

## **VOICE OF THE STUDENTS: THE ROLE OF EDUCATION AND PUBLIC ADMINISTRATION IN MITIGATING ENVIRONMENTAL ISSUES IN ROMANIA**

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**Abstract:** *Environmental protection is one of the core societal issues that the European Union has taken the global lead in tackling. In doing so, it relies not only on macro instruments (such as Environmental Action Plans or Multilateral Environmental Agreements), but also on national and micro-level partners (such as local administration, businesses, civil society and individual citizens). The current paper seeks to collect and disseminate ideas on solving ardent environmental issues, as they are expressed in a focus group involving students with diverse academic backgrounds (but specialized in the study of EU integration and environmental policies). The results suggest that pollution problems are significantly more present in urban areas of Romania and that the respondents were better acquainted of environmental problems that they face in their day-to-day lives. “Education” and “Public administration” proved to be the two central pillars on which innovative solutions for environmental problems could be designed and successfully implemented, in the views of the respondents.*

**Keywords:** *EU policies, environmental issues, urban pollution, public administration, environmental education.*

### **1. INTRODUCTION**

Environmental protection is currently a worldwide common concern. In the last 60 years, states worldwide have been involved in the negotiation and implementation of dozens of strategically important multilateral environmental agreements (MEAs), covering a wide range of environmental issues. In the last two decades, the European Union (EU) has become the leading proponent of such MEAs, whereas the US has retreated from its previous leadership role and refused to ratify most important

agreements (Kelemen and Knievel, 2015). This clearly emphasizes the role that the EU has taken upon itself, as a promoter or “leading champion” of international environmental law. The reasons for which US has shifted from a leader to a lager were well documented by Sbragia and Damro (1999) or Kelemen and Vogel (2010).

When designing its environmental protection strategies and policies, but also during the implementation phase, the European Commission significantly relies on a close collaboration with local authorities, especially within urban areas. In this context, urban areas, which are considered significant contributors to environmental degradation, are not only generating negative outputs, but also nurture the development of creative solutions in addressing pollution and other related issues (EC, 2018a). Thus, it is clear that the public administration, both national and local, plays a significant role in developing and nurturing innovative initiatives in the form of: providing support for green industries, incentivizing low-carbon investments, actively involving universities and research centers, or implementing pilot projects in the field of ‘smart’ or ‘sustainable’ cities. A significant advantage that the local administration can gain from such actions is the branding of their cities as ‘green’, ‘smart’, ‘creative’ etc.

The current paper is the second edition in the Voice of the Students series of papers. These are intended to collect and disseminate ideas on solving ardent environmental issues, as they are expressed by a group of students with diverse academic backgrounds (but specialized in the study of EU integration and environmental policies). Thus, from an educational standpoint, the aim of this work has been to encourage the students to get involved in assessing and tackling ‘hot’ EU environmental issues by actively participating in an open discussion (in the form of a focus group) that involves their classmates and is guided by the teaching staff. From an academic standpoint, the research is meant to provide interested parties (e.g. policy makers, public administration, NGOs, researchers in the field of environmental policy), as well as the public, with a unique point of view into tackling ardent EU environmental issues.

Beyond the introduction, the paper includes four sections. The second section is a literature review that presents how laws and regulations in the field of environmental protection have evolved within the EU. The third describes the research methodology and develops on the context of the research. The fourth presents the results of the two stages of the study and identifies the overlapping issues and solutions identified by the students. The final part of this paper presents the conclusions and implications of the research.

## **2. LITERATURE REVIEW**

The preoccupation that the European Union has with regard to the protection of the environment is expressed not only within the member countries, but also with regard to other key actors at a global level. Prior to 1987, the EU’s existing institutions did not explicitly express environmental policy concerns within the former European Economic Community Treaty. Nevertheless, in the context of rising environmental problems that prove to have a significant impact on a European level, a specific legislative infrastructure was needed more than never. For this reason, with the entry into effect of the Single European Act under the Delors Commission, the legislation that concerns the

protection of the environment received its own chapter in the Treaty of the European Union. There were voices which argued that although the European primary law finally included increased powers aimed at environmental protection, in terms of approach and practice, there seemed to be much more continuity than change – given that the Treaty codified many principles and approaches which can already be encountered in previous official policy papers (Hey, 2005). The amendments which subsequently followed under the EU's Treaties did not substantially change the principles and objectives referring to the environmental policy – the Treaty of Maastricht (1992), the Treaty of Amsterdam (1997) and the Treaty of Nice (2001) – but, at least the last two Treaties, brought significant changes with regard to the decision-making process, by introducing the co-decision procedure (Proelss, 2016).

In present times, the EU's environmental policy objectives are clearly specified in Article 191(1) of TFEU, as follows: “preserving, protecting and improving the quality of the environment; protecting human health; prudent and rational utilisation of natural resources; promoting measures at international level to deal with regional or worldwide environmental problems, and in particular combating climate change” (European Union, 2012, p. 132). Moreover, in Article 3(3) of TEU, it is specified that the EU shall work “for the sustainable development of Europe based on [...] a high level of protection and improvement of the quality of the environment” (European Union, 2008, p. 17).

In conclusion, environmental protection is clearly one of the main concerns of the EU embedded in its primary laws (in TEU and TFEU). More than that, its involvement in guarding and improving the quality of the environment is not limited to the EU's inside territory, but is it also seen at a global level. Although TFEU's articles do not explicitly refer to any geographical coverage by the Union's actions of EP, there are some references in Article 3(5) in TEU which EU's position in relation with the rest of the world (in promoting its values and interests with regard to EP, among others) and its contribution to “the sustainable development of the Earth” (European Union, 2008, p. 17). In fact, “for present and future generations, the EU leads the efforts for a sustainable world” (Vella, 2016).

As also stated in another paper (Apostoiae, 2016), environmental degradation is a phenomenon that is not limited by geographic boundaries, yet it is more pronounced in some countries than in others. Environmental protection is in need of a significant international agreement that has to be backed up by all the important global players. Moreover, it must go beyond the limited results of the already completed Kyoto Protocol that ended without a successor agreement in place. The scarcity of achievements on protecting the environment at a global level is due either to the increasing reluctance of some countries to be part of important international agreements (especially USA) or to the belief of other countries that economic development prevails environmental protection ('by all means'). In this context, although the EU is a key global player that contributes to the international efforts of promoting environmental protection, it has nonetheless limited options of achieving this desideratum outside its borders. One way to do it is to establish regional agreements with third countries and to seek that environmental protection is achieved via these frameworks. Moreover, it does that by promoting more effective environmental governance in the countries that wish to

embrace sustainable development and incorporate it into their legislation – an aspect included in the Environmental Action Programme (7th), the basis of the current EU policy up to 2020 (European Union, 2014) as well as in the UN Sustainable Development Goals (SDGs).

As Oueslati *et al.* (2015) describe in their paper, Europe has one of the world's highest densities of urban settlements, with over 75% of the population living in urban areas. The size of many European cities is increasing at a much faster rate than their populations. This trend towards reduced population densities began in the early 1970s, most prominently in medium-sized European cities. The European Commission (2016) showed that while urbanisation has the potential to raise wealth, hence the wellbeing of the society, it might do so at the expense of increasing, for example, pollution or other forms of environmental damage. "Cities account for the highest share of the EU-28 population" (EC, 2018a), given that these consume significant amounts of energy and resources and generate high levels of air pollution or waste. Nevertheless, cities also prove to have a huge potential as these are seen as creative hubs that could provide possible solutions to a wide range of environmental issues.

A concept that is continuously growing in importance in the last years and is of great interest for most cities around the world (at least for those cities that, under the pressure of the most recent financial and economic crisis, learned to adapt by cutting budgets and prioritise) is "smart city". Although it is not clearly defined and most definitions are subjective by nature, the European Parliament outlined in 2014 that at the core of the concept lies the creation and connection of human capital, social capital and ICTs infrastructure to better generate greater and more sustainable economic development and a better quality of life. Without delving into details, the main general idea that seems to link most definitions is the use of information and communication technologies (ICTs) and data as a means to solve a city's economic, social and environmental challenges. It is these new, growing, always changing challenges that represent a threat to the existing and well-established institutions and their traditional processes of governing.

In such a context, the existing forms of governance need to adapt, to renew themselves and to innovate to meet these challenges, making the cities not only "smart", but "smarter". As mentioned earlier, one way of doing that is for the governments to use ICTs to improve political participation, implement public policies or providing public sector services. Despite the instruments, one thing is clear: "smart cities" require "smart governance", through a 'smart' public administration. In addition, in line with this, too little is known with regard to the role of governments in promoting smart cities and their motivations.

### **3. METHODOLOGY**

#### **3.1 Research context**

Over the last decade, the European Union has focused significantly on developing long-term strategies and policies in areas related to consumer rights and environmental

protection (EC, 2018b and 2018c). Acting as a catalyst for improved global cooperation in mitigating climate change (UNFCCC, 2018), Europe has become a *de facto* leader in promoting sustainable development and in nurturing the growth of so called ‘green’ industries (i.e. renewable energy, energy efficiency, sustainable transportation infrastructure etc.).

These trends are expected to generate a demand for staff specialized in environmental policy and management on the job market. Thus, an academic and professional gap with regard to environmental policy training is likely to develop at a regional level. This issue drew the attention of the CERNESIM Environmental Research Center (part of the Alexandru Ioan Cuza University of Iași), which is specialized in five areas: Biology, Chemistry, Economics and Business Administration, Geography-Geology and Physics. The “Think Green, Act Green: Environmental Protection in a United Europe” (TAG-EU) Jean Monnet Module, developed by CERNESIM and supported by the ERASMUS+ Program of the European Union, provides a set of tailor-made courses on European integration and environmental protection and policies (EP). The primary beneficiaries of TAG-EU are students from all five CERNESIM faculties, who do not have access to EU and EP studies in their standard curriculum.

### **3.2 The customized focus group method**

The core research method used in this study was the focus group. The previous edition of “Voice of the Students” used a similar approach, although the actual implementation was significantly different due to the topics being addressed (Mihai, Maxim and Apostoaie, 2017). There are several arguments for choosing the focus group as the basis of the methodology, which were detailed in the aforementioned study. To briefly recap, these include: it nurtures spontaneity and innovation, it encourages a strong involvement of the participants in the discussion, it is adequate for generating synergy within a diverse group and it uses interactions that are familiar and comfortable for the students. In addition, by involving a group of environmentally aware students, the study is able to collect real world information at the ‘grassroots’ citizen level.

In order to efficiently collect the responses and facilitate the progress of the exercise, the focus group discussions were moderated using a ‘step-by-step’ guide, each step having an allotted time limit. A succinct overview of these steps includes:

- A brief outline of the research topic to be discussed (an ardent environmental issue affecting the EU and/or Romania) is presented;
- Participants are asked to write down the problem within the wider topic that they feel is the most significant, the factors that have contributed to creating or amplifying the problem, which groups/persons/entities are most affected by this problem, how severe is the impact on these ‘victims’ (low, medium, high, critical), what is a potential solution/realistic measure that can be taken to limit or eliminate this problem;
- Each student expresses the points that they have written down and the responses are collected in a table visible to all participants;
- An open group discussion is used to determine if any of the identified problems are similar and to group each of them into more aggregated and wide reaching issues;

- Each participant then writes down a feasible solution that successfully addresses an issue or a set of issues that they feel is the most important; the solutions are then read to the entire group;
- The focus group facilitators then classify these solutions into categories of measures (e.g. taxation, public investment, private investment, education);
- Each general measure is then evaluated through a ‘pros vs. cons’ discussion, which can be guided through questions such as: “Does it cover a sufficiently wide array of issues?”, “Does it have a reasonable financial or temporal cost?”, “Would it be efficient in the short or/and long term?”.

The current study presents the results of two such focus groups, conducted in two consecutive years. The research topic addressed in the first exercise was “urban environmental problems”. The students were encouraged to consider the city of Iași as a case study for identifying these problems, given that this is the second most populous city in Romania and it is the location where they are pursuing their studies. The topic of the research problem was selected considering the observation that urban settlements are the main polluting areas in the EU, as discussed in the literature review. In addition, Iași is among the three cities in Romania that is constantly exceeding air pollution standards, causing the European Commission to trigger infringement procedures against Romania (Energy Industry Review, 2018). The research topic addressed in following year was “pollution issues affecting Romania”. This topic was selected due to an observed increase, during the period 2017-2018 in the number of reports from entities (NGOs, news outlets, think tanks and governmental organizations), both national and international, signaling various environmental issues across the country. Examples include urban air pollution (dust, NOx, smoke etc.), rapid deforestation (legal or illicit) and pollution of water reservoirs. Some of these issues were also identified during research activities and other events facilitated by the TAG-EU project, such as the TAG-EU Green Workshop (TAG-EU, 2018), which involved specialists who are actively involved in the study of air pollution in urban and suburban areas of Romania. Another source of investigation has emerged from discussions with local rangers from the Călimani National Park during field study visits with the TAG-EU students.

As mentioned previously, two focus group activities were performed, in 2017 and in 2018 respectively. The participants in the first exercise consisted of 11 students, while the second activity included 10 students. These participants were selected from the pool of TAG-EU beneficiaries, classes of 2017 and 2018 respectively. They were selected based on their interest in taking part in the activity, as well as their proficiency in understanding and debating environmental issues and the functioning of EU institutions. The focus group took place in a university classroom that provided a relaxing work environment (offering panoramic views of the city) and that stimulated the debates regarding environmental pollution. The discussions were guided and moderated by one of the TAG-EU lecturers, with the assistance of the two other members of the teaching staff (representing the team of facilitators). The duration of the activities was approximately two hours, with enthusiastic debates and stimulating discussions continuing even after the official data collection process was completed.

The chosen method of research has several limitations, most of which have been identified in the previous edition of “Voice of the Students” (Mihai, Maxim and Apostoiae, 2017). However, the overlapping results from the two sets of participants (presented in more detail the following section), suggest that the conclusions drawn by the researchers are generally reliable.

## 4. RESULTS

In this section, we will outline the results of the two focus groups, conducted in 2017 (focused on “urban environmental pollution”) and in 2018 (focused on “pollution issues affecting Romania”). The data collected during the exercise was processed and consolidated through content analysis and coding (Malhotra and Birks, 2007). Parts of the analysis were performed during the implementation, as part of the ‘step-by-step’ process outlined in the Methodology section.

### 4.1 TAG-EU class of 2017 – urban environmental pollution

In the first focus group, each of the participants identified a specific environmental problem that affects the urban and/or suburban area of Iași. The initial solutions were diverse and covered issues that varied significantly in the degree of specificity and severity. Because of the group discussion, these were consolidated into six more wide reaching issues. The results are presented in Table 1.

**Table 1. Consolidated urban environmental issues identified by the students**

No.	Consolidated issue	Causal factors	Severity of impact
1	Air pollution and damage to green spaces related to cars and road traffic	Number of cars exceeds road and parking infrastructure capacity; inadequate public transportation; high usage of old cars and trucks	High – Very high
2	A public lake and forest (Dumbrava lake and Galata forest), located at the edge of the city, are becoming waste dumps	Littering and carelessness of visitors and residents	High
3	Noise and congestion of transportation impacting humans and the environment in the vicinity of roads and of numerous city streets	High intensity of traffic due to people following self-interests; poor quality of roads	High
4	Creation and continued development of landfills	Lack of containers and programs for selective collection of waste; lack of demand/desire from citizens to separate garbage; inadequate waste management by public authorities	Medium – High
5	Air pollution and localized environmental damage by larger	Local factories use production processes that generate pollution	Medium

	factories		
6	Drainage of waste in the main river crossing the city (Bahlui river)	Defective sewage systems; people dumping waste into the river and its tributaries	Medium

As can be seen from Table 1, the students rated the impact of the identified issues from medium to very high. The most notable problem was the one also flagged by the European Commission – air pollution within Iași city – which is assumed to be connected to the high levels of road traffic. In fact, air pollution places Iași on the map of Europe's most polluted urban settlements (Energy Industry Review, 2018). Other significant issues are related to garbage and waste pollution by common people, noise pollution related to congested transportation, as well as localized environmental damage caused by large factories.

**Table 2. Proposed solutions for addressing the identified urban environmental issues**

Description and strengths	Weaknesses and obstacles
<b><i>Education</i></b>	
“interactive, game, rewards (day off school) should be used to convince kids”	“difficult to implement in Romania due to culture, religion”
“environmental education is new and necessary for a long term impact”	“children don't take advice seriously – own examples would be more effective”
“not very expensive to implement, perhaps use NGOs (win-win for attracting new volunteers)”	“adults resist change, so focus should still be on children”
“indirect impact on adults with children's school books”	
“use the church for calls to action (e.g. plant trees)”	
<b><i>Legal standards</i></b>	
“Green police - creates new jobs”	“difficult to forbid car access in practice (people will not comply) needs investment in technology e.g. traffic cameras”
“it is more effective due to use of authority”	
“protected areas with no access for cars”	“no cars need better public transport”
<b><i>Taxation</i></b>	
“emphasize that it is an investment, not a tax”	“there are a lot of taxes already...”
“it can encourage development of the suburbs”	“people will try to avoid paying taxes (low effectiveness in the short term)”
	“additional costs with enforcing the taxes, paying fines etc.”
<b><i>Voluntary investment in infrastructure</i></b>	
“it can create new revenue streams (payment for	“it will not raise enough money, should be

relaxation services) and even create new jobs and other benefits”	complemented with public funding”
<b>Public investment in infrastructure</b>	
“special funds from local authorities should be established” (consultative allocation of funds)	“need to use money properly and access funding” “need for more transparency” “rigidity of public authorities”

The most frequently proposed solutions revolve around “Education”. Similarly, to the previous edition of “Voice of the Students”, the participants proposed creative new programs that could improve civic attitudes towards the environment. Solutions for educating children as well as adults were proposed. Most of the other possible solutions identified by the students require the involvement of local, county or national authorities through measures such as ‘creative’ taxation, consultative allocation of funds, public-private partnerships and creation of environmentally focused legislation and dedicated enforcement agencies.

#### 4.2 TAG-EU class of 2018 – pollution issues affecting Romania

In the second focus group, the participants identified various environmental problems present in Romania. However, several of these issues had overlapping scopes and could be naturally connected to those proposed by other students. Because of the group discussion, the initial problems were consolidated into three broader issues. The results are presented in Table 3.

**Table 3. Consolidated pollution issues affecting Romania**

No.	Consolidated issue	Causal factors	Severity of impact
1	Air pollution that mainly affects cities	Old, pollutant cars mostly imported from Western Europe; low quality infrastructure causing congestion and localized pollution concentration; congestion around large shopping centers and at city limits (related to commuters from expanding housing in suburban areas); insufficient efforts by authorities to clean the streets	Critical
2	Environmental degradation related to economic activities	Use of chemical fertilizers in agriculture and of chemicals in the mining industry; deforestation and environmental degradation due to other economic activities; state not being strict enough (legislation and monitoring); companies focused exclusively on profits	Low – Critical (in the case of water table pollution)
3	Garbage pollution and littering	Lack of education (littering); wasteful supply of plastic bags; unavailability of ecological bags;	Medium – High

		unavailability of infrastructure for garbage collection; inadequate usage of garbage dumps by companies	
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The most significant issue identified by the students is related to air pollution associated to concentrations of population (i.e. cities, shopping centers, major roads). Given the direct and immediate impact that air pollution has on human health and on the surrounding environment, this issue was flagged as being critical. The other two issues are related to environmentally costly economic activities and garbage pollution, each of these having a varied impact, from low to critical, depending on the intensity of the activity and on the nature of the effects that it has on the environment.

**Table 4. Proposed solutions for addressing the environmental issues affecting Romanian citizens**

Description and strengths	Weaknesses and obstacles
<b><i>Education</i></b>	
“educate people on environmental issues from an early age” (compulsory classes) “involve companies and state in promoting a social attitude” (for adults) “it can have an impact on children, changing mentalities in the long term” “it can be effective on a large scale if implemented in traditional education/schools” “it covers all of the main issues”	“it is effective in the long term; results are not fast” “adequate education for trainers is needed first” “materials and training of teachers can be costly overall”
<b><i>Public Administration</i></b>	
“more garbage bins available within cities and parks” “increase surface and improve maintenance of green areas in cities” “it covers all of the issues to some extent” “it can be efficient in the short and long term” “small steps for a short term impact do not need significant funds”	“no personal interest by the administration to take these measures” “sufficient funds need to be provided... not enough are available”
<b><i>Transportation</i></b>	
“switch from classic to green transportation” “encourage the use of electric vehicles, public transportation, bicycles” “carpooling by companies is already being	“costs for public transport investments may be too high for localities” “unreliability – low use” (weakness spiral) “green transport takes a long time to implement”

Description and strengths	Weaknesses and obstacles
<p>implemented successfully and more companies may be willing to cover such costs”</p> <p>“can be efficient in the short term, as an emergency measure”</p> <p>“combine with a digital app to reduce infrastructure costs”</p>	<p>“it has peripheral costs (charging stations, infrastructure, monitoring etc.)”</p> <p>“need to change mindset of public transport drivers”</p>
<p><b>Digitalization</b></p> <p>“public shaming via surveillance cameras”</p> <p>“online apps for monitoring garbage levels”</p> <p>“viralizing environmental issues on social media”</p> <p>“fast to implement and cheap to operate”</p> <p>“efficient in the short and long term”</p> <p>“examples of good practices can be rewarded”</p> <p>“increase public involvement in environment”</p> <p>“effective through social shaming”</p>	<p>“there is no guarantee that issues will be resolved or that people will react/resolve”</p> <p>“good at creating awareness, but not able to measure effectiveness”</p>

As can be seen in Table 4, “Education” remains the primary pillar from which the most frequently recommended solutions emerge. However, the implementation of most of the other proposals requires an active involvement by local or national governmental authorities. This suggests that students such as those involved in the TAG-EU program may have an active role to play in the design of future policies, either as green minded voters or as active citizens within their communities (within NGOs, public administration, local businesses etc.).

## 5. CONCLUSIONS

Environmental problems are present and have an impact on our everyday lives. As a result, they cannot be addressed only by using high-level policies, but also through customized implementation at the micro level. Public authorities and local administration has a key role to play at this micro level, along with businesses, civil society and individual citizens.

After analyzing the results, we can observe that, although the topic of the 2018 study referred to pollution problems affecting Romania, approximately two thirds of the issues that were identified are tightly connected to urban settlements. This conclusion is further supported by the fact that the discussions, which took place during the 2017 focus group (specifically addressing urban pollution in Iași), generated higher levels of enthusiasm and involvement in the discussion. Thus, we are inclined to deduce that pollution problems are significantly present in urban areas of Romania (a fact that was

also flagged by the European Commission during infringement procedures). Alternatively, it is possible to deduce that the respondents were better acquainted of environmental problems that they face in their day-to-day lives. By extrapolating this conclusion to the public, it is possible that, the use of intensive awareness raising campaigns could determine a shift in the attitudes of urban residents. The goal would be to make them more inclined to adopt a ‘sustainable’ and ‘responsible’ consumer behavior (purchasing, as well as waste output), which would imply that they would seek to avoid the augmentation of the environmental problems brought to their attention.

The overarching topic of “Education” has proven to be a central pillar on which innovative solutions for environmental problems could be designed. This was the case for each of the three focus groups conducted (2016 – first edition of “Voice of the Students”, followed by 2017 and 2018 in the current edition). Some of the creative ideas proposed by the students included involvement of the church, the creation of customized teaching programs for adults and children, as well as the indirect influence that ‘environmentally educated’ children can have on their parents.

Most of the other solutions identified are more or less connected with public administration – which represents a designer, means of delivery and enforcer of policies meant to mitigate pollution and environmental degradation at the urban level. Some of these include the broader categories of “Taxation”, “Legal standards”, “Public investment in infrastructure” (through consultative allocation of funds and public-private partnerships), “Public administration” and “Transportation”. We consider that governmental authorities can look at these results as a source of inspiration, as well as motivation for concrete actions. The fact is that young people are showing a relatively high degree of trust in the administration and believe that it will have a major role to play in the sustainable development of society going forward (although they are aware that this is not a *panacea* for all environmental problems).

Finally, we have observed that the students have proposed innovative means of implementing solutions that are considered more traditional (as was the case of “Education” described above). However, it is worth mentioning that the students also proposed some truly innovative solutions, such as “Digitalization” with all its means of action described in Table 4 (e.g. public shaming via mobile applications).

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