes in the long run. The research results are further discussed and analyzed, and a set of conclusions and practical implications are drafted based on these results.

2. The 'Rurbanization' and Sustainable Development of Cities

The official communiqués of the United Nations show us that we live in a largely urbanized world and that the urbanization process is proceeding at a fairly fast pace. Cities have had high population densities for a long time now, but their physical extent increased relatively slowly [8]. This tendency has been reversed in the last 30–40 years. Today, urban areas around the world are expanding, on average, twice as fast as their populations [9].

Urban areas are complex systems linked to economic, ecological, and demographic conditions and change [10]. Urbanization has always been a natural process in the development of human society, but today, the process of urbanization can bring with it several potentially negative effects. Although urbanization is often perceived as a local issue, the direct impact of future urban expansion on biodiversity, for instance, is highly significant [11]. The over-extraction of groundwater resources also yields an important pressure on the environment [12]. Therefore, people's concern to limit the negative effects of the urban development is well founded. The analysis of the latter half of the century can provide significant information about the human footprint in the evolution of the earth's biophysical systems and the role of science and scientists in leading society's transition towards greater sustainability [13].

On one side, the phenomenon of economic globalization, combined with an intensified trade liberalization and an increased importance of the knowledge-based economy, disproportionately generates benefits in favor of urban areas compared to rural ones [14]. But still, the interdependence between rural and urban areas is growing. This matter changes the traditional role of 'rural' and

‘urban’ spaces [15]. Agriculture, for example, which represents a very important activity in rural areas, especially for food production, has started to be complemented by the development of other types of activities in production and the service sector [16]. Following the same idea, Dashper [17] shows that the rural environment, like the urban one, becomes a place of expanding consumerism (tourism, for instance) and also a center of non-agricultural production. Rural households begin to rely on non-agricultural employment such as tourism as a means of diversifying incomes in order to become less reliant on agriculture. Just as rural areas show signs of urban practices, traditional rural peculiarities, such as agriculture, are manifested in urban areas as well [18].

The elements of the rural environment have always persisted in the cities of Western Europe [19], which entitles us to make the same assertion for Eastern Europe that, as a result of decades of centralized economy, it is less economically and socially developed. Rural is insinuated in the city not only as a lifestyle choice or as a singular attempt to integrate sustainability into urban life, as expressed and analyzed in some discussions of urban agriculture in Western cities [19]. Thus, the rural is not just an accessory reintroduced in entirely urban areas, but is actually part of an interesting combination of two seemingly opposite dimensions: Urbanity and rurality.

The rapid growth of cities—the result of population growth and growing migration—has led to a real explosion of mega-cities especially in developing countries, and suburbs have become a major feature of urban life [20]. Sustainable development cannot be achieved without significantly transforming the way urban spaces are built and managed. Creating sustainable cities means creating career and business opportunities, safe and affordable housing, and building resilient societies and economies. This involves, among other measures, investment in public transport, the implementation of green public spaces, and the improvement of planning and urban management in a participatory and inclusive manner [20].

Over the years, the attempts to redesign the city have very rarely given up the notion of the city itself. It would be an interesting assignment for sociological research to explore the significance of the notion of city, both among the urban and rural population, and the preferences of the participants for a certain lifestyle would also be worth researching. The proposal to rurbanize cities would require to some extent the ‘ruralization’ of thinking [19] in terms of social relations, man’s relationship to nature, matters of food and livelihoods, real and induced needs, all in order to make city life more sustainable.

A possible way to follow would be to distinguish the dimensions previously associated with the urban and rural environment and recombine them in order to create a new paradigm for the development of life in urban spaces. In this respect, the individual initiative is encouraged, according to European regulations and the young generation is the ideal starting point for sustainable change under the rurbanization concept. In the next section, a review of the existing literature on city life, sustainable city life, and city life features for young people is conducted.

3. Features of City Life for Young People

Approaching the subject of city life and city life quality is an increasingly hot topic in any debate area since we are all witnessing a quasi-permanent relocation from villages towards urban areas, a movement that led to a record in 2007: The number of city inhabitants surpassed the number of villagers [21]. In the context of this urban setting expansion, a degradation of the agricultural system has occurred and has impacted human wellbeing [22]. So, despite the development of spread and quantity, life development in the urban setting has not succeeded yet its full potential when it comes to sustainability in its various perspectives—environmental, social, and economic [23]. Even more than that, Murgas and Klobucnik [24] argue that big city life is detrimental to life satisfaction while rural life is at the opposite spectrum, being beneficial to life satisfaction. Green spaces become even more important since previous research has proved that social factors rather than economic factors influence life satisfaction for individuals [25] Therefore, Unsworth [23] proves that the concept of ‘urban renaissance’ is wide enough to include the new sustainable urban landscapes that take into account and solve social cohesion, sustainability, connectivity, walkability, and higher-quality streets.

Given the framework, having an increased focus on subjective evaluations of different city life aspects seems to lead to more relevant perspectives on quality of urban life [26].

Despite various forms of city development that have turned some cities into megacities, Drobysheva and Larionov [21] show that citizens are pressured into changing in terms of psychology and behavior according to the available personal and public space. But since cities have been at the heart of innovation as a source of new ideas, solutions, and systems [27], they now have yet another chance in proving that sustainable innovation can be the key towards the wellbeing of cities' inhabitants, especially young inhabitants. In order to achieve this, integrated policies and actions are required to create the appropriate conditions related to social justice, environmentally friendly landscapes, and economic benefits for living in the city [23]. Such policies are becoming more and more important since previous research has showed that no, or restricted access to, natural ecosystems is one cause of people's disconnection from their local environment, with a wide range of negative consequences for population well-being [28]. So, despite the high rate of development and growth of the urban space, there is also an increasing trend for the growth of social pathology reflected in crimes and mental disorders [24]. Drobysheva and Larionov [21] expand on this idea, arguing that the urban setting has led to 'emotional manifestations of satiety,' a concept that entails a wide range of behaviors like aggression, irritation, and apathy. In the context of such struggles of the urban life perspective, it is becoming increasingly important to grant special attention to the urban youth and their successful social integration as a foundation for sustainable urban development [29].

In order to decide what needs to be done in terms of quality of life improvement and sustainable living conditions, we first have to identify which are the biggest concerns of young citizens when it comes to city life. Among all aspects derived or determined by urbanization, we have chosen five that are, first of all, extensively discussed in literature (as presented in Table 1), and secondly, directly linked to our approach of making cities greener towards 'rurbanization.'

Table 1. Urbanization problems directly associated with the 'rurbanization' solution.

Urbanization Problems	Literature on This Topic
Air quality	According to the European Environment Agency's 2019 Air Quality Report, cities regularly exceed the European air quality standards for PM2.5 levels prescribed by the Air Quality Directives and by the Air Quality Guidelines recommended by the World Health Organization (WHO) [30].
Disconnection from nature	Within cities worldwide, most residents are concentrated in neighborhoods of impoverished biodiversity, thus billions of people may lose the opportunity to benefit from or develop an appreciation for nature, as nearby surroundings shape people's baselines of ecological health and, in consequence, their quality of life [31]. There are, however, solutions to this problem: Encouraging cities to introduce nature into the urban core, such as requiring buildings to have windows that can be opened, allowing fresh air and natural light to enter the room; incorporating rooftop gardens and urban agriculture; creating spaces within and around buildings to touch, see, and smell native plants [32].
Greenhouse effect	This is the negative effect of expanding cities with growing industrial power, which automatically leads to gas emissions [33]. People living in these areas can affect the balance of nature since the gradual increase in the earth's surface temperature is caused predominantly by human activity [34,35].
Urban heat islands	Urbanization has a great impact on the local city climate, thus triggering the urban heat island effect and affecting the quality of life [36,37]. The center area of a city registers the highest surface temperature compared to the surrounding open area and the areas covered with vegetation and water [38].
Water quality	Water quality is intensively discussed in the recent literature, even though this has been an issue for decades now [39]. There are various papers focusing on specific geographical areas, as each one has its own hydrological footprint, but the focus is on the impact that enlarging cities have on water availability, quality, and delivery [40–43].

When speaking of the young generations and their wellbeing in an urban setting, this topic is gaining momentum based on the current youth mental health crisis [44], a topic even more important as previous research has proved that mental illnesses begin during youth [45]. More specifically, Mortensen and Pedersen [46] prove that there is a direct correlation between the risk of developing schizophrenia and life in the city landscape in the first 15 years of life. Expanding on this idea, young generations are more and more likely to live in high-risk urban areas that prevent them from having the freedom to be in outdoor places [47], translating into increased urban life pressures on multiple aspects of people's lives which eventually turn into a higher exposure to disease agents [48]. Even more than that, research shows that there are some critical levels of greenspace whose growth or reduction can have a strong and direct impact on health [28]. Furthermore, addressing this age-range population is motivated by the fact that they constitute a consistent source of creativity and high consumption power that can run the engine of sustainable innovation and development in the city [29]. In order to create the appropriate environment for such a development, nature is displayed to offer a "stronger, authentic sense of self or offering a new perspective of oneself within the world" [47]. Repke et al. [49] have shown in their research how the positive impact of nature is to some extent motivated by the decrease in impulsive behavior and fast reckless decision-making. The same authors further discovered that these benefits (decreased impulsive decision-making that is thought to generate health improvements) occur in people due to an expansion of the space perception [49]. These results are further confirmed by findings showing that having access to a garden was linked to important health benefits, especially mental health, and also to social and emotional positive outcomes [50].

This population segment is often discovered as disinterested and disconnected from nature [47], which can be a lead cause of youths' struggles with mental, physical, psychological, and spiritual balance. For example, previous research has proved that nature connection is one path towards life flourishing, so creating the context in which citizens can connect with nature is a "potential wellbeing intervention" [51]. Going even further, exposure to greenspace was discovered to build new capacities: Physical activity readiness and social contact openness, both with major psychological health benefits [28]. But what is nature? The most common definition of nature relates to "trees and woodland in and around the city" and it is often defined as being external to the city setting [52,53] since it is frequently associated with "quieter, less peopled, environments, proper countryside or farms" [47]. Even though both concepts of 'nature' and 'wellbeing' are charged with personal meaning [51], human wellbeing is described to include elements like security, basic resources for living, freedom of choice, health, and functioning social relations [22]. In the context of wellbeing, the 'biophilia hypothesis' argues that people have a natural tendency towards living systems that will lead them to subconsciously seek nature connection [28]. This is becoming even more important as cities are rather artificial systems and not natural ones that are starting conflicts between humans and nature that translate into climate change, energy crisis, and food security [54].

In the given context, with an increased focus on turning the cities greener, healthier, and more natural, especially for the younger generation, the present research was developed in order to discover youths' interest in approaching and promoting aspects of 'rurbanization' in their own urban lifestyle. In the next section the research is further detailed, starting from the research methodology through the results and their discussion.

4. Citizens' Perception on Urbanization Problems and Future Actions They Are Willing to Take towards 'Rurbanization'

4.1. Methodology

Considering all the above-mentioned implications of urbanization, where citizens feel the pressure of big city life, together with this new opportunity of doing something about it—'rurbanization'—we have developed a quantitative study. This research aims to identify the degree to which citizens feel this pressure and are willing to act towards making the city greener. Among all 'rurbanization' dimensions, the present research is focusing on the city's green life aspects, which refer to a city more connected to

nature and citizens acting towards having a rural experience within the city borders. This approach is very much supported by the European Commission, who has even launched a competition for the 2023 between cities—European Green Capital (EGCA 2023) and the 2022 European Green Leaf (EGLA 2022), recognizing cities that are genuinely committed to becoming more sustainable [55,56].

The need to fight the negative effects of this accelerated urbanization is even greater in ex-communist countries, where up until 20 years ago the rural population was surpassing the urban one, thus cities were very much uncluttered. This new shift in geographical structure, described by a migration to city life, has authorities and citizens unprepared for all the problems that urbanization brings. For example, the enlarging city's population in Romania led to poor air quality, which continues to be a problem for years now, while the European Environment Agency estimates that about 25,400 premature deaths were attributable to concentrations of fine particulate matter, 580 to ozone concentrations, and 1300 to nitrogen dioxide concentrations [57]. Also, water quality is still an issue, as centralized drinking water supply is covering only 70% of the total population, the rest using groundwater through individual wells, leading to problems such as organic pollution, nutrient discharge, priority substances, and hydro-morphological alteration [58]. When it comes to disconnection from nature, a 2019 study shows that half of respondents (52%) spend in a week, on average, only an hour or less in nature [59]. The same study presents positive signs for the future, as 90% of respondents said they would enjoy spending more time in nature, although 77% of them are aware that this means changing their daily routine and lifestyle. Another problem brought by urbanization is related to heat islands, with major cities in Romania (such as Bucharest, Iasi, Cluj) monitoring and trying to identify, if not providing immediate solutions, at least some warning mechanisms [60–62]. Although the greenhouse gas emissions in Romania are below the EU average, due to the absence of large industrial platforms, there are still problems related to gas emissions from waste control [63].

Considering all the above-mentioned environmental problems from Romania, our take on 'rurbanization' in the present research starts from the individual and relies on his unforced decision to take action towards a better quality of life, a more sustainable environment, without waiting for the government to do all the work. This approach is also supported by the European Commission, who is empowering the citizens to be proactive, proposing inclusive policy making, where citizens and government bodies are equally responsible for the well-being of their environment [64].

Having this context, our study is focusing on Romanian youth perspectives on 'rurbanization' in order to identify the actions young people are willing to take towards making their city greener. Considering the nature of this subject, we have designed and implemented a quantitative research project (based on an online survey), in order to also have the ability to identify correlations between factors and actions, thus building a conceptual model for actions towards 'rurbanization.' Respondents were selected from university centers in big cities, asking them to also give a referral for other age groups.

The research objectives cover a broader perspective, as we intended to identify current urbanization problems and their impact on individuals' lives, and also the enhancing and inhibiting factors for such urbanization problems.

The research sample consisted of 500 young people living in the Romanian urban area (cities with more than 50,000 inhabitants), 18 to 35 years old (according to Romanian Law no. 350/2006 young people are citizens aged between 15 and 35; in our research, we established the minimum limit at 18, in order to comply with the ESOMAR code of ethics). The size of the research sample corresponds to a $\pm 4.5\%$ margin of error and a 95% confidence level. Trying to build a representative survey, the sample was structured based on age, income, and gender. Regarding age, we had an 80/20 ponder for 18–25 years versus 26–35 year, based on two reasons. First of all, this research intends to identify call-to-action strategies, in order to positively modify the current behavior of people living in the city, and there is sound evidence that younger generations are easier to influence, as their behavior is not yet fully formed [65,66]. Secondly, as the European Union defines young people as being aged between 15 and 29 years, a greater emphasis is laid on the first segment (18–25). The gender segmentation

led to a sample of 45% men and 55% women, using the current data from the National Institute of Statistics [67]. The income was used in order to make sure that we have a proper representation (corresponding to the national statistics) of the purchasing power, the research sample being composed of low income individuals in a proportion of 40% (under 1500 RON per month), 50% medium income (between 1500 and 4000 RON per month), and 10% high income (over 4000 RON per month).

The questionnaire used in our research was built from general to specific items, with a total of 31 questions, out of which the first ones had the role to filter the proper respondents, in terms of place of residence (where we look for people living in cities with more than 50,000 inhabitants) and age (selecting only those with the 18–35 years segment). Moreover, in order to respect the sampling quota, there were also questions about gender and income, and for segmentation purposes we included information about period of time lived in a specific town and occupational status, in order to see if this factor influences the perceived impact of urbanization problems.

The research results will be presented both from a univariate analysis, where several key-questions will be discussed, and a bivariate one, where we will use a correlation test (Spearman) in order to identify if the perceived impact of urbanization problems can affect the decision to take action towards making the city greener.

4.2. Results

Our study had a funnel structure, starting from a broader perspective on the concept of sustainable city, going forward with topics related to the current situation related to city life, as ways to identify urbanization problems and, last but not least, debating future actions that citizens are willing to take in order to make their city greener.

4.2.1. Perspective on the Concept of Sustainable City

The research started with the exploration of the perspective on the concept of sustainable city to identify where does the association with ‘rurbanization’ dimensions stand. As mentioned in the literature review part of this article, ‘rurbanization’ is about making cities more sustainable, thus it is important to see, first of all, if people really understand what sustainability means and, secondly, if the actions towards making cities greener are associated with this concept. The 64 different concepts associated with a sustainable city show us that this term is not fully understood by the public. Despite this lack of agreement on what the concept means, we can see that some of the associations most often mentioned by respondents are linked to ‘rurbanization’ (Table 2), such as environment protection/ecological (9.9%) and closer to nature/green city/green spaces (6%).

Table 2. Concepts associated with sustainable city.

Spontaneous Associations with the Term Sustainable City	Percent
Environmental protection/Ecological	9.9%
Quality of life	8.7%
Continuous development/Evolution	8.5%
Lack/Decrease of pollution level	7.9%
Economic development	6.3%
Closer to nature/Green city/Green spaces	6.0%
Jobs creation	5.6%
Infrastructure	5.4%
Waste Selection/Recycling	5.2%
Others	56.7%

It is important to mention that the concept of environment protection is more often mentioned by younger people—18 to 25 years old, as a more generic expression, whereas the association with a clear concept such as green city is more often mentioned by older respondents—26 to 35 years old. This difference can be explained by the extra experience, where people have more and more personal

interaction with city life and responsibilities derived from it, thus identifying what needs to be done in order to have a sustainable city.

4.2.2. Current Situation Related to City Life

In order to better understand citizens' perceptions, we have to first discover and define the current situation for city residents. We therefore examine parks or green spaces availability around the living area, frequency of green space visits, time spent inside and outside the home, type of housing (flat apartment or house), owning a personal exterior garden, and having plants inside the house. All these conditions can lead to a higher or lower perceived impact of urbanization, as we will see in the conceptual model from the fourth section of this paper.

In terms of parks or green spaces close to the living area, the situation is encouraging, as 84.6% of respondents have this facility, with an average of two parks in the range of 1 km away from home. However, when asked about their visit frequency to such places, we can see in Table 3 that 1/5 of young people do not interact with green spaces every week, a result influenced also by the home-park distance, as the percentage doubles for people who do not have a park or a green space within 1 km of their home.

Table 3. Frequency of visits in parks or green spaces depending on existence of such places in the living area.

Frequency of Visits in Parcs or Green Spaces	Do You Have Parks or Green Spaces in Your Living Area (within a Range of 1 km)?		Total
	Yes	No	
There are weeks when I do not visit green spaces at all	19.1%	35.1%	21.6%
Less than 1 h/week	13.7%	13.0%	13.6%
1–3 h/week	33.6%	27.3%	32.6%
4–6 h/week	20.3%	16.9%	19.8%
7–10 h/week	7.6%	7.8%	7.6%
More than 10 h/week	5.7%	0.0%	4.8%

This result is also backed up by the results in the parallel comparison between time spent outside and inside the house, where the ratio is 70 to 30 in favor for time spent inside home. This ratio is changing a little, towards 65/35, for persons living in a house, and not a flat apartment, thus having their own garden. Table 4 presents an analysis for these two factors and we can notice that, among those living in a flat apartment, there are very few who have a garden (6.3%). So, an individual solution that can really make a difference is building their own garden or participating together with their neighbors in building a common garden, or even bringing more plants into the apartment (where the current result show that 78% respondents have at least one plant in their home).

Table 4. Living condition in terms of type of housing and owning a personal exterior garden.

Do You Have a Personal Exterior Garden?	You Live in a		Total
	Flat Apartment	House/Villa	
Yes	6.3%	95.2%	21.6%
No	93.7%	4.8%	78.4%

4.2.3. Urbanization Impacts

In order to better understand the current situation, in our research, before identifying solutions, we have first presented participants with 5 urbanization problems, presented in detail in Table 1 from

Section 3 of the present paper, and asked them to rate their perceived impact, on a scale from 1 to 10. Table 5 presents the average score, showing that the air quality is perceived as the most impacted when it comes to living in big cities, with an average score of 7.99. Not far away is also the disconnection from nature (7.69), which means that people feel this rupture between their daily life and green life. What we have observed, based on standard deviation and coefficient of variation, is that for greenhouse effect and urban heat island the mean is not significant, as the coefficient of variation is around 35%. The explanation behind such results can be based on the little knowledge people really have on these two concepts, thus being harder to evaluate their impact.

Table 5. The perceived impact of urbanization problems.

Urbanization Problems	Mean	Std. Deviation	Coef. of Variation
Air quality	7.99	1.98	0.25
Disconnection from nature	7.69	2.16	0.28
Greenhouse effect	7.03	2.32	0.33
Urban heat islands	6.96	2.49	0.36
Water quality	6.88	2.01	0.29

In order to better understand the perceived impact of these five urbanization problems, we have to look at the correlation with different descriptors for the current situation, such as the amount of time spent in a certain city, the existence of parks or green spaces close to the living area, the type of housing (flat apartments or house), the existence of a personal exterior garden and also the existence of plants inside the house. Table 6 presents the correlations and their statistical significance, where we have highlighted the correlations with a significance level below 0.05 (which indicates that there is a statistically significant correlation between variables). These factors were used in the conceptual model, as enhancing or inhibiting factors for urbanization problems.

Table 6. Correlation between urbanization problems and the current situation descriptors.

Urbanization Problems		The Amount of Time He Has Lived in That City	Existence of Parks/Green Spaces Close to the Living Area	Type of Housing (Flat Apartment or House)	Owning a Personal Exterior Garden	Having Plants Inside the House
Air quality	Correlation Coefficient	−0.165	0.181	−0.029	0.047	−0.020
	Sig. (2-tailed)	0.046	0.000	0.520	0.297	0.656
	N	497	497	481	497	497
Water quality	Correlation Coefficient	−0.117	0.056	0.000	0.011	0.036
	Sig. (2-tailed)	0.010	0.216	0.999	0.808	0.425
	N	490	490	474	490	490
Urban heat islands	Correlation Coefficient	−0.078	0.073	−0.185	0.067	0.053
	Sig. (2-tailed)	0.085	0.107	0.045	0.142	0.244
	N	489	489	473	489	489
Greenhouse effect	Correlation Coefficient	−0.077	0.184	−0.077	0.073	0.045
	Sig. (2-tailed)	0.059	0.046	0.096	0.110	0.328
	N	484	484	468	484	484
Disconnection from nature	Correlation Coefficient	−0.032	0.210	0.017	−0.226	−0.244
	Sig. (2-tailed)	0.481	0.015	0.718	0.025	0.035
	N	488	488	472	488	488

The first descriptor—the amount of time spent in a certain city—has a significant correlation with the perceived impact of air and water quality, where we see a negative value, meaning that the more time a person spends in the city, the less he feels the impact of poor quality of air and water, as the

individuals just get used to the city conditions. The existence of parks/green spaces in the residential area has an influence on the perception related to air quality, intensification of the greenhouse effect, and disconnection from nature. For example, the respondents without a park/green spaces nearby have an average perceived impact of poor air quality of 8.86 (on a scale from 1 to 10, where 10 is the highest), compared to just 7.83 for those people living nearby such spaces.

The type of housing influences the perceived impact of urban heat islands, considering that this negative effect of urbanization is felt more in the middle of the city where there are many apartment buildings, whereas houses can be found more often in the outskirts of the city.

The last two descriptors—having a personal exterior garden and having plants inside the house—have a statistically significant influence on the perceived impact of disconnection from nature. Having plants in their life (be they in the exterior garden or inside the house) gives people more of a sense of natural surroundings, thus decreasing the feeling of disconnection.

4.2.4. Future Actions that Citizens Are Willing to Take in Order to Make Their City Greener

These actions are split into two categories, based on the individual decision that citizens can take: Leaving the city area for a home in a greener environment or staying in the city and fighting the negative effects of urbanization, trying to make life greener, thus becoming a pillar of transforming the ‘rurbanization’ concept into reality (as presented in Table 7).

Table 7. Staying or leaving? Decisions linked to urbanization problems.

In the Next 3 Years, Do You Plan to Move from the City to:	Percent
I will stay in the city area	83.8
Suburbs	12.6
Rural areas	3.6

This decision is rarely standardized, as people’s conditions and characteristics vary, weighting differently in the long run decision-making process, as can be seen from the below correlations with variables such as time spent in the city, the available green space, type of housing, occupation, and number of people in the household:

- The experience of living in the city puts a mark on this decision, as those who have been living for a short time in the city have a tendency to stick to it, whereas those with a large city experience are more likely to intend to move to the suburbs. There is also an option of leaving the city altogether and moving to the rural areas, a choice preferred by people who have lived for a medium period of time in the city (four to six years);
- In terms of occupational status, entrepreneurs are the most mobile, with a higher percentage of those who intend to leave the city in the next period, either to move to its outskirts or to relocate to rural areas;
- The more people in the household, the more prominent the tendency to leave the city: The percentage of those who intend to stay in the city is decreasing from 86.5% for those who live alone to 61.5% for those who live in a household with more than five people;
- The available green space in the living area is also a major influence: Those who do not have a green space at least 1 km away from home are much more eager to leave the city in the near future;
- People already accustomed to living in a house instead of an apartment and having their own garden are more willing to leave the city, while those who live in apartments are not as willing to make such a drastic change in their lives and take on the responsibilities of housekeeping and gardening.

What is even more important for our research is the influence of urbanization problems (issues) on the decision of leaving or staying. Table 8 shows the correlation between these two variables, and it can

be noticed that there is an inverse relationship, thus, the greater the impact of urbanization problems, the lower the desire of people to stay in the city (those that want to move to the suburbs or rural areas have a higher average score than those who will remain in the city area, in the next three years). The only correlation which is not statistically significant (having a significance level over 0.05) is the one for urban heat island, a concept which, as previously discussed, is less known by the public.

Table 8. Correlation between urbanization problems and future decisions on staying or leaving the city area (average mean for the perceived impact of urbanization problems, on a scale from 1 to 10).

Urbanization Problems	In the Next 3 Years, Do You Plan to Move from the City to:			The Statistical Significance of Variables Correlation	
	Suburbs	Rural Areas	I Will Stay in the City Area		
Air quality	8.63	8.89	7.85	Correlation Coefficient	−0.145
				Sig. (2-tailed)	0.001
				N	497
Water quality	7.47	7.50	6.77	Correlation Coefficient	−0.126
				Sig. (2-tailed)	0.047
				N	490
Urban heat islands	6.81	7.22	6.97	Correlation Coefficient	0.007
				Sig. (2-tailed)	0.885
				N	489
Greenhouse effect	7.65	7.22	6.93	Correlation Coefficient	−0.110
				Sig. (2-tailed)	0.015
				N	484
Disconnection from nature	8.82	8.50	7.49	Correlation Coefficient	−0.232
				Sig. (2-tailed)	0.000
				N	488

The second topic on future decisions is regarding citizens' own initiatives towards fighting urbanization problems and making their lives greener. This list is important in terms of future public policies aimed at empowering citizens to become change leaders in the neighborhood, in order to overcome people's numbing expectations of government being the only one responsible for decisions and actions.

As Figure 1 shows us, most respondents incline towards a short-term and easy to implement change—more green plants in their homes (48.6%), an action that, despite its contribution to a greener life, has a too small impact on the whole neighborhood environment. The second choice relates to people who are moving out instead of staying and finding solutions (38.6% chose to move to a greener area altogether). The third type of action is actually the one describing future communities, where people work together on making the surroundings greener and the city a habitable climate (28%). Alongside, we can mention also the citizens who are willing to build a personal exterior garden with their own resources (20%).

However, even though not all people are ready to take action, there is a part of the urban citizenry that is willing to pay for a better life in the city as 20.8% of the respondents opted for paying a local tax for the administration to create new green spaces in the nearby area. In order to feel closer to the rural area, people are also willing to grow their own fruits and vegetables (18.8%), but, again, this is a decision with a too little impact on the community, unless they are willing to share the harvest with other citizens.

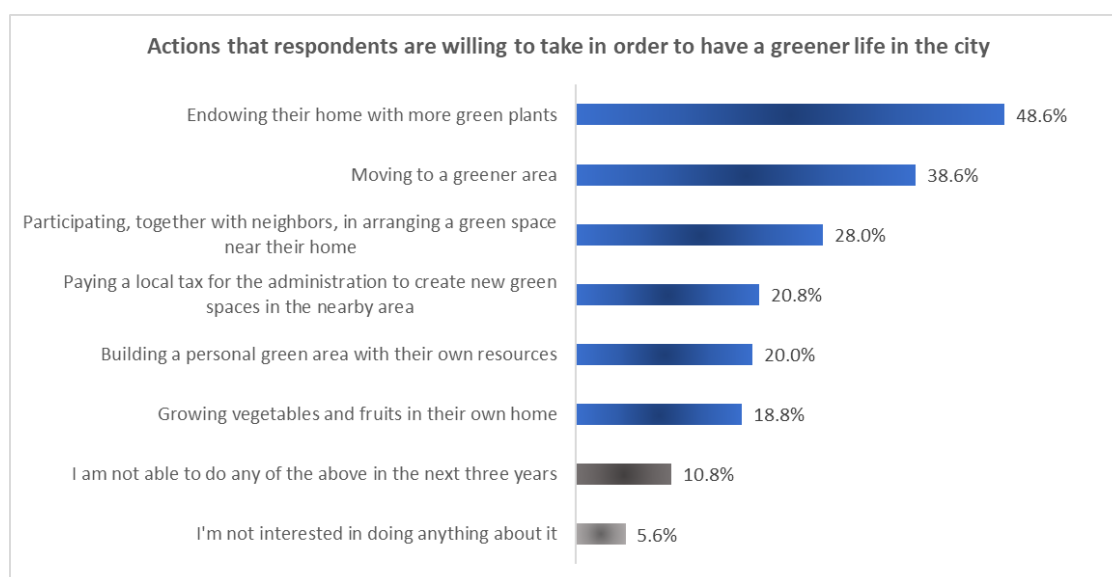


Figure 1. Citizens' willingness towards fighting urbanization problems and making their lives greener for city inhabitants.

In Figure 1 there are two separate categories of respondents, which will do nothing in the future regarding 'rurbanization,' be it because they are not able to take any of the above-mentioned actions (10.8%), or because they are not interested in doing anything about it (5.6%). If the first category (the ones not being able to do anything) is somehow influenced by uncontrolled variables, such as age (the percentage being triple for people between 18 and 25 years old, compared to those of 26–35) or income (where the percentage decreases from 15.9% for people with a personal monthly income under 1500 RON to 0% for those with more than 5500 RON), the second category (people not willing to do anything) can be related to the current context (as people living in individual houses or having their own gardens are more satisfied with the current situation, thus they do not see the need to do something in the near future). This is not sustainable behavior, as an inclusive and citizen-driven development is more likely to have a long-term efficiency.

The final analysis in our research connects urbanization problems and the 'rurbanization' solutions, as seen in Table 9. This correlation represents the main part of our conceptual model towards 'rurbanization' through citizen participation in making the city greener (Figure 2). In this model, we have taken into consideration only those correlations that are statistically significant, according to Spearman test (having a significance level below 0.05):

- Paying a local tax for the administration to create new green spaces in the nearby area—air quality and disconnection from nature;
- Building a personal green space with their own resources—disconnection from nature;
- Participating, together with neighbors, in arranging a green space near their home—disconnection from nature;
- Growing vegetables and fruits in their own home—disconnection from nature;
- Bringing more green plants into their home—air and water quality, urban heat island, greenhouse effect, and disconnection from nature;
- Moving to a greener area—air quality, water quality, and disconnection from nature.

Table 9. Correlation between urbanization problems and future actions towards ‘rurbanization.’

Urbanization Problems		Air Quality	Water Quality	Urban Heat Islands	Greenhouse Effect	Disconnection from Nature
Paying a local tax for the administration to create new green spaces in the nearby area	Correlation Coefficient	0.171	0.070	0.042	0.069	0.109
	Sig. (2-tailed)	0.046	0.122	0.350	0.128	0.047
	N	497	490	489	484	488
Building a personal green space with their own resources	Correlation Coefficient	−0.012	0.040	0.007	0.002	0.159
	Sig. (2-tailed)	0.795	0.383	0.874	0.970	0.000
	N	497	490	489	484	488
Participating, together with neighbors, in arranging a green space near their home	Correlation Coefficient	0.053	0.018	0.027	−0.014	0.094
	Sig. (2-tailed)	0.242	0.683	0.547	0.765	0.500
	N	497	490	489	484	488
Growing vegetables and fruits in their own home	Correlation Coefficient	0.026	0.070	0.077	0.092	0.108
	Sig. (2-tailed)	0.561	0.124	0.089	0.063	0.017
	N	497	490	489	484	488
Endowing their home with more green plants	Correlation Coefficient	0.092	0.089	0.114	0.147	0.123
	Sig. (2-tailed)	0.041	0.048	0.012	0.001	0.007
	N	497	490	489	484	488
Moving to a greener area	Correlation Coefficient	0.101	0.049	0.086	0.117	0.274
	Sig. (2-tailed)	0.025	0.283	0.058	0.010	0.000
	N	497	490	489	484	488
I am not able to do any of the above in the next three years	Correlation Coefficient	−0.006	−0.120	−0.006	−0.023	−0.098
	Sig. (2-tailed)	0.895	0.008	0.898	0.609	0.030
	N	497	490	489	484	488
I am not interested in doing anything about it	Correlation Coefficient	−0.087	−0.071	−0.092	−0.057	−0.178
	Sig. (2-tailed)	0.053	0.115	0.041	0.210	0.000
	N	497	490	489	484	488

4.3. Research Conclusions and Conceptual Model

Taking into consideration all the above-mentioned research results, the urbanization issues and their enhancing or inhibiting factors and actions that citizens are willing to take towards ‘rurbanization,’ we have built a conceptual model (Figure 2). This model displays what input should be taken into consideration when trying to decrease urban pressure and, most importantly, what actions can be developed and supported by policy makers, as citizens already validated them. The model does not incorporate the correlation coefficients between variables, but these coefficients can be seen in Tables 6 and 9.

In terms of future actions towards ‘rurbanization,’ we can see from Figure 2 that disconnection from nature is the most impactful urbanization problem, as it is correlated with all six actions, thus it is determining people to think of alternatives, such as plants inside the house, growing fruits and vegetables, even building an exterior personal garden. What is worrying is the fact that the highest correlation coefficient is with the decision to move to a greener area (0.274, as it can be seen in Table 9), which most of the times means leaving the city.

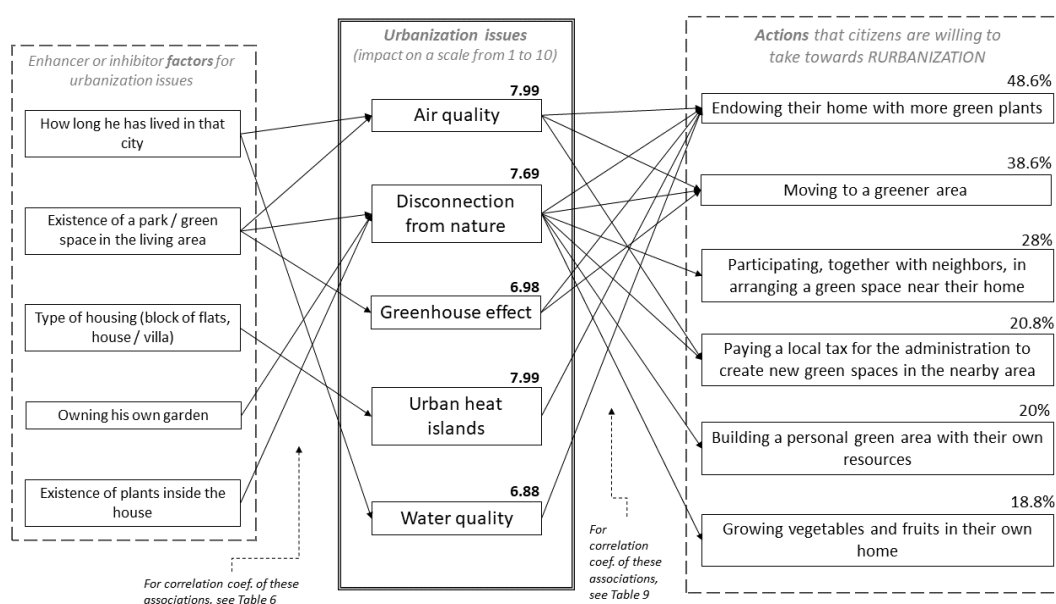


Figure 2. Conceptual model correlating urbanization problems with its enhancer or inhibitor factors and future actions citizens are willing to take towards 'rurbanization.'

One of the main issues of urbanization—poor air quality—is also determining people to think about leaving the city for a greener area. However, the highest correlation coefficient (0.171) is in relation to the decision of paying a local tax for the administration to create new green spaces in the nearby area. So, people, constrained by increasingly poor conditions brought by crowded cities, are willing to pay a special tax in order to have better life conditions.

The greenhouse effect determines people to seek green life, be it through more plants in their homes, or through moving to a greener area. We see, thus, that people make a direct connection between lack of plants in their vicinity to increased greenhouse effect. This is important if we connect it with the fact that, for now, the concept of greenhouse is not well-understood.

The perceived impact of urban heat islands has a statistically significant influence on the decision to bring more plants into people's homes, thus showing that citizens prefer to do something for their own personal environment, rather than identifying ways of participating to a broader sustainable process. This is something to consider in future policies that try to convince people to get onto the sustainable wagon, without showing first how resolving a community problem can lead to better quality of life for each inhabitant.

The least impacting urbanization problem—water quality—has just one statistically significant influence, and that is also on the decision to have more plants in the house. If we look at these two variables from a technical point of view, there is no direct link; however, people are trying to have a more balanced life, where they lose on the one hand (water quality), but win on the other (air quality and greener life).

5. Practical Implications for Environmental Public Policies and Future Research Directions

EU urban policies encourage cities to implement policies for sustainable urban planning and design. These should include innovative approaches to public transport and mobility in the urban sector, sustainable buildings, energy efficiency, and the conservation of urban biodiversity [68].

Also, the European Union encourages cities to go greener through initiatives such as the European Green Capital Award, the European Green Leaf Award, and the Green City Instrument. Oradea, a city in western Romania, was one of the seven cities that were nominated for the European Green Capital 2018 award. On 28 May 2020, the European Commission launched the competition for the European

Green Capital 2023 (EGCA 2023) and the European Green Leaf Awards 2022 (EGLA 2022), thus giving recognition to cities that are truly committed to becoming more sustainable [55].

In this context, Romania is committed to ensuring that at least 5% of the national allocation of the European Regional Development Fund (ERDF) will be dedicated to sustainable urban development [69].

Romania's national strategy on climate change for the period 2016–2020 includes, among its strategic objectives, "the protection and expansion of natural recreational areas in and around cities" [70]. The National Territorial Development Strategy 2035 includes a measure aimed at developing green spaces in urban areas and green belts around big cities [71].

However, despite its membership of the EU, Romania continues to struggle with the development and implementation of comprehensive environmental regulations. Faced with the increased pressure in the urban setting, both authorities and individuals should take on the responsibility to build more sustainable urban landscapes. In this context, it is essential to grow and educate a young generation with an open mind for bringing the rural flavor inside the city borders in order to enhance the urban life quality. Young generations lead the change, as we see more and more social campaigns that are initiated by teenagers, and considering that behavior flexibility declines with age, it is more and more difficult to change the mind of adults [65,66].

In this respect, the research described in this paper showed that there are things which we can work on, meaning that, although young people lean more towards individual solutions, with an easy and practical input, there is an opportunity for education towards an inclusive and cooperative process that focuses on community well-being, not just individual well-being.

The conceptual model that we have proposed in this article shows, on one hand, what factors need to be taken into consideration when designing a strategic public and private policy for urban life improvement, as the individual perceived impact of urbanization problems is variant, depending on factors such as available green spaces in the vicinity, existence of exterior gardens and interior plants, type of housing, and time spent in the city area. This conclusion is important when it comes to building new sustainable projects for living and working spaces, balanced with green oases integrated within the city architecture.

On the other hand, the conceptual model offers a perspective for future actions, as it is of utmost importance to empower citizens for sustainable development, counting on their proactive participation in community progress. The practical implication for this part of the model can be translated into regional administrative policies, where people are encouraged to take action, are rewarded for their input, and are constantly consulted in regard to future sustainable development projects.

We also see the influence of urbanization problems on citizen mobility, within the city limits or from urban to rural areas. This situation needs to be addressed, not in terms of limiting people's freedom to move, but in terms of giving them reasons to stay. The city expansion leads to a thriving economy and having the work force within the city area gives this process a boost. If we lose city inhabitants to poor urban conditions, we lose the power to strive for a better future. The research results showed us that young people think about leaving the city area due to problems with air quality, greenhouse effect, or disconnection from nature. All these urbanization issues can be addressed with a proper 'rurbanization' strategy that will make the city greener.

When it comes to research methodology, we can admit some limits related to sampling and representativeness, as we have analyzed only Romanian young people, 18 to 35 years old. Every country has its own geographic and economic background; thus, our results may not work for other regions. This is the reason for which we recommend that future studies expand the geographic horizon, in order to capture all Europe's youth, as the trend now is to have a unified youth, a borderless community, where everyone can learn from the other, anyone can help their neighbors and be responsible together.

Another limit may be the fact that we have focused our research only on the green city concept, out of all the rurbanization dimensions, leaving out important aspects such as transportation and food procurement. The decision to have a narrower research coverage is based on the fact that we wanted to have specific data that an authority can use in order to issue relevant public policies

towards making citizens more responsible for their surroundings. In this case, the specific authority is the Ministry of Environment, Water, and Forests. Future research can be extended towards other important rurbanization dimensions, thus offering the government more data on which to build a better sustainable strategy, thus incorporating the work of several other ministries and giving it a synergetic effect.

Future researches can also test some of the strategic ideas proposed in this article, in order to identify the most suitable both for city development, and for individual well-being. These tests should identify which options have the ability to be naturally integrated within citizen lifestyle and which need a more long-term education campaign, in order to convince people that the effort is worthy and justified.

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