State – Civil Society Relationship for the Air Pollution Problem in Sofia, Bulgaria

Plamena Terziradeva

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Analysing the dimensions of the policy arrangement for air pollution problem in Sofia, Bulgaria; barriers that exist in these dimensions and the role of the civil society domain in this policy arrangement.

This master thesis is my final task for completing the master program Environment and Society Studies, with specialization Local Environmental Change and Sustainable Cities. Passing through this program was an important experience for me since it fulfilled my knowledge related to the environmental problems by concentrating on cities – how they create environmental issues and the opportunities for solving them. The writing of this thesis was an exceptional experience which allowed me to get acquainted with the topic of the polluted air in Bulgaria and especially in Sofia. Since I have always wanted to realize myself in my country, the work on this thesis has allowed me to meet many people who work in the field, and wherever what is offered as a job. I think this will greatly help me with my professional realization after graduating from the Master's program.

Before all, I would like to express my sincere thanks to certain people without whom writing the thesis would be impossible. First, I want to thank to my supervisor, namely Dr. Duncan Liefferink. I thank him for every minute of attention, for every advice he has given to me, for the freedom, which I had during the whole process of writing, and for his understanding when I come across different situations. Without him, writing this thesis would be a chaos. Then, I would like to thank to Stefan Dimitrov and Petar Kirov from AirBG.Info for the opportunity to do my internship at Code: Bulgaria Foundation. The time spent there taught me many things, and also gave me the opportunity to apply what I have learned in the university so far. Lastly, but not least, I want to thank to all people who took part in my research by giving me interview. All discussions with them were interesting for me and helpful for my thesis.

I hope that you will enjoy reading this thesis.

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August, 2019

Summary

The polluted air is becoming a painful issue for the population of Bulgaria and especially for the citizens of Sofia in recent years. This is due to various reasons - pressure from the European Union as well as from the citizens themselves. Despite the state's efforts to reduce concentrations of particulate matters, they are still above norms, especially during the winter when people are heating their households with wood / coal / fuel. This research is aiming at showing the reasons that still detriment the problem solving in Sofia, Bulgaria.

The purpose of this thesis is to provide deeper understanding of the air-related policy arrangement in the capital of Bulgaria, Sofia. For doing this, the four elements of this policy arrangement are analysed, namely: a) actors involved, b) resources needed, c) rules of the game, and d) discourses used. Within these dimensions, the barriers that exist on institutional and societal level are also identified – barriers that detriment the problem tackling in Sofia. After mapping the air-related policy arrangement in the city, the analysis focuses on one actor within this arrangement, namely the civil society domain. This is done because for the goals of the thesis it is essential to be understood to what extent the civil sector has influenced the decision-making processes on air-related policies and its role in causing/solving the barriers in the four dimensions. This was important in order the analysis to reveal the actual development of the country when it comes to the civil society involvement in political processes.

After explaining all this, it can be concluded to what extent non-governmental organisations and citizens are involved into air-related policies by the institutions and the relationship between the two sectors – state and civil society.

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List of Abbreviations

BSA: Bulgarian Academy of Science

CS: Civil Society

EC: European Commission

EEA: European Environment Agency

EO: Environmental Organisation

EU: European Union

EWC: Environment and Water Committee

ExEA: Executive Environmental Agency

LPAA: Law for Purity of the Atmospheric Air

MoEW: Ministry of Environment and Water

MS: Member State

NGO: Non-governmental Organisation

NIMH: National Institute of Meteorology and Hydrology

PAA: Policy Arrangement Approach

PA: Policy Arrangement

PM: Particulate Matters

RIEW: Regional Inspectorate of Environment and Water

SM: Sofia Municipality

TPP: Thermal Power Plant

1. Introduction

Bulgaria is a country that has experienced two radical political changes for the short time of the past 30 years. These shifts can be considered as important preconditions for different consequences for all aspects in one society. First chapter of this thesis presents two of the major changes that have taken place in Bulgaria over the last 30 years being crucial for the societal psychology, political landscape, economy and environment (Communism regime falling and the EU accession), as well as the air pollution problem in the country. The chapter continues with describing the research goals, questions and relevance of the research afterwards.

1.1 Introduction to the research

1.1.1 Main Political Changes in Bulgaria

In its 'canonical form', the main elements of the paradigm of the transition after 1989 have been taken as the basis of the economic program and reformist forces in countries of Eastern Europe, including Bulgaria. The initial paradigm is based on several basic principles: the existence of two formally equal but diachronic goals - financial stabilization and institutional change (Аврамов & Антонов, 1994). Today, 28 years later, the clearly outlined conclusion of the Bulgarian transition poses in a new way the problem of how the Bulgarian citizens perceive the communist past of Bulgaria - not so much as an element of the political struggle but as part of the self-awareness and self-identification (Баева & Калинова, 2011). The main vice of modern society is that the collapse of Communism in the East left a 'sick' winner. There is no doubt that the market economy is the only one that is productive, producing goods. At the same time, this economy creates the greatest inequality and injustice. That is why we are all looking for a mix between the market and the state economy, a social intervention to correct inequalities. So, it is time the controller and the mediator between the state and the market economy to be the civil society in order to have a just social existence. As governments have the power over citizens, citizens can exercise power over them or their elected people. Democracy through the freedom of citizens extends their rights. Democracy as a first necessity is therefore bound up with freedom and human rights to go towards a just social existence for all (Иванов, 2013). From this point of view, placing society as a regulatory power, we can ask ourselves the question - is there a real democracy in Bulgaria?

The question of democracy is of high importance for this thesis since it is related to the influence of the civil society over the actions of state institutions. Having in mind the residues from the communist regime, this thesis will explore the air pollution problem that exists in the capital of Bulgaria, Sofia, analysing the societal way of thinking and awareness when it comes to air pollution problems as well as state`s way of tackling these problems. It cannot be denied that after the fall of Communism, people of Bulgaria have already seen another world, a free world, in which one can safely travel and in which all information is accessible to anyone at any time. This, of course, leads to a great change of the society. As a result of access to information, people begin to become more involved in different issues by participating in political processes. Developing an active civil society is one of the European Union`s (EU) goals for democratic Member States. Therefore, it can be said that since Bulgaria Is a member of the Union (2007), in the country citizens are becoming increasingly more active (Приматарова, Ганев, Смилов, Минева & Смилова, 2017). Except for its positives, the economic development that is

associated with the EU accession of the country is also related to some negative externalities such as the air pollution.

During the Communism people in Bulgaria have had to wait around 10 years so to buy a car. Nowadays, the situation is quite different. The car is something that almost everybody can afford, something that is already a need, not just a desire. The analyzes show that the average number of cars in Bulgaria is growing by about 100 000 per year. In 2011, the number of cars in Bulgaria was just about 2.7 million, in 2012 - 2.8 million, in 2013 - 2.9 million, in 2014 - 3 million and in 2015 just over 3.1 million cars. Every year, the number of new cars bought increases, but it is still relatively smaller compared to imports of second-hand cars. The most numerous are cars over 20 years - over 1.7 million (Economic, 2017). Having this information in mind, it can be said that the most worrying facts are related to the number of cars that Bulgaria (and mostly the capital – Sofia, because it is the most crowded city) cannot bear, and the old fleet with the high number of diesel-based engines (Попов, 2017).

The information above was given in order the reader to become acquainted with the political situation in the country. It can be said that any change affects not only the political landscape but also the social and economic one. Since this thesis is not scientific but aims at analysing social aspects related to citizens' activities when it comes to polluted air, it is important to be understood whether these political changes have influenced the actions of the population and how. After the fall of Communism, Bulgarians already had the opportunity to travel freely. Along with the increased pool of information, people already can make comparisons and demand from the state actions that can be seen somewhere else to be effective. In that way the role of the society becomes essential - on one hand, of the citizens trying to demonstrate their desires towards the state, and on the other hand, of the NGOs supported by the citizens who, through lobbying, require actions on behalf of the state and control the institutions. More informed and active society, as well as the economic development of Bulgaria, and especially of Sofia, allow people to think already in the direction of "not only whether they eat but also what they eat", namely to demand a better quality of life in their city. For this reason, in recent years, the society in Bulgaria has become increasingly interested in the quality of the environment and especially in the polluted air.

Having already been hinted that the role of the society is changing in Bulgaria and consequently civil society is beginning to rise, demanding to be heard by the state, the next chapter will present the context of this study, namely air pollution.

1.1.2   Air pollution in Bulgaria

In recent years, data on fine particulate matters (PMs) levels in ambient air, registered by the National Environmental Monitoring System (NSEM), show periodic exceeding of the norms for many areas in Bulgaria, both in industrial zones, the so-called "hot spots", and in urban areas as well (НИС, 2011; НИС, 2015). The air in Bulgaria is among the most polluted in Europe. Each year Bulgarian cities rank among the leading places in the most polluted air in Europe (Greenpeace, 2016). Although air quality has improved over the last decades, it is still deteriorating compared to European and world standards.

On Graphs 1 and 2, one can see the air quality in Bulgaria and in Sofia respectively for the last 2 years. The data is separated in weeks. From both graphs it can be noticed that both in Sofia and throughout the country, there is a specific period in the year when the air is most polluted. This period is the winter season when huge part from the population uses coals and wood for domestic combustion for heating.
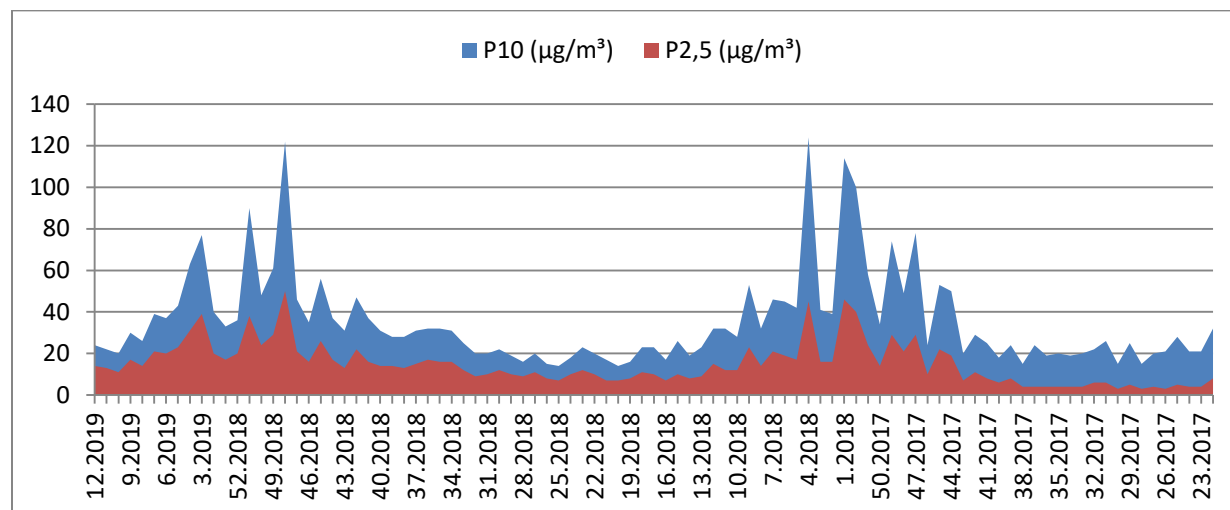
Graph 1: PM2.5 and PM10 concentrations in Bulgaria for the period 3.06.2017 - 28.03.2019 (source of data: AirTube, n.d.; author`s analysis)
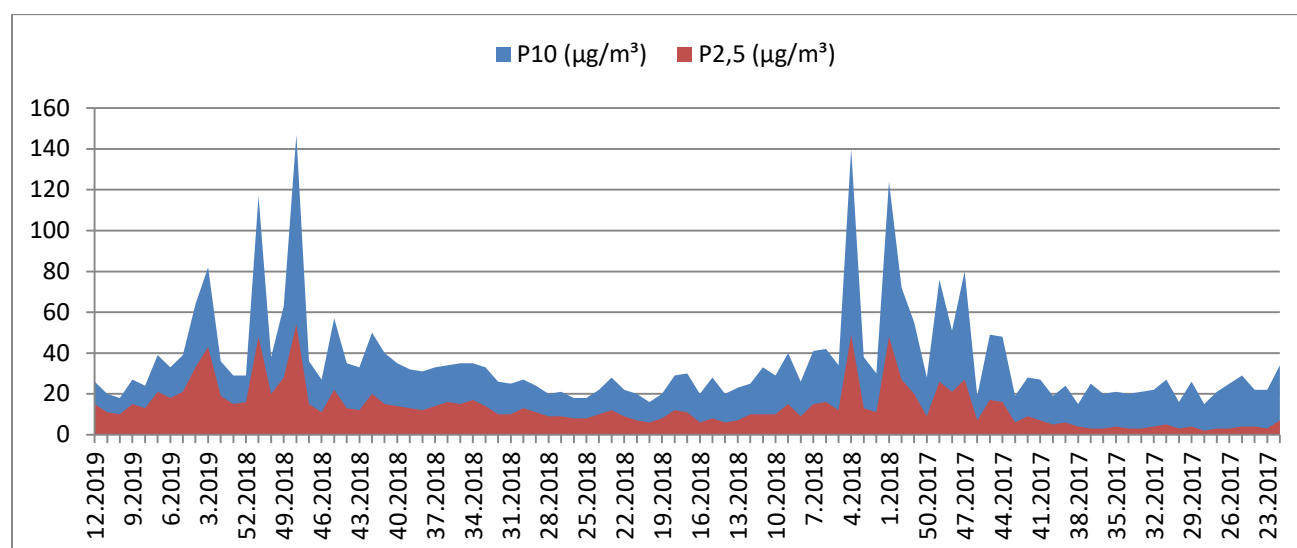
Graph 2: PM2.5 and PM10 concentrations in Sofia for the period 3.06.2017 - 28.03.2019 (source of data: AirTube, n.d.; author`s analysis)

In the previous chapter, it was mentioned one of the main sources of pollution in Sofia, and in Bulgaria, namely the traffic. The prevail of second-hand, diesel cars and heating systems that use fuel/wood/coal are the main emitters in the country. On the other hand, the geographical location of Sofia and the uncontrollable construction of buildings in the city make the problem solving even more difficult. All these sources pollute with fine dust particles (PMFs), which are microscopic solid or liquid substances that are accumulated in the atmosphere. The most common PMs are 10 micrometers (PM_{10}). They are

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released by domestic heating, automobile traffic and various manufacturing processes. Smaller particles of 2.5 micrometers ($PM_{2.5}$) are toxic organic compounds and heavy metals. They are even more dangerous to the health of the population (HEAL, 2014). Combustion of coal for electricity and heat generation in thermal power plants is also among the main sources of emissions that degrade ambient air quality. Coal, which is burned massively in thermal power plants, is of poor quality - low calorific value and high ash and sulfur content (Greenpeace Bulgaria, 2016).

Edmondson (2016) defines wicked problems as those with incomplete, changing and contradictory requirements. Air pollution can be considered as a wicked problem because it is not a single-issue problem nor it is one that is easily solved. The wickedness consists of its inordinately complex and the constant evolving (Riley, 2017), which is a problem that can be addressed globally, regionally and locally. As part of the global issue related to climate change, air pollution is an issue that is gradually fragmented into different problems with different aspects – environmental, social, economic, political, scientific, etcetera. This process of joint formulation of a set of different issues which substitute the initial one is called 'problematization' (Callon, 2009). Being so complex, it has been difficult for Bulgaria to tackle the problem for a long time.

1.2 Goals and Questions of the Research

1.2.1 Knowledge gap

Air pollution in the country can be described not only as a scientific and objective problem (increased concentrations of PMs that lead to negative health and environmental consequences), but also as a political issue. The period after the accession to the EU presupposes a reorganization and diversification of the civic sector, when various movements prove to be an effective tool for forming civic opinion and mobilizing activity (Кужидловски, 2011). Hardly ever before citizens of Bulgaria were so sensitive about the air pollution in the country as at the end of 2017 until now. The tension that has arisen and the expectations for immediate actions have made the issue more political, and the attempts of various experts to speak objectively about the problem sank into the general sea of dissatisfaction. Probably the economic upturn, almost the zero unemployment in the capital and the emerging sustainable urban middle class, is already looking for solutions to problems that are beyond purely economic. This is exactly what makes the problem political – the perception of the people that the state does not take enough adequate measures and demonstrations on behalf of the population for this reason. And despite the efforts to address the problem, it still exists. Reasons for this can be seen on both levels – societal and institutional. However, few things related to the problem solving are still not clear, namely:

(a) What are the exact institutional, structural and/or societal reasons that lead to polluted air (what are the barriers for tackling this issue);
(b) Whether the civil society sector really participate in political processes and the formal collaboration between the state and the civil sector actually exists, and
(c) Whether the civil society domain has influenced the policies in the country, and more specifically their implementation in the capital Sofia.

1.2.2   Research aim

In Sofia city it is always discussed that the domestic heating with coal and wood is one of the main sources of pollution. However, very often, areas where this kind of heating is not common, excessive concentrations of particulate matters can be observed. Therefore, the main objective of this thesis is to reveal the barriers that hinder the air pollution problem handling by including the main sources of pollution and main reasons on institutional or societal level, having in mind the geographical characteristics of the city as well. Analysing societal barriers, it will be possible to be understood how the population can change the situation shifting its daily practices. On the other hand, the institutional reasons (the disadvantages of the administration) will be researched with the aim the process of air quality improvement to be bilateral. Moreover, it is very important for this thesis to research the role of the civil society domain in solving / causing these barriers – whether the civil society has some impact on the policy arrangements and on some changes happened in the last 3 years in the national policies. This time frame is chosen for the research because the problem has started to be discussed increasingly more in the past 2-3 years than before, even though the air cannot be said to be more polluted. There were a lot of citizens' demonstrations in the last 2 years; NGOs are becoming more active in their lobbying, as well as in judging the institutions for inadequate reactions when it comes to the air pollution problem. The increased awareness seems to be one of the main trigger for the raised attention on the topic, which is why it is also main focus of this research. Some of the most noticeable changes have happened in the last few years probably because of the more active citizens and more active lobbying by the NGOs.

When discussing national policies, it is important to be specified that the focus of the thesis will be on the implementation of these policies in the capital only – Sofia. The reason why the focus will be exactly on Sofia is because, as a capital and the biggest city in the country, most of the NGOs are located and with focus in Sofia, as well as, since the economic situation is better than in some other smaller cities in the country, it could be said that the population in Sofia is more aware and active when it comes to environmental problems. Moreover, the traffic in the capital is much higher which contributes to the air pollution.

1.2.3   Research questions

For achieving the research objectives, the following main research question is formulated:

What are the barriers related to the implementation of air pollution policies in Sofia, Bulgaria and what is the role of the civil society in causing and/or solving these barriers for the last 3 years?

With the aim to answer the main research question few sub-questions are represented, as it follows:

1. What are the actors, resources, rules of the game and discourses involved in the policy arrangement for air pollution problem in Sofia, Bulgaria?
2. What are the barriers that exist based on the actors, resources, rules of the game and discourses within the air pollution policy arrangement in Sofia, Bulgaria?
3. What is the role of civil society in the last 3 years in the policy arrangement for air pollution in Sofia, Bulgaria?

4. What is the role of civil society in causing / solving these barriers that exist in the air pollution policy arrangement in Sofia, Bulgaria?

1.3 Relevance of the Research

1.3.1 Societal relevance

There is a story in Bulgaria: "It smells like a village, like in my grandmother's house". The Association of smoking chimneys has always been connected with the comfort of our homes and thus has always resulted in warm feelings for the Bulgarians. However, in recent years the consciousness of the population has changed, beginning to associate this smell with polluted air and health problems. When it gets colder during the winter, the problem of the polluted air comes out. The issue emerges on the agenda every year, but the last two/three years the problem is more discussed, mainly because of the "self-organized citizens" project by AirBG, which provides stations to the population for measuring air pollution. By providing real-time air quality information, so far, there are almost 900 stations installed in the whole country (AirBG, n.d.). With regard to the data gathered for the short time of the initiative, the poor state of the air in Bulgaria became public. Interestingly, this is a very hot topic in the last 2-3 years, even though in the last 5 years Bulgaria has always been at the forefront of the dirtiest air in Europe, but for one reason or another there was little discussions about it (Sneji, 2019).

By introducing the change of the Bulgarians consciousness, it can be said that solving the problem of dirty air is becoming increasingly more urgent because people require adequate actions by the state. The dissatisfaction of the population is mostly demonstrated through strikes held during the last two winters. Even though the government, and mostly the municipalities of the biggest cities in the country, takes measures for air quality improvements, these measures are not enough for really solving the problem. Strategies in the cities are mostly focused on traffic decrease and do not pay enough attention to the domestic combustion in poorer neighborhoods. As time goes on, people become more and more informed and demanding, making the problem important for resolution. With the increased pool of information, the role of the society becomes also essential - on one hand, of the citizens trying to change their daily practices and demonstrating their desires, and on the other hand, of the NGOs supported by the citizens who, through lobbying, require actions on behalf of the state. The purpose of this Master thesis is to be objective in its results, as until now the blame has always been thrown to one of the domains - state or society. My purpose is to discover the barriers that exist in the policy arrangements for the air pollution in Sofia, Bulgaria, revealing the causes for these barriers, would they be on administrative or societal level, and then to research the role of the civil society domain in tackling the problem, especially in the last 3 years. Being objective, this work can contribute to a more realistic view of the picture, taking into account the opinions of many different actors in various sectors, which deal with the problem.

1.3.2 Scientific relevance

From what has been said so far it became clear that there is an increase in the activeness of the citizens and in the general role of the civil society domain mainly in the last two years. The increased activeness leads to more lobbying on behalf of the NGOs, more events related to the air pollution issue, more informational campaigns etcetera. As a consequence of the rapid change in the people`s behaviour,

there is still insufficient research to show the effect of this 'awakening' of the society, as well as the specific barriers in institutional and societal aspects. There is research about the sources of pollution but there is no enough information about how the state facilitates processes and procedures that lead to air quality improvements, and how the institutions communicate and coordinate internally and externally (with the civil society domain). Moreover, the practical implementation on local level of national policies is understudied.

Therefore, this thesis can contribute by mapping the implementation performance of national policies related to air pollution in Sofia, addressing the knowledge gap for the institutional and/or societal reasons that detriment the problem solving mentioned above. Afterwards, according to this map, the role of the civil society will be presented in the actions taken by the state when it comes to the air pollution, filling the knowledge gap related to the influence of the citizens, which is quite important in a country that is struggling with being democratic.

1.4 Research model

The research framework of this project consists of few steps that will lead to the answer of the main research question, as well as to the achievement of the research objectives. The paper starts with a preliminary research about the political, societal and economical situations in Bulgaria, the influence of the communist regime and the accession in the EU in these three terms, as well as a preliminary research is conducted also for the air pollution in the country. After introducing the main background information, the theoretical framework is presented and the concepts used in the conceptual model. Having in mind all this information, propositions are delignated such as:

a) As a residue of the communist regime, the bureaucracy detriments air pollution solving because most of the approaches are top-down;
b) As a consequence of Bulgaria's EU accession, there is an economic upturn which leads to more cars in the country and more air pollution;
c) As a consequence of a citizens-led project called AirBG.Info where sensors for measuring the air quality are distributed among the population, citizens are more aware of the problem and more active, demonstrating their desires, and
d) Main changes happened in the last two to three years in the national policies are influenced by civil society through NGOs' lobbying and citizens demonstrations on the street.

The role of these propositions is not to be formally verified or falsified during the research and without being actually used in the analysis later on they will guide the analysis towards the main sensitive ideas that exist related to the air pollution problem in Sofia. Moreover, it can be said that these propositions are to some extent the expectations of the researcher related to the results.

After collecting all theoretical information needed, interviews are conducted with different stakeholders in the domains of state and civil society. The interview guide is based on the theoretical framework presented, more specifically – on the concepts operationalized below. On the other hand, there is a direct link between the theory and the conceptual model as well because the model is based on the theory itself. Then, the data gathered by the interviews, events observation and documents coding will

be analyzed with the aim to be understood what are the barriers that detriment the air pollution problem solving and the extent to which civil society has a role in these barriers, as well as its role as a trigger for policy changes in recent years.
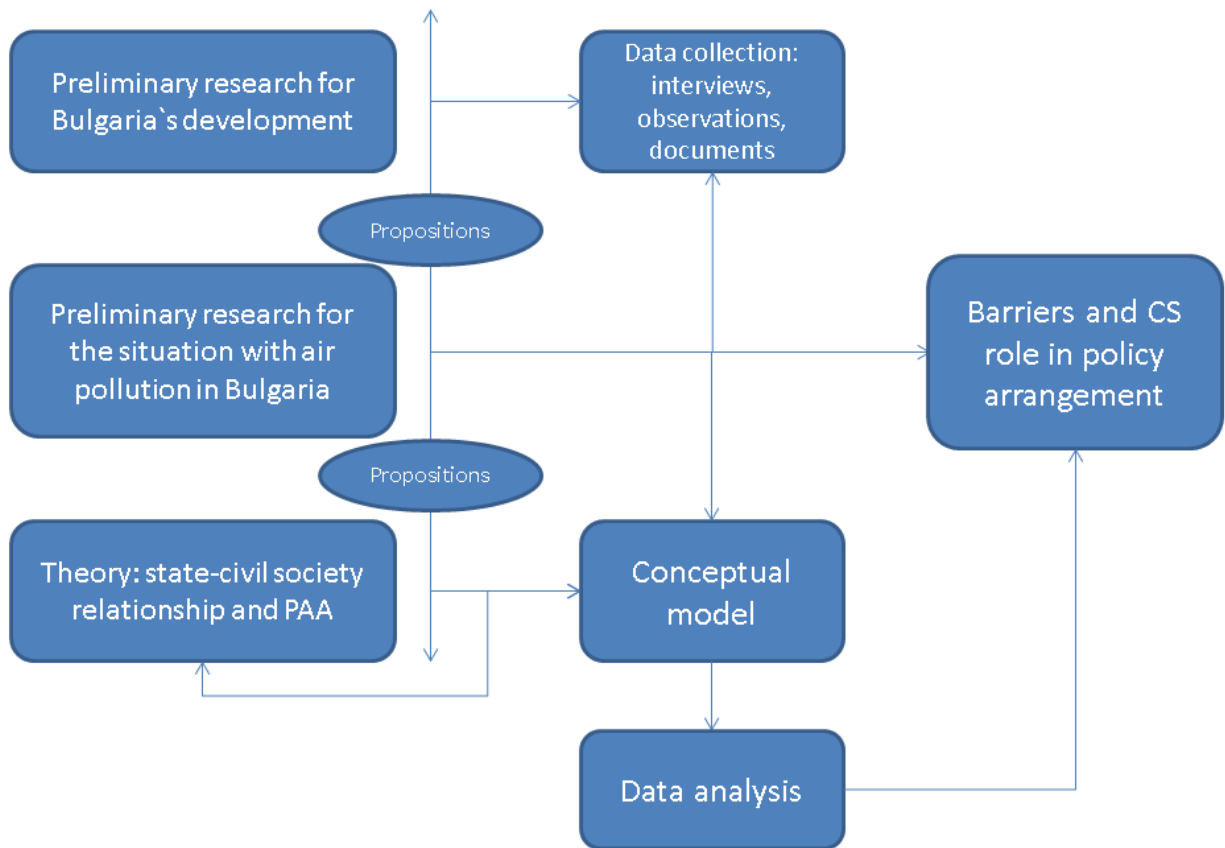

Figure 1: Research Model (author`s work)

2. Theoretical Framework

In this chapter the reader will be introduced to the theoretical concepts used in this thesis for answering the main research question. The first two sub-chapters start with more abstract explanation of the concepts of state and civil society. Chapter 8.3 explains the Structuration Theory of Giddens which will be used as a basic idea for analysing the state-civil society relationship. Chapter 8.4 is more specific, presenting the policy arrangement approach, a theory used for mapping the policy arrangement in Sofia for the air pollution problem. Finally, chapter 8.5 is related to the operationalisation of all these concepts and how they will be used in the empirical part of this thesis.

2.1 Defining the state

Due to the hypercomplexity of the state concept, there is not only one theoretical perspective that can completely define the structure and dynamic of the state (Jessop, 2009; Pierson, 2004). In this paper, the role of the government is phrased as the state; the formal institution of the state and the power they have to make decisions and enforce them as well (Stoker, 1998). There are different forms of governing, and states can differ. For the purpose of this study, it is important to deeply analyze the case of Sofia so to be understood what the form of governing is, what sort of regulations the state uses and what the underlying mentality is.

According to the Anglo-American political theory government is defined as a "formal institution of the state and [its] monopoly of legitimate coercive power" (Stoker, 1998, p.17). According to Stoker (1998), the government in one country is able to take decisions and has the capacity to enforce them. In that way it operates the formal and institutional processes which are at national level, maintaining public order and facilitating collective action. However, nowadays a new term is coming to the front, a term that refers to changed boundaries between the three main domains, namely the state, market and civil society. Increasingly more, the term 'governance' is used in the literature as more effective way of governing, which encompasses collaborative actions between these three domains. Governance is defined as 'new processes', 'new methods' or 'changed conditions of ordered rules' (Rhodes, 2012). By using the term Rhodes (2012) refers to the changed boundaries between the public, private and voluntary sectors, and the changed role of the state. The dichotomy between government and governance lead to another one that is observed in the literature, namely hierarchical bureaucracy and network governance. Network governance is a term that refers to negotiation processes between different agents and individuals which interact (Salancik & Burt, 1995), substituting the traditional hierarchical nature of the bureaucracy. Rhodes (1996) explains the concept by describing the interdependence between the actors involved for delivering services, by exchanging resources, maximizing influence over outcomes, and avoiding dependency on other actors. Nowadays, governance networks are essential for environmental policies. However, they require new institutional arenas within the government structure, decentralization and alliances formation (Poulussen, 2013). Decentralized governance gives the right to the citizens to demand better services, to monitor the performance of the government and to insist for improving the quality of the services. In that way civil society strengthens the responsiveness and accountability of the state (Bardhan and Mookherjee, 2006; Tiebout, 1956).

Since significant changes have taken place in Bulgaria in a short time, Bulgarians can still compare Communism with Democracy and the EU membership. Bureaucracy has always been associated with Communism, as it is characterized by top-down initiatives, lengthy procedures and political decision-making without citizen participation. Democracy, on the other hand, is thought to lead to civil society involvement in politics and decision-making, as well as direct coordination of the state with local initatives, NGOs and experts. Therefore, these dichotomies are important to be considered for the case of Sofia in the context of the air pollution problem since revealing whether more bureaucratic (associated with the communist regime) or more networking governance (associated with the Democracy and EU accession) exist for the implementation of policies in the city will contribute to the deeper research on the barriers and the ways for solving the 'wicked problem' of air pollution. For analysing how the state works for the case in Sofia, except for the concept of 'state', the concept of 'civils society' will be explained as well.

2.2 Defining civil society

Until the 18th century, the term of civil society has been used by the European philosophers as a synonym of the state or the political society (Keane, 1988). Therefore, at that time the notion has expressed the growth of the civilization and its development in 'civilized' society (Kumar 1993). Still, during the 18th century, the term started to be presented as a separate domain that is endowed in its own principles and forms (Spurk, 2008). From that moment onwards the domain is expected to be oriented towards the state but also to limit its powers and even to counteract them. Eventually, the domain of civil society has been supposed to play a role of a means against the despotism of the political leaders (Bratton 1994). Broadly speaking, the responsibility of the civil society has been (and nowadays as well) understood as being a protector of the individual`s rights and property against the arbitrary interventions of the state (Spurk, 2008).

According to Spurk (2008), civil society is considered as a separate sector that at the same time can be both - different from the state (comprising administration, judiciary and different executive government institutions), and a political sphere (political parties or legislature). This is happening because the civil society usually makes political demands towards the state without running for political offices in the government. On the other hand, civil society can be seen as a separate sphere from the market and the economic realm and from the family/private sphere, even though their boundaries can be blurred and sometimes the "sectors can be viewed as partially overlapping" (Spurk, 2008, p.4). In other situations, where civil society plays the role of the public realm between the state, market and family, the domain is defined as the space between these three sectors. In Figure 2, one can see both – the role of the civil society domain as own sector and its role as an intermediate sphere.
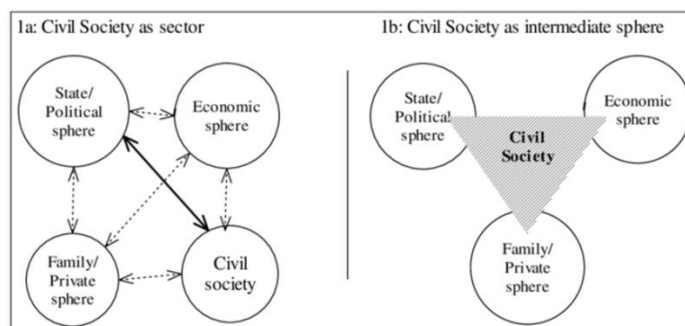
Figure 2: Civil society as own sector and as an intermediate sphere (Spurk, 2008).

Usually, intermediaries (political parties, media, social movements, associations) that play a role of connectors between the private sphere and the political-administrative system run the country without being directly related to the population. Among these intermediaries only associations and social movements are part of the civil society domain (Spurk, 2008). On the other hand, CS as a sector is defined by Spurk (2008), to consist of organisations and associations that have their own goals, interests and ideologies. They are mostly considered to be fully autonomously organized, and interacting in the public sphere, whereas CS as intermediate sphere is more or less the space between the sectors or the realm that links the state, business and family. However, it cannot be stated that these two positions are not mutually exclusive. They tend to complement each other for democratic development of a country.

Since the role of the civil society domain regarding the air pollution policies in Sofia, Bulgaria is analysed in the current research, it is important to be understood what the position of the civil society sector in the country is – whether it is trying to be a mediator between the sectors, coordinating actions with public institutions and with citizens, or whether it has some personal economic or political interests that trigger its actions. This will contribute to a conclusion that reveals the dependence or independence of the domain from the state and the extent to which this sector is influenced by it. In that way, when it comes to the NGOs, it will become clear the exact function of these otganisations that are interested in the air pollution issue and are actively involved in its solution. NGOs being part of the civil society domain, together with the citizens as individuals (Phillips, 2012), have three main functions enumerated by Beer, Bartley & Roberts, (2012) as it follows:

a) NGOs as advocates – pressure the state while mobilizing attention to certain problems, being the "critical social safety valve for social problems" (Salamon, 2013, p.13), and a powerful influence on the social political agendas.

b) NGOs as service providers – this role is related to the shifting from 'rowing' the state to 'steering' activities. By participating in these steering processes NGOs can reach constituencies more efficiently than the bureaucracy can, using more participatory model while strengthening the social capital in local communities.

c) NGOs as regulators – by this function, NGOs can impose social control, stakeholder pressure, and private standards that carry some authority. This can be done in two ways:

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As 'watchdogs' – when directing attention to questionable practices of the government or private companies, aiming at 'naming and shaming' them.
By developing standard-settings, monitoring, and certification (e.g. standards for sustainable forestry/agriculture/fishery; responsible investments; fair labor etcetera).

It could be said that civil society nowadays can have a regulatory power, and new concepts related to this are coming in front. Zadek (2004) defines the civil regulation as "the ability and willingness of society to create collective pressure on business [and state] beyond the rule of law by threatening the productivity" (p.26). The increased civic awareness and participation that have occurred in Bulgaria in recent years lead to a positive trend (regarding the democratic development of the country) since minorities of active citizens who, through their actions, break into the system by demonstrating that people have to participate, have to protest, have to express their position, have been created. Obstacle for civic motivation is the fact that, on the one hand, citizens do not know how to participate, and on the other - the administration does not take any actions (Форум Гражданско Участие & BCNL, 2015).

2.3 State – Civil Society Relationship: Giddens perspective

All of the information above explains how the concepts of state and civil society domains will be used in this thesis. However, both domains will be researched in order the relationship between them to be revealed. Giddens` Structuration Theory sets the goal of exploring the nature of human actions and social institutions, clarifying the nature of the relationship between them. The key concepts and ideas of the Giddens Structuration Theory are that human agencies together create structures and the structures again influence the agencies. This means that they are constantly changing, as human agencies also constantly change (Giddens, 2003).

Since in this thesis the change in the air pollution policy arrangements will be diagnosed, the concepts of organisation and substance should be elaborated. Giddens' structuration theory explains organisations as social systems where agents are nested together in structures of rules and resources (Giddens, 1984). Therefore, in one organisation, three main elements can be distinguished, namely: actors, rules of the game, resources and power, which are three of the dimensions analysed through the PAA. On the other hand, the concept of substance will be researched through the term discourses, which will be analysed via the PAA as well.

For a better understanding of the theory, the two main concepts in it will be described:

<ol type="a">
By structure Giddens means social structure that is continuously created by the everyday practices (Jones & Karsten, 2008) or the rules and resources that are organized as social system`s properties and exist only as structural properties. These resources can be allocative (generate commands over objects) and authoritative (generate commands over the actors) (Giddens, 1984). According to Giddens & Pierson (1989), social life should be observed as "a series of ongoing activities and practices that people carry on, which at the same time reproduce larger institutions" (p.76). For better analysis on structure, Giddens identifies three main dimensions of the structure (see: Figure 3): signification, domination, and legitimization

which have corresponding dimensions of interaction – communication, power and sanctions respectively. These two types of dimensions are linked through modalities – interpretive schemes, facility, and norms.
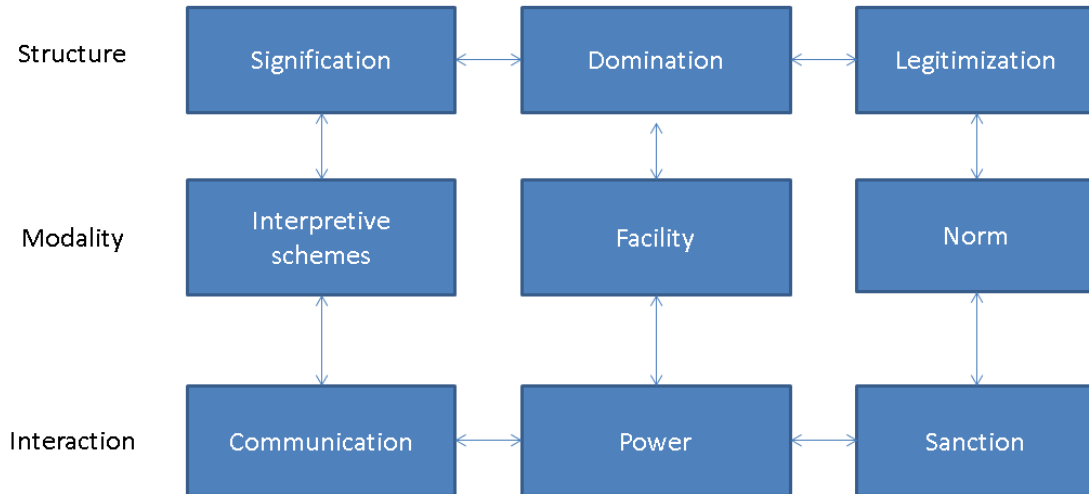

Figure 3: Dimensions of the Duality of Structure (source: Jones & Karsten, 2008, p.130, adapted from Giddens 1984, p. 29)

For the objectives of this thesis, it will not be necessary all of the concepts from the figure above to be operationalized. The notions communication, power and sanction will be used with the aim to be understood how the state works, more specifically through what kind of instruments – whether it relies more on the communication with other institutions / organisations and citizens, on the power executed by state's institutions having the last unconditional word, or on sanctions, facing fees for unsustainable practices that detriment the air pollution problem solving.

(b) Based on Giddens (1989) human agency is a volunteer who always have the possibility of doing otherwise" (p.258), which means that the "agents are highly autonomous" (Jones & Karsten, 2008, p. 132). For Giddens it is of high importance the agent, as a member of the society, to know how this society works based on his / her participation (Giddens, 1979). This knowledge can be discursive consciousness – "all those things that actors can say, put into words, about the conditions of their action" (Giddens 1983, p. 76), and practical consciousness - "what actors know, but cannot necessarily put into words, about how to go on in the multiplicity of contexts of social life" (Giddens 1979, p. 5).

At first glance, it seems that agency and structuration are indeed in contrast with each other, yet structure is dependent on agency and vice versa. This is known as the duality of structure - the means for production of social practices and the outcome of such interaction (Dickie-Clark, 1984). In this thesis, Giddens Structuration Theory will help the researcher to analyse the relationship and dependency between the two domains – state and civil society. This will happen through an analysis of all four dimensions of the policy arrangement, mapping them, and explaining what is the relationship between

them. By including actors from the state and civil society sectors, it can be understood how resources and power are allocated within the coalitions, as well as the main discourses, important for knowing the type of governance that exist in Sofia. Furthermore, the idea of Giddens where structure (used as 'state') and agency (used as 'actor') are influencing each other will help the researcher to analyse the relationship between the two domains, which in turn will clarify the role of the civil society in the last policy changes related to the air pollution and their implementation in Sofia. All of this leads to the proposition that through the demonstrations and changing behaviour Bulgarians could have forced the policy changes in the last 2-3 years. On the other hand, the state influences the behaviour of the population through different regulations and rules related to the air pollution. Researching this relation will help us to answer the third and fourth sub-questions.

Pursuing answers to the first and second sub-questions, which are more specific, the Policy Arrangement Approach will be used first to map the policy arrangement for the air pollution in Sofia, and then to reveal the barriers that exist within this policy arrangement. Next chapter presents the theory in more details.

2.4 Policy arrangement approach

Since first two sub-questions are related to the barriers that exist in solving the problem with air pollution in Sofia, Bulgaria based on the actors coalitions, resources and power, rules of the game and discourses involved in the policy arrangements, PAA is a theory that can provide the answers of these questions by mapping the relations and interdependencies between these four aspects of the policy arrangement. In a second step, PAA will be used as a basis for an analysis on the role of a specific group of actors within the policy arrangement, namely – civil society.

Figure 4 visualizes the relationship between the four dimensions that a policy arrangement consists of: (a) actors, (b) resources and power, (c) rules of the game, and (d) discourses. The tetrahedron on the figure reveals the interconnection between these four aspects – a change in one of the dimensions can induce a change in the other three. For example, if a new actor comes to the front, this may lead to a new resource distribution and vice versa – if new resources are introduced (subsidies, for example) for a specific activity, this may attract new actors (Liefferink, 2006).
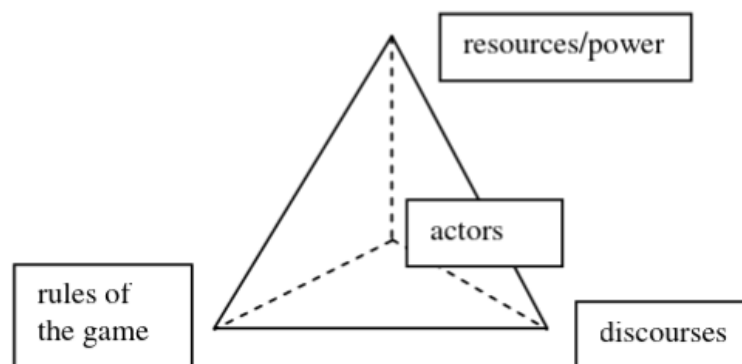

Figure 4: Tetrahedron, which reveals the interconnection between the four dimensions (Liefferink, 2006).

The policy arrangement approach can be used for the research of the stability or the change in the policy arrangements (Liefferink, 2006). Using this theory the dynamics of the policy processes and different analytical perspectives can be identified (Arts & Leroy, 2006). Arts & Tatenhove (2004) define policy arrangement as "the temporary stabilisation of the organisation and substance of a policy domain" (p.2). To phrase the theory for our case, it could be said that the policy domain related to the air pollution, and changes in this domain arrangements for the last 3 years, will be researched. For a better understanding of the approach, its four dimensions will be explained (Liefferink, 2006):

I.   Actors / coalitions – the actors involved in the decision-making processes will be analyzed. In the case study, these actors can be governmental (from different public institutions) and non-governmental (citizens / experts and NGOs). The actors within the policy arrangement can be characterized by coalitions where resources are shared among the actors with the aim to achieve a similar goal in the end. While some coalitions can support the goal achievement, others may challenge it. That is why the coalitions can be divided into two groups: supporting and challenging (Arts & Tatenhove, 2004).

II. Resources / Power - since actors are empowered or dependent on resources, this study will aim at identifying the resources needed for tackling the air pollution problem in Sofia and the powerful actors who mobilise these resources. According to Giddens, (1984), resources and power should be observed as an agent-in-interaction for transforming the social and physical environment, and achieving certain policy outcomes.

III. Rules of the game – the rules that exist will be explored, focusing on both formal rules (regulations, policies currently in operation on national level and their implementation in Sofia), and informal rules ('routines' of interaction that may, for example, consist of awareness and knowledge increase by the NGOs). These rules determine the procedures used (tasks allocation, division of competencies etcetera) for achieving certain policy goals (Arts & Tatenhove, 2004).

IV. Discourses – refer to the norms, values, principles, approaches to solutions that are entailed in the policy arrangements, and the type of governance. The term discourses refers to the concept of substance used by Giddens encompassing the solutions designing by the actors in order to understand and solve a specific problem. This is done by environmental policy discourses, which consist of the ideas, concepts, and categorizations produced that are transformed into set of practices through which social and physical realities receive meaning (Hajer, 1997).

According to Arts & Tatenhove (2006), policy arrangements are always in processes of production and reproduction where rules are formed and defended. These processes refer to the notion of 'institutionalisation'. This means that policy arrangements are produced by interactions between human agencies resulting in different discourses, rules and coalitions ('structuration'). At the same time, these rules constrain the behaviour of the agents involved ('stabilisation'). Here is where the connection between the Structuration Theory of Giddens and the Policy Arrangement Approach are brought together.

2.5 Operationalisation

2.5.1 Operationalisation of concepts

In this sub-chapter the operationalisation of the concepts discussed in the theoretical part will be explained. It will be clarified how the concepts will be used for the empirical chapter based on what is found in the literature. The operationalisational sub-chapter is divided into five parts: explaining the operationalisation of the concepts of the PAA, of the barriers, of the state-civil society relationship and finally, the operationalisation of the concepts related to the state and civil society individually and their roles.

As it was explained above, the PAA consists of four main elements, which will be identified for the case of Sofia, Bulgaria in the context of the air pollution problem. Firstly, the operationalisation of the concept of actors consists of defining main actors that are involved in the problem solving. These actors are roughly divided into two categories: governmental and non-governmental. When it comes to governmental actors, this thesis will be focused mainly on Sofia municipality because the objective of the study is to analyse the implementation processes of national policies only in Sofia. However, the Ministry of Environment and Water will also be in focus since national policies are created and enforced by it. On the other hand, non-governmental actors in this thesis will be NGOs involved, as well as active citizens who demonstrate loudly their opinion and desires through different actions against the authorities. According to the literature review, non-governmental organisations involved in the air pollution problem are: AirBG (AirBG, 2019), For the Earth (За Земята, 2019), Save Sofia (Спаси София, 2019), Present air (Knowbox, 2019), A group for clean air (Илиев & Попов, 2019), and Sofia Vision (Визия за София, 2019). More information about their goals and roles in the problem solving will be presented in the empirical chapter of this study. Secondly, after discussing all theoretical concepts above, it can be concluded that the general resources needed for tackling air pollution problem are: money, technologies, time, awareness, willingness, incentives, knowledge, and, of course, human resources, which is essential for the implementation of more stringent policies against air pollution. Thirdly, rules of the game are divided into formal regulations and informal activities. Formal regulations are the ones that are enforced by state's authorities (national laws, regulations etcetera). For Bulgaria, the main formal law regarding air pollution is the Law on the Purity of Atmospheric Air (MOCB, 2017). Other important regulations on national level are the Law on Renewable and Alternative Energy Sources and Biofuels (MEE, 2008), taxes regulation for older cars (BTV, 2018), and ecotaxes for all cars that are registered in the country. Under informal "rules" of the game, it is meant all written and unwritten 'rules' that are 'steering' activities such as education on air pollution consequences, spreading awareness, and advertising. These actions can be taken by NGOs, as well as by state`s institutions. For the case of air pollution issue in Sofia, the informal 'rules' that are going to be considered will be: (a) rules of information spreading (who is the main source of information for the society and for the state), (b) rules of access to information (who has access to this information and can use it); (c) rules of participation (who can participate in different activities, events and has the word), (d) decision-making rules (who takes decisions related to air pollution-related policies and on what basis), (e) rules of conflict and resolution (what is considered as being a problem for the society and what is considered as good decision for the society), and (f) what is considered as 'legitimate' and 'appropriate'. Finally,

environmental discourses can be identified as the general perception of the actors involved regarding the air pollution problem, as well as the way of governance for this problem – e.g. whether collaborative governance exist or the approach is more top-down.

Following the sub-questions given in the beginning of this thesis, after mapping the policy arrangement for the air pollution problem in Sofia, the barriers should be identified based on all four elements in this arrangement. During the writing of my bachelor thesis, I conducted a short interview with Tzvetelina Popova – former secretary of the Sustainable Energy Development Action Plan Management Committee for Bulgaria. She identified the main barriers that exist in Sofia, including main sources of air pollution, as follows:

> ➢ Barriers on administrative level

a) Lack of preventive measures
b) Lack of coordination between different institutions
c) Lack of good communication
d) Lack of innovative decisions
e) Overlook of urban planner`s opinion

> ➢ Main sources of pollution

a) Random overconstruction of buildings – together with Vitosha Mountain that surrounds the city totally stops the airflow which in turn does not allow natural air purification.
b) Energy and heat production - coal-fired power plants and domestic solid fuel combustion.
c) Transport - road transport is so harmful for the environment in Bulgaria because of the outdated car fleet and the technical failures of the cars driven in the country.

Since the objective of this master thesis is related to the revelation of the main barriers (societal and institutional) that detriment the air pollution problem solving in Sofia, the interview with Ms. Popova provides a good starting point for this research. Generally speaking, pollutants enumerated by Ms. Popova are those on which there is a consensus as the main sources of air pollution in Bulgaria (Greenpeace Bulgaria, 2016). What is stated in this interview will be tested in the empirical chapter of the current master thesis including societal barriers (specific way of thinking of the Bulgarians), not only institutional. Therefore, barriers mentioned by Ms. Popova will work as a kind of practice-derived 'hypotheses'. For doing this later on, now these barriers will be 'translated' in terms of the PAA in order some kind of comparison to be done in the result chapter of this research.

d) Lack of preventive measures: related to the dimension of formal rules because there is no a specific preventive plan enforced by the state, which concerns the air pollution issue.
e) Lack of coordination between different institutions: related to the discourses and the extent to which collaborative governance exists in the policy making process.
f) Lack of good communication: a barrier presumably related to the actors dimension where actors from different sectors do not collaborate for taking decisions together.

g) Lack of innovative decisions: related to the dimension of recourses where there is no enough knowledge about the problem and innovative ideas for its solving.

h) Overlook of urban planner`s opinion: a barrier probably related to the informal 'rules', namely - a thirst for construction and new buildings after the communist panel blocks that are disseminated within the whole city.

The third part of this sub-chapter encompasses the operationalisation of concepts related to the state-civil society relationship. As it was explained in the theoretical chapter, the concepts of organisation and substance, which are a basic idea in Giddens' structuration theory, will be operationalized through the PAA. In fact, the very idea that the policy arrangement can change itself is kind of operationalisation of Giddens' theory. Organisation, according to Giddens (1984), is a social system where actors are influenced by resources, power and rules. In this thesis, the actors, resources and rules will be researched via the PAA, and then it will be possible the whole social system to be identified. The notion substance is operationalized by the concept of discourses that explains the general air pollution problem in Sofia, and barriers related to this issue by all actors involved. For researching the type of governance the dimensions of the Duality of Structure theory of Giddens will be used, more specifically – the terms 'communication', 'power' and 'sanction'. They will be used in order to be understood how the state works – relying on communication with other institutions / organisations / citizens, on power execution or on fees facing. These three forms of interactions can be related to the PAA. According to Whittington, (2015), (structure of signification) communication refers to a system that consists of symbolic and discursive order such as types of talk, predominant images, jargon etcetera. Therefore, interaction via communication can be interpreted through the dimension of discourses of the PAA where the collaboration and communication will be analysed. Sanctions (or legitimization structure) concern formally sanctioned institutions and written or / and unwritten constraints and obligations embodied into one institution or organisation. Therefore, this way of interaction will be analysed through the dimension of rules of the game within the PAA. Finally, power execution (or the dimension of domination), Whittington, (2015) explains as the one that refers to the material and allocative resources, which implies that this way of interaction will be analysed through the PAA`s dimension of resources and power.

In the theoretical part related to the state and civil society, there is plethora of concepts introduced. Firstly, notions concerning the state and their operationalisation will be made clear. As it was explained above, by the state, in this thesis, it is meant Sofia municipality and the Ministry of Environment and Water mainly. Of course, some other state's institutions could be involved, but they are eventually all part of the ministry or of the municipality. For analysing the role of the civil society in the policy arrangement, it is crucial first, the way of governance to be defined for the country. Network governance in this thesis is used as the new way of governance associated with the democracy, the alliances formation and the collaborative governance where civil society-led initatives take place in the political landscape, as well as citizens have the word and can calmly demonstrate their point of view and their desires. On the other hand, the concept of hierarchical bureaucracy for Bulgaria is associated with the Communism where the procedures are too long, approaches are top-down, and people cannot demonstrate any actions against the state. Identifying whether more hierarchical or network structure

exist in Sofia, Bulgaria, it will be easier to analyse the role of the civil society in the political processes. In the concept of civil society in this study, the NGOs and citizens as individuals are included. With the aim to analyse the role of this sector in the general policy arrangement, it is essential to be understood the dependency of the domain from the state. This can be done by explaining whether the civil society sector is an intermediate or an own sphere in Sofia or in other words – to be explained the dependency of the civil society domain from the state in order its role in the decision making processes to be revealed. By intermediate sphere, it is meant civil society sector that is playing the role of public realm and stands between the spheres of state, economy and family. Intermediaries can be the media, some associations, social movements or political parties. By civil society sector on its own, in this thesis it is meant a separated sphere from the ones of the state, economy and family, a sphere that consists of voluntary organisation and associations with various objectives and interests. These organisations are considered as fully autonomous because they are not purely driven by private or economic interest (Spurk, 2008). After analysing the position of the CS sector in Sofia, its functions also will be discussed. The functions of NGOs given by Beer, Bartley & Roberts, (2012), namely: (a) NGOs as advocates, (b) NGOs as service providers, and (c) NGOs as regulators, will be operationalized via 'translation' of these functions in PA terms and will be tested in the empirical analysis.

2.5.2 Conceptual model

As it was stated in the main research question, the main objective of this research is to identify the barriers that exist in tackling air pollution, as well as the role of civil society in solving / causing these barriers and its role in changes made in national policies during the last 2-3 years. Changes in the last 3 years are related also with the other three dimensions of the PA, because these changes are not only in the legal framework, but also in the discourses, resources and actors involved within the policy arrangement. For doing this, the PAA will be used and the Giddens` perspective for explaining the civil society role in the policy arrangements. After mapping the policy arrangement and the included actors, rules, resources and discourses, the role of one specific group of actors will be analysed within this policy arrangement, namely – civil society domain. Except for its role in solving and / or causing the barriers identified, its role in the last changes made in national policies will be researched. Revealing the extent to which the sector has influenced policy decisions, it will become clear the position of the CS sphere and the functions of the NGOs within this sphere. Moreover, an analysis of the way of governance of the state and the way of working of the municipality will reveal main barriers on administrative level. The relationship between all theoretical concept and how they are used can be seen on Figure 5.
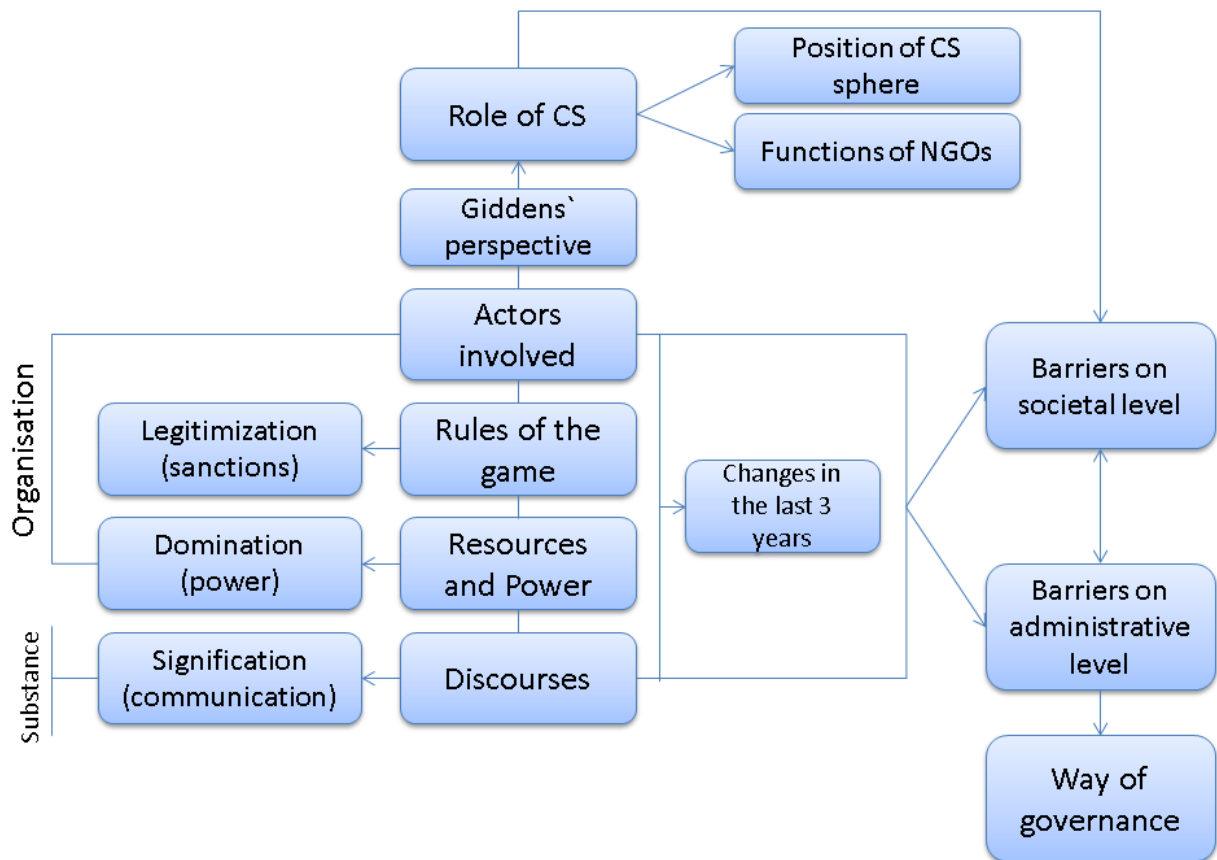
Figure 5: Conceptual model

3. Methodology

In this chapter what exactly will be investigated and how the research will be executed is introduced. Firstly, the research philosophy is identified, revealing the researcher`s assumption about the knowledge development. Secondly, it will be explained what the research strategy of the study is clarifying why qualitative method is chosen. The third sub-chapter consists of the research methods used for data gathering and the sources of information. Finally, it is explained how validity and reliability of the study are increased, as well as some practicalities of this master thesis.

3.1 Research philosophy

According to Saunders, Lewis & Thornhill (2009), research philosophy is a system which encompasses the researcher`s "beliefs and assumptions about the development of knowledge" (p. 124). Even unconsciously, in the beginning of each research the researcher makes assumptions about the results (Burrell and Morgan, 1979). It is inevitable that these assumptions influence the way the writer shapes the research question, methods used and the interpretation of the results (Crotty, 2015). The assumptions can be: (a) ontological – about how things really work, and the nature of reality; (b) epistemological – about what can be known and discovered in the end of the research, and (c) methodological – about the methods appropriate for the inquirer to find out whatever can be known (Guba & Lincoln, 1994). Within social sciences philosophies there are two extremes, namely positivism and constructivism. Positivism applies for cases where the ontology consists of the assumption that there is only one dominated reality. On the other hand, constructivist approach implies that realities have form of multiple constructions based on local and specific nature, depending on the individual/s that holds the constructions (Guba & Lincoln, 1994). Between these two extreme philosophies, there are two more, namely: postpositivism and critical theory. Postpositivism`s ontology is labelled as critical realism (Cook & Campbell, 1979), where researcher do not believe in strict causes and effects but rather perceive these relations as ones that may or may not occur (Creswell, 2013). Finally, critical theory implies for ontology where the reality is shaped by a congeries of political, social, economic, ethnic, cultural, and gender factors and then reified into structures that are taken as real (Guba & Lincoln, 1994).

In the current thesis the reality consists of different social and political groups that have different opinions and experiences when it comes to the air pollution issue. Therefore, it can be said that few realities exist, which applies for the constructivist approach. Therefore, constructivism will be used as a research philosophy. As it was said above, the ontological position of this philosophy is that multiple realities are constructed through the researched individual/s` experience and interaction with others. Epistemological beliefs for constructivist approach concern a way where reality is known through co-construction between the researcher and the researched, shaped by individual experiences. Finally, the methodology within constructivist approach consists of more literary style of writing used – inductive methods of emerging ideas that are obtained through interviews, observations and documents analysis where the interviews consist of open-ended and broader questions with the aim the interviewee to be able to construct meaning of the situation (Creswell, 2013) but also deductive elements can exist if a theory is the basis for the research, which is the case for the current thesis. In the end of the research, the collected data is analysed and interpreted by the researcher`s own view on reality which means that

the results of this thesis can be helpful for more understandable interpretation of the social world for the case of the air pollution issue in Sofia, Bulgaria.

Figure 6 reveals the nature of the constructivist philosophy, explaining its ontology (where individuals create reality in groups), epistemology (where the researcher should get as close as possible to the individual, gathering subjective evidences), and theoretical perspective (where the actions of the individual should be interpreted by the researcher).
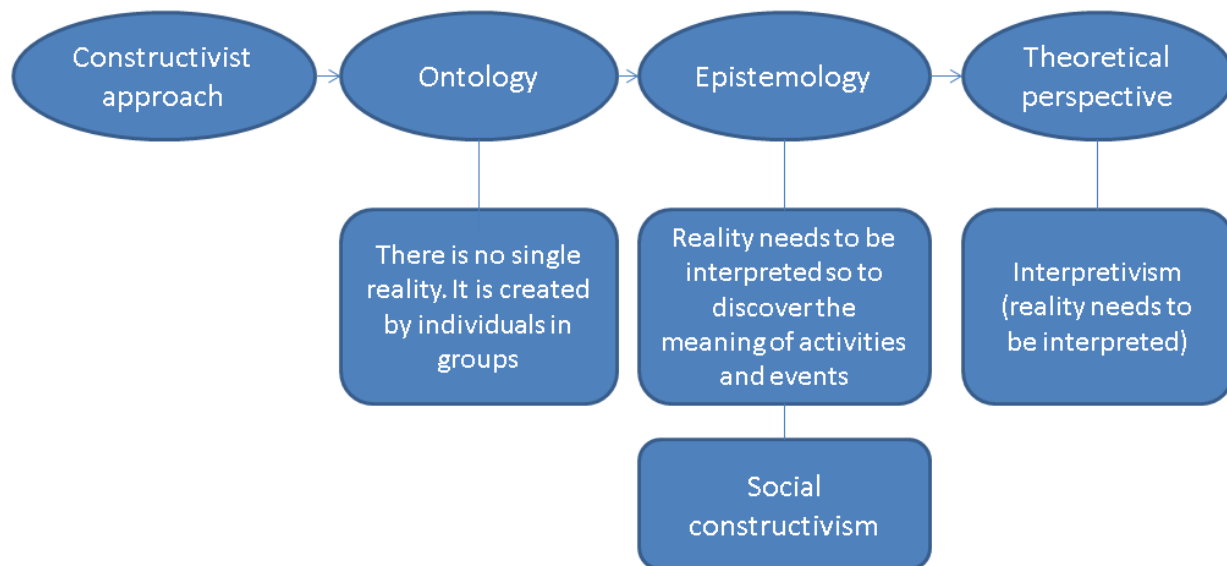

Figure 6: Research philosophy explanation (source: author, idea taken from Huijer, (2018)).

3.2 Research strategy

In order to have an orientation how to gather and measure the data, one researcher should choose between two types of research strategies, namely: qualitative or quantitative (Bryman, 2012). In this sub-chapter, the strategy used will be introduced, which encompasses the general orientation for the conduction of this thesis. Involving in-depth understanding of the motives for a specific human behaviour (Bryman, 2012), this research has qualitative basis. The thesis will aim at giving insight into the following main themes: (a) what is the air-related policy arrangement in Sofia, Bulgaria (b) what are the barriers that hinder the air pollution problem solving in Sofia, Bulgaria, and (c) what is the role of the civil society domain in the policy arrangement and in causing / solving the barriers related to the problem. For giving insight in these themes, there are inductive, as well as deductive elements used in the analysis. Since there are no specific hypotheses stated in this research which formally have to be verified or falsified, this element applies for an inductive approach, where the research starts by collecting data and generates a conceptual framework (Saunders, Lewis & Thornhill, 2009). The inductive approach states that in the "relationship between theory and research […] the former is generated out of the latter" (Bryman, 2012, p.380). On the other hand, firm theoretical concepts and expectations are used as a starting point for the current analysis, which applies for a deductive approach

(Creswell, 2013). It can be said that both approaches are meeting each other somewhere in the middle using elements from both.

The strategies for answering the research question are two: (1) literature review which describes the development of the country and the air quality situation nowadays, as well as the theoretical framework focusing on the barriers related to the air pollution problem and on the state-civil society relationship in Sofia, Bulgaria, all of which serve as a guideline throughout the data collection for getting insight into the real situation, and (2) case study strategy – in this research the focus is on one instance, namely Sofia city, in the context of the air pollution issue. The case study strategy allows more in-depth understanding about the current state having more holistic view and going in more details about the processes and relationships (Denscombe, 2003).
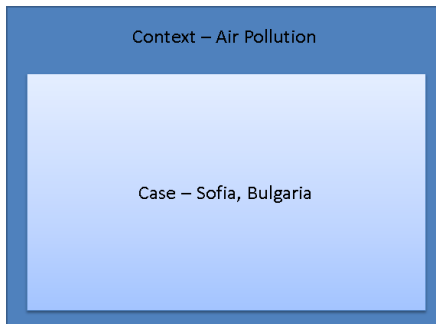
3.3 Research methods

3.3.1 Case selection

According to Yin (2009), case study researches a real-life case within a contemporary context as a bounded system. Therefore case study analysis is appropriate for the current thesis because we have a bounded system: policy arrangements in the last 3 years, which also means that we have a case bounded by time. Moreover, the case study will analyse the policies on local level for Sofia, Bulgaria - we have a case bounded by place. The case of Sofia can be defined as an instrumental one, so to understand a specific issue (air pollution problem) and the specific policies related to this problem. Sofia is chosen as a case because of few reasons: (a) it is the biggest city in Bulgaria, and most of the organisations and demonstrations related to the air pollution problem are located in this city, (b) urbanization processes lead to unbearable traffic, which leads to more congestions and air pollution, (c) the implementation of the policies is probably most difficult in Sofia because there is a huge diversity of people, everybody with different understandings and values, which requires different approaches for tackling the problem, and last but not least (d) Sofia is one of the most polluted cities in the country, especially during the winter.

3.3.2 Data collection

Various methods are used in order the necessary information to be obtained for answering the research question in this thesis:

(a) Interviewing – the main method for information gathering is a qualitative interviewing. Semi-structured interviews were conducted. Being flexible and allowing deeper probing in the topic, these interviews gain more understanding, not just facts related to the topic of air pollution. The selection of respondents is based on the engagements that the actors have related to the air pollution. Participants are chosen from both domains – state and civil society. There are four environmental non-governmental organisations and two citizens (one of them expert) interviewed. The EOs are chosen since they are the most active NGOs in the country (and in

Sofia) regarding the air pollution issue. The expert is engaged with the topic as a climatologist and an expert in different conferences and meetings for strategies development. The citizen is an active inhabitant of the city that has judged Sofia Municipality for a project of the institution that is not in the interest of the population. On the other hand, the other respondents are from different state and municipal institutions that are directly linked with the work on air pollution-related policies and strategies in the city. One of the participants is from the EWC, an institution that assess all environment-related policies before their enforcement. Other participant is from the ExEA – the main informational institution of the MoEW that measure the air quality in the country with professional sensors. The other participants are from the Municipality (being the main institution on local level in Sofia), from one of the Regional Municipalities in the city and from two of the Sofia Municipality`s environment-related projects that initiate different measures in the city and create long-term overall strategy. All these interviewees are involved in the research because of their extensive knowledge and experience in the air pollution field being part of active institutions or organisations in the city / country.

(b) Secondary data – this type of data provides a lot of additional information, interpreted by the researcher, for the selected case study and the context of air pollution.

(c) Observations – according to Bryman (2012), there is always some gap between the stated and the actual behaviour of an individual in general. Therefore, observations of the actual behaviour of the actors involved in the air pollution problem provided me with accurate data that can be used in the data analysis. As an intern at the Code: Bulgaria foundation I was able to participate in different seminars, workshops, or just informal meetings. During these events and discussions I was taking notes that were used in Atlas.ti, along with the interviews and secondary data, for coding them together with the other documents.

3.3.3 Data analysis

While collecting the data, different records of data were analysed in different phases (Bryman, 2012).

1. Firstly, the respondents who were interviewed were ordered so to be clear how these actors are involved in the issue.
2. After conducting each interview with an institution or organisation, the audio record was transcribed and translated from Bulgarian into English so to be ready for coding in Atlas.ti. Along with the transcribed interviews, the documents and notes from events were also translated and uploaded in Atlas.ti, separating them in different folders.
3. Thirdly, all data (interviews / notes from events / documents) was transcribed and each issue was coded via Atlas.ti. Picture 1 reveals an example of coded data where the sentence that gives information about the function of the NGOs is coded as 'Corrective function of NGOs'. After doing that the data was ready for analysis.

NGOs are non-governmental so to be a corrective to us. We can work together, but also they can show us bad practices, so we to take into account the bad experience and to not apply it on our territory. I believe that this is their function - a corrective of the state body.　　　　Corrective function of NGOs

Picture 1: Example of data coding

4. In the fourth phase, categorization of the codes was done in order to link some of the codes into one sub-label if they are similar to each other. For example, on Picture 2 one can see that different functions of the NGOs mentioned in all interviews or during events are linked into the sub-label 'Function of NGOs' and colored in the same orange color so to be visible.

● ◇ Function of NGOs_Combined function of NGOs	▪	2	0 [DEFINING CS_Function of NGOs]
● ◇ Function of NGOs_Communication through events	▪	2	0 [DEFINING CS_Function of NGOs]
● ◇ Function of NGOs_Communication through social media	▪	1	0 [DEFINING CS_Function of NGOs]
● ◇ Function of NGOs_Corrective function of NGOs	▪	1	0 [DEFINING CS_Function of NGOs]
● ◇ Function of NGOs_Demonstrations	▪	1	0 [DEFINING CS_Function of NGOs]
● ◇ Function of NGOs_Enforcement of judge practice	▪	2	0 [DEFINING CS_Function of NGOs]
● ◇ Function of NGOs_Focus on participation, not demonstration	▪	1	0 [DEFINING CS_Function of NGOs]
● ◇ Function of NGOs_Informing society - NGOs	▬	6	0 [DEFINING CS_Function of NGOs]
● ◇ Function of NGOs_Lobbying of NGOs	▪	1	0 [DEFINING CS_Function of NGOs]
● ◇ Function of NGOs_Looking for solutions - NGOs	▪	1	0 [DEFINING CS_Function of NGOs]
● ◇ Function of NGOs_Marketing strategy for NGO	▬	4	0 [DEFINING CS_Function of NGOs]
● ◇ Function of NGOs_NGOs - function to increase the morale	▪	1	0 [DEFINING CS_Function of NGOs]
● ◇ Function of NGOs_NGOs - monitoring network fro informing	▪	1	0 [DEFINING CS_Function of NGOs]
● ◇ Function of NGOs_NGOs that serve internal interests	▪	1	0 [DEFINING CS_Function of NGOs]
● ◇ Function of NGOs_Organize civil movement - NGOs	▪	1	0 [DEFINING CS_Function of NGOs]
● ◇ Function of NGOs_Proposals from NGO	▪	1	0 [DEFINING CS_Function of NGOs]
● ◇ Function of NGOs_Put pressure - NGOs	▪	1	0 [DEFINING CS_Function of NGOs]
● ◇ Function of NGOs_Research - NGOs	▪	1	0 [DEFINING CS_Function of NGOs]
● ◇ Function of NGOs_Start to mobilize people	▪	1	0 [DEFINING CS_Function of NGOs]

Picture 2: Example of sub-label for different codes

5. Then, these sub-labels were gathered into specific labels that aim at answering the research sub-questions. Matching the sub-questions, the following main labels were created: a) defining air pollution problem in Sofia b) actors, c) resources, d) rules and regulations, e) informal rules, f) discourses, g) defining the state, h) defining the CV, and i) state-CV relationship. The full coding scheme of the data can be seen in Appendix 2. This scheme is based on the conceptual model and the theories of this research in order the conclusions to be outlined according to the theoretical framework.
6. Finally, comparison between all data and a description of the codes was made.

Figure 7 summarizes the steps which were taken during the data gathering. In the methodology, template analysis is used, which in its nature is a method for organisation and analysis of qualitative data (King, 2002) by developing a coding template where themes are summarized that are considered as important for the research question. After identifying the themes, the researcher organizes them into template where the relationships between the different themes are revealed. For template analysis, the main source of information is the interview transcript; however, any textual data also can be used such as documents and dairy entries (from the observations) (Brooks & King, 2014).
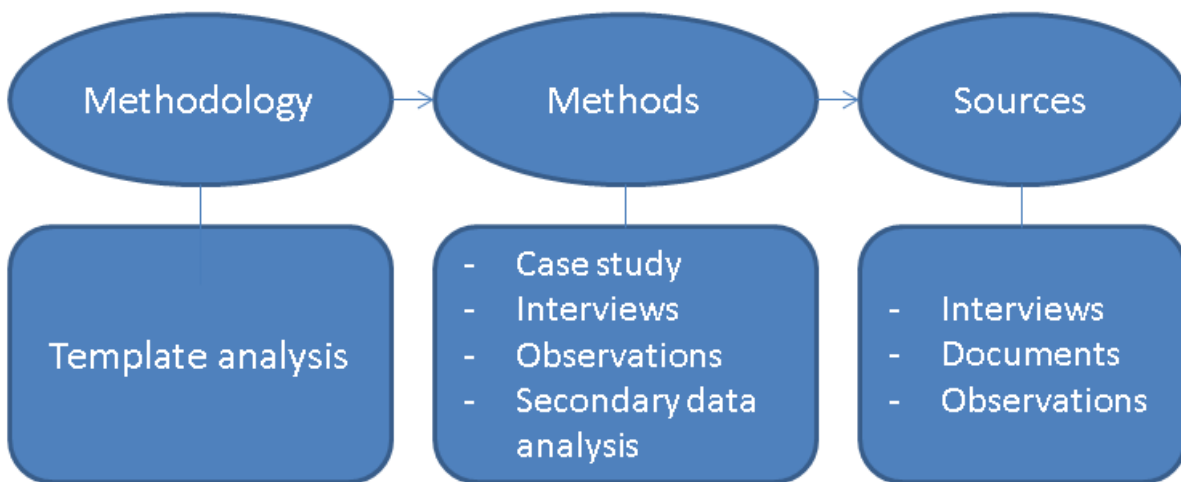
Figure 7: Methodology, steps (source: author, idea taken from Huijer, (2018)).

3.4 Validity and reliability of the research

Validity and reliability are essential criteria that reveal the quality of the research. According to Bryman (2012), validity refers to the extent to which the research represents the real world and consists of two types:

a) Internal validity is about the quality of the research design. The concepts validity in this thesis will be secured by credibility or the use of multiple methods – interviews, observations and secondary data. This will be done with the aim in the end the results to be homogenous.

b) External validity refers to the extent to which the results can be generalized (Bryman, 2012). In a qualitative design, external validity is characterized by its transferability or whether some other researcher will be able to reach to the same conclusions. In our case, I would say that the external validity will not be in focus for this research since the case of Sofia is quite specific, and it will be difficult to be compared with other cities. However, there always may be some generalizability via theoretical interpretations of the findings. Conditions that apply for the case of Sofia can be applied for other cities that have the same characteristics. I may assume that this research can be applied for the capital of Serbia – Belgrade, for example, because I suppose that this city has some similar characteristics in the context of air pollution as Sofia. This is what is called theoretical generalization (Schwandt, 2007).

Reliability is an important criterion for a case study research since it is about the extent to which the results can be repeatable (Bryman, 2012). For achieving the same results, following the same steps and procedures, a later researcher should have access to all my documents and operational steps (Yin, 2009). Therefore, the research should be as transparent as possible and all the information and procedures should be recorded. This was done by thoroughly transcribing all interviews and all documents, as well as by taking notes during the meetings and events which took part in.

3.5 Practicalities of this research and observations

In Appendix 1 all events / interviewees and their organisations / institutions are presented, as well as the abbreviations used in this thesis when the interviewees / events are mentioned. I have conducted 12 interviews overall with four non-governmental organisations (called environmental organisations), two municipalities (the main Sofia Municipality and one Regional Municipality – Ovcha Kupel), two projects of Sofia Municipality (Vision for Sofia and Sofia Green), two national institutions (Environmental Executive Agency and Environment and Water Committee), one climatology expert, and one citizen. All of these actors are directly related to the problem of air pollution, which leads to their high engagement and interest into the topic. Most of the interviews are conducted face-to-face, recorded, transcribed, translated and analysed after this. However, there are three interviewees of which there are no audio records. The interview with Sofia Green was recorded but there were some technical problems after this, which is why I just wrote everything, which we have talked about, down, and transcribed it. The interviewee with the Regional Municipality was not recorded because of the disagreement of the representative; that is why I was writing notes during our discussion, which were transcribed after this. Finally, the member of the EWC disagreed to meet me face-to-face, I sent him the questions via e-mail, and he sent me back the answers. On the other hand, I observed three events: (a) the first event was arranged by the NGO For the Earth and it aimed to acquaint all attendants with everything we do not know about the air by creating a table with the obstacles that exist for the panelists who participated in the discussion; (b) the second event was SOFAIR – international air quality conference; the event was arranged by Sofia Municipality and various of experts and representatives of governmental institutions in different countries have participated for exchanging knowledge and experience; (c) the last event was called 'Protecting the environment in conditions of limited democracy', discussing the role of the civil society sector in tackling environmental issues during limited democracy in whole Europe.

According to my observations, it can be said that in general, almost all participants were interested in my work and what I do. For this reason, I can not say that I had great difficulties reaching the interviewees, as well as they to agree to give me an interview. All of them were polite and tried to answer all my questions. The only people who I noticed to be more reserved in their answers, avoiding specifications were the representatives of the ExEA, EWC and Sofia Green. Unfortunately, there are people who disagreed to give me an interview at all – these were representatives of the Ministry of Environment and Water, as well as the sub-institution of the MoEW - Regional Inspectorate of Environment and Water – Sofia. The two representatives from the MoEW, who firstly agreed to participate, received the questions via e-mail but then they refused to answer.

This research was involved in an internship at the foundation Code: Bulgaria, where I conducted another research related to the motivation of the participants in the project AirBG.Info, as well as full analysis of the database, and also I had access to some documents and contacts that helped me in gathering the data for my master thesis. The foundation Code: Bulgaria and its project AirBG.Info aims at distributing stations among the population of Bulgaria in order everybody to be able to measure the air quality in the area without any specific scientific knowledge.

During the interviews I was bringing with me an interview guide that was helping me to stick to specific questions in order nothing to be missed during the discussions. It can be said that almost each

participant has had an interview guide but all main topics were discussed with all interviewees. The interview guide can be seen in Appendix 3.

4. Results

This chapter presents the empirical results obtained after the data analysis. Sub-chapter 4.1 provides background information and some introduction to the city of Sofia. 4.2 and 4.3 explain in more details the air pollution problem in Sofia and the main challenges for the city. Sub-chapter 4.4 explains the air-related policy arrangement in Sofia, Bulgaria with all its four dimensions. Next, the barriers within the policy arrangement and the links between these barriers are identified, and finally, sub-chapter 4.5 analyses the relationship between the state and the CS sector in Sofia by explaining both concepts separately and then the relationship between them.

4.1 Background information

Sofia is the capital and the biggest city in Bulgaria. The population of Sofia in 2017 amounts to 1,241,675 people, which represents 16.4% of the population of Bulgaria. However, the average density of the population in Sofia is increasing tantivy. The capital is the region with the highest incomes and standard of living in the country and poverty is very limited (Regional Profiles, 2015). The tendencies of massive motoring and increasing number and length of movements in Sofia in the last 20 years are often diagnosed as a "vicious circle" of motor dependence (Kondokula, 2011). Pressure on the urban environment of individual movements, including congestion and accidents, is the reason for the state to spend more and more money in increasing the capacity of the street network and optimization of traffic. This approach of supply is heavily criticized because alternative approaches and policy instruments should be oriented to demand, not supply (За Земята, 2019a). At the same time, there is a serious problem with air quality in Sofia and in particular with high concentrations of fine particulate matter (За Земята, 2019b).

4.2 Defining air pollution problem in Sofia

One of the things that became clear during the interviews was that the problem of polluted air is not new at all. It has existed in our country for many years, but in the last few years people have begun to talk more actively about the subject, as well as to generally recognize that such a problem exists.The air quality in Bulgaria nowadays is better than few years ago. However, during the Communism and the operation of a lot of factories in Bulgaria, nobody has discussed this problem even though it has existed. It can be said that the main sources of pollution (compared to the years during Communism) are different. Years ago industrialization was the focus of our country - different productions that have heavily polluted our cities. Cars were definitely not widespread, something that is a major problem for the air pollution in recent years. Apart from the cars pollution, which is a permanent pollution, main source in Bulgaria is also the domestic heating with coal, wood or fuel, being peak pollution. Especially for Sofia, traffic pollution is significant. Therefore, it can be said that the main two sources for Sofia (and Bulgaria) are the traffic and domestic combustion of wood, coal or fuel. The geographical location of Sofia also contributes to dirtier air - surrounded by mountains, a valley, where during the winter and the temperature inversion, there is no wind enough and natural purification for the air. Except for this, other factors have impact on the air such as: the rare street washing and the dust, which pollutes, especially during the summer, as well as the perpetual construction of buildings in the city.

During the Event C, it became clear that Bulgaria is a country with small population, which, however, has a lot of emissions per capita at the expense of a very small economic product. Coal has a colossal environmental footprint per capita. It should be noted that in many cities in the country there is no central heating system or it does not cover the entire city, as is the case with Sofia. 2,3% of the population of Sofia is using heating systems with wood or eco briquettes; o,5% are using coals and 2,4% are using pellets. Overall, these are more than 5% of the population of the city, and this number cannot be neglected.

On the other hand, as it was mentioned above, the traffic pollution is also a significant problem in the city. This is so mainly because of the increased number of cars in Sofia and the average age of the fleet. According to the climatology expert, last year, 230,000 second-hand cars were imported in Bulgaria - 85,000 of which are over 10 years old. Moreover, Vision for Sofia states that the average age of the cars in Sofia only is 19, even though the official statistics that is sent to the European Commission is 9 (which shows that the exact average age of the cars in Sofia is not really known). Due to key gaps in this field, knowledge of the transport contribution to air pollution in Sofia is scarce. There are also no studies geared towards more complex interactions leading to exposure to health risks from urban pollution (For the Earth, 2019).

Being a problem that is not dependent on other factors such as people`s income or their locations, air pollution is on the whole territory, a consequence of the practices of all citizens, threatens the health again of all of us. EO A explains that Bulgaria continues to be the most polluted capital in the EU and one of the leading places on diseases and mortality related to air cleanliness, the state has been fined by the European Union, which is why society suddenly realized that there is a problem allowing NGOs to start talking more strongly than they have spoken before (talking for some old problem, but the audibility is much greater today). As a result of this, part of the people have placed themselves behind the NGOs, which is why the sector acquired some more power so their voice to be heart. Now, it can be said that local authorities are in the middle because, on the one hand, NGOs put pressure over them because they are already becoming an organized force and politically starting to threaten the status quo. On the other side, there is still some ignorance of the problem, especially on behalf of the Ministry. One of the reasons for the people to realize the scope of the problem is something that EO D did – namely, the visualization of the problem. People already can see the air quality almost everywhere in the country (especially in Sofia) in real time, and to react when the concentrations are over the norms. However, despite the change in people`s consciousness related to the air, tackling this problem remains a challenge.

4.3 Main challenges in Sofia

Main challenges in the capital are related to the sources mentioned above, the emissions allocation and the behaviour of the citizens. Limiting the traffic and the domestic heating with coal, fuel or wood turns out to be great challenge for the city. People refuse to accept that using the public transport can be even more comfortable sometimes because of the avoidance of congestions, as well as heating with coal or wood is still considered as the cheapest heating system that exist. Except for some economic factors that influence people`s decisions, those who have to change their behavior need either very much to believe in those who are talking to them or should be able to see it with their own eyes - i.e. to make a

problem, such as air pollution, which is generally invisible, visible. That is why initiatives mainly aim at changing citizens' minds so to make them to wish to get out of their cars and to give up the comfort. Another challenge for the city is the emissions allocation and the transboundary pollution that contributes to the air quality in the city.

4.4 Policy Arrangement

The main focus of this thesis is to find the link between the four dimensions of the air-related policy arrangement in Sofia, Bulgaria, as well as the barriers that exist in these dimensions. Doing that, the actors, resources, rules and discourses involved in this policy arrangement should be explained. This is what will be done in the current sub-chapter. Firstly, the actors dimension will be presented, then the resources, the rules and informal rules, and in the end the discourses. The second part of this sub0chapter presents the barriers within the policy arrangement and the relations between them.

4.4.1 Actors

In this dimension interviewees spoke about the actors involved in the policies related to air pollution. Generally speaking, there are four main levels of actors that are involved in the process of tackling this issue: (1) European level – European union and its institutions; (b) National level – all Bulgarian government institutions that have some role in the air pollution problem; (c) Municipal level – all Municipal institutions / projects that take place in Sofia and participate somehow in tackling the problem, and (d) Local level – all civil-led local initiatives, active citizens and NGOs that deal with local problems in the city or in specific districts of the city.

❖ European Union

The European Union and its institutions such as the European Commission, European Parliament and European Environmental Agency are structures that have significant effect in air quality policies, mainly with European Directives that have to be implemented in the member-states, including Bulgaria. It can be said that the European Commission is the institution that has most affected Bulgaria in relation to the polluted air, as it was the one that condemned the country for not addressing the poor air quality adequately. Moreover, the EC is proposing the legislations that affect all MS, including Bulgaria (EC, 2018).

❖ National institutions

During the interviews different institutions have been mentioned as participating most actively in solving the air pollution problem. Gathering all opinions, it can be concluded that main national institutions that have primary role are:

a) Ministry of Environment and Water (MoEW) – the MoEW is the main institution that implements the overall policy in the area of air quality, aiming at achieving air quality in accordance with established legislative requirements. In few words it can be said that the role of the Ministry consists of developing the legislative documents, setting emissions limits, coordinating the national programs, implementing the obligations of Bulgaria for different international conventions etcetera (MoEW, n.d.).

b) Executive Environmental Agency (ExEA) – the agency is an administration with the MoEW, which has a role mainly in the information for the environmental protection in Bulgaria. The institution has overall 50 stations for measuring the air quality from which 5 are in Sofia.

c) Regional Inspectorate of Environment and Water (RIEW) – the inspectorate again is an administration of the MoEW, and the main control authority when it comes to violations related to the environment. The goals of the structure are related to the implementation of the air quality-related policies in accordance with the sustainable development principles on regional level. Every region has RIEW that is responsible for the environmental protection in the certain region.

d) National Institute of Meteorology and Hydrology (NIMH) – this institute`s main role is in making the weather forecasts for the whole country. However, it has a significant role in the air pollution problem since climatologists are participating in different conferences related to the air, defining the problems related to this issue and looking for solutions.

e) Since it is known that the air pollution problem is a complex problem, it is inevitable that its solving has to be embedded in almost all sectors` policies. That is why, it can be said that the other Ministries, except for MoEW, have role in tackling this issue as well. Mostly, the interviewees mentioned the Ministry of Health (related to the health effects of air pollution), Ministry of Forests (related to the wood logging for heating use) and Economic Ministry (related to the car taxes, for example)

f) Bulgarian Science Academy (BSA) – this structure is engaged with conducting much of the research, working together with the state. What`s more, they implement a lot of projects in coordination with the national/municipal institutions, looking for solutions for the air pollution problem.

g) Members of the Parliament and Town Councilors – these people are included in the actors' constellation because they take all important decisions about different laws / programs / plans related to the air pollution problem in the country or in the city.

❖ Municipal institutions / Projects

Inevitably, Sofia Municipality is the main institution that has role in the measures for tackling air pollution in Sofia. Moreover, in Bulgaria, this issue is commitment of the municipalities; therefore, Sofia Municipality, and the Mayor Yordanka Fandakova, is one of the main actors in the city. The Deputy Mayor for Environment – Yoana Hristova – is also mentioned few times by the interviewees as important figure among the actors since she participates in a lot of meetings related to the air quality, and is responsible for the implementation of specific air-related policies in the city. Secondly, Sofia Municipality`s Directorate Climate, Energy and Air, with its director – Teodora Polimerova, is the directorate that directly is tackling the air quality issue by coordinating the plans / programs and strategies of the Municipality related to the air quality, by monitoring the implementation of these policies, and by participating in the process of budget allocation when it comes to air pollution.

In Sofia, there is one main Sofia Municipality, and 24 regionally separated small municipalities where there is one/more than one ecologist/s who is/are working for the environmental problems of the

region. These regional municipalities are also quite important because they are working closely with people`s problems in the specific region, tackling local issues.

Except for the main municipal institutions, there are two important projects that have significant effect on Sofia Municipality`s air-related policies. Both of them are projects of the Municipality itself. The first one is Sofia Green - a project that prepares the city for European Green Capital and coordinates the Municipality`s policies related to the sustainable development of the city. The second one is Vision for Sofia - a project of the Municipality that aims at creating a document with 50-years strategy for the city, including a focus on the air pollution.

❖ Non-governmental organisations and civil-led initatives

In the country there are few NGOs that participate in solving the air pollution problem. The first one is Greenpeace Bulgaria - an NGO, which is well known. It aims at lobbying and controlling the authorities for taking different measures, as well as informing the society. Another NGO, which works on national level, is the foundation Code: Bulgaria and its project – AirBG.Info. This project aims at distributing stations that can be bought by everybody, installed almost everywhere, measuring the air quality in the area. These stations are connected to the internet and visualize the PMs concentration in real time on online platform so everybody can see the air quality in the country. Air for Health is also a NGO that works with the doctors all over the country aiming at educating them for the consequences of the air pollution, making them mediators who can understandably explain to their patients about the health effects of the pollution. For the Earth is another NGO that works directly with the Municipality in tackling the problem, informs the society through different campaigns and events and increase the environmental culture in the country by creating new practices applicable (such as judging an institution for its actions).

There is also one NGO that works mainly on local level in Sofia – Save Sofia. This NGO works actively for creating strategies on local level related to the air pollution. Due to its lobbying, the Municipality put cameras on the bus lanes in order the public transport to be faster than private cars during peak hours and congestions, as well as a strategy was accepted for cleaning the streets more often because otherwise the dust from the streets also pollutes the air.

These organizations' entire goal is to criticize the state and municipal institutions, showing their mistakes and trying to suggest a solution. Most of them are mainly informing the society, mobilizing the civil society in the city; some of them are also proposing solutions for tackling the problem.

❖ Citizens

Some civic initiative committees appeared in recent years that are engaged with specific local problems. According to EO B, most active ones are in the districts: Krasna Polyana, West Park and Ovcha Cupel. These are committees of citizens who are active only in their regions and work with the regional municipalities. In the 'Citizens' part the experts can also be included – considered as significantly involved because they identify the problem and possibly give some solution about it. Business is also

involved into the political decisions and policy making but since only the domains state and CS are in focus for this thesis, market sector will not be discussed.

❖ Coalitions of main actors

The actors within the policy arrangement can be characterized by coalitions where resources are shared among the actors with the aim to achieve a similar goal in the end (Arts & Tatenhove, 2004). For the case of Sofia, in the context of the air pollution problem, two main coalitions can be identified that share the same resources, namely: their budgets, as well as competences and knowledge of the people who work in these institutions. One of the coalitions is between the MoEW, ExEA, RIEW and the EWC. Of course, the most powerful institution here is the Ministry. The second coalition is between Sofia Municipality, all Regional Municipalities and the projects of SM: Sofia Green and Vision for Sofia, where the municipality is the dominant actor. As it was explained in the theoretical chapter of this research, actors' coalitions can be supportive as well as challenging (Arts & Tatenhove, 2004). After identifying all actors involved, the interviewee were asked to point one institution / organisation that detriments the problem solving. Most of them denominated this institution to be the MoEW.

4.4.2 Interaction Between Actors

During the interviews, the participants were asked to denominate the actor, which, according to them, is the most important for air pollution problem solving. EO C considers the MoEW, Sofia Municipality and citizens as the most important actors. ExEA stated that the Municipality only is the most responsible institution. Something, which is in agreement with EO B`s opinion. On the other hand, Vision for Sofia thinks that national institutions are the most important. Although some of the participants consider some actors as more important for the problem tackling than others, they all agree that responsibility should be shared and an interaction between the actors must exist.
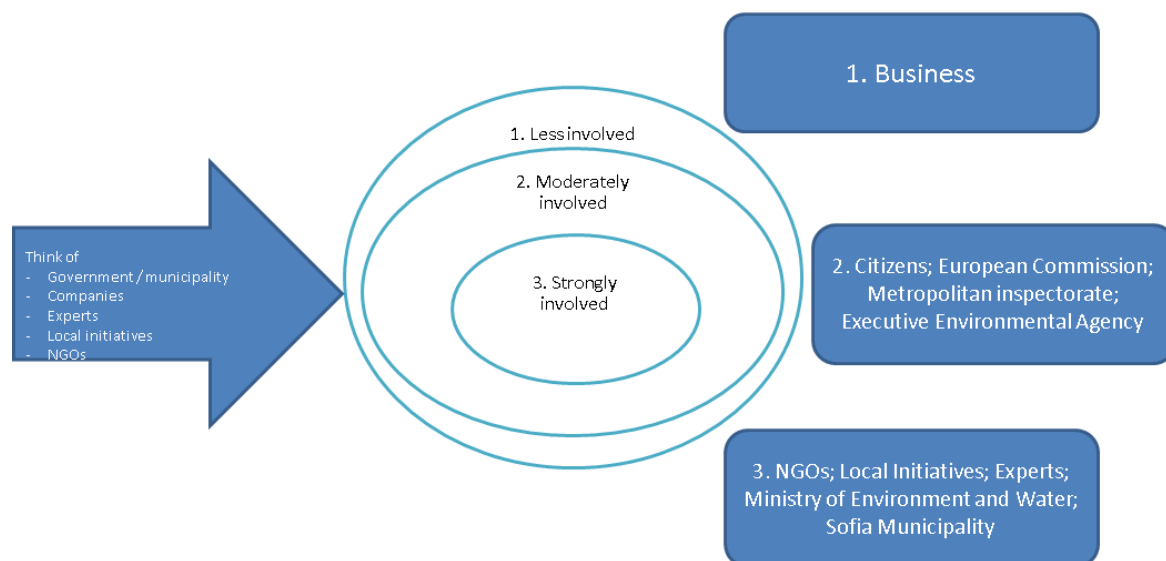

Figure 8: involvement of the different actors regarding the solution of the air pollution problem, according to all interviewees.

In Figure 8 the involvement of the different actors regarding the solution of the air pollution problem is shown, according to all interviewees. Since the focus of this thesis is on state and civil society sectors, business sector was not so much discussed during the interviews. However, the participants consider private companies as least involved in the air pollution problem solving. According to EO D, this is because they are entirely up to the law. Business is either forced to do something or not to do it – therefore, it depends on the state. On the other hand, as moderately involved are presented to be: a) European Commission, b) Executive Environmental Agency, c) Metropolitan Inspectorate, and d) Citizens. All these four actors are from different actors coalitions. EC is the main institution that can execute power on European level regarding Bulgarians national policies. ExEA has all data and information needed related to the air pollution on national level, and this institution can be seen as a dominant one in the coalition with the MoEW when it comes to data gathering. The Metropolitan Inspectorate exercises control over compliance by all legal and natural persons on the territory of Sofia Municipality with the normative acts of the Sofia Municipal Council. This is the reason why it is indicated as a moderately involved actor – because of the resources, which this inspectorate has so to exercise the control, which it has according to the law. Finally, citizens are considered as moderately involved because of their power to influence authorities` decisions as well as because of their contribution to the air pollution through everyday activities. On the other hand, citizens cannot be strongly involved since they have to follow the rules that the state creates.

As strongly involved are considered to be the: a) NGOs, b) Local initiatives, c) Experts, d) Sofia Municipality, and e) MoEW. Three of these actors are in the civil society sector, which means that the interviewees agree with the fact that civil sector should be actively involved in the air-related policies. NGOs have very important role in informing the society and controlling the institutions. They inform the society mainly through events, such as discussions and informational / educational campaigns. Moreover the main NGOs that are active about the air pollution problem propose different strategies / plans to the Municipality, working together with the institutions. This means that NGOs have the capacity and skills to tackle the problem. On the other hand, more locally oriented organized societies that initiate different local initatives are also quite important because they can influence the regional municipalities, working together on some specific local problem. In general, it can be said that NGOs and local initatives have the ability to solve the problem by proposing solutions and lobbying in the institutions. Experts are the people who have the knowledge – they can identify the problem and probably give a solution to it. This resource should be used by the institutions as well, so to create well implemented measures.

Sofia Municipality and MoEW are also stated as mostly involved actors. MoEW is inevitably the institution with the most resources available, as well as with the strongest power on national level. In the Ministry the legislation is created and implemented. On local level, when it comes only to Sofia, Sofia Municipality is the institution that is most responsible and powerful. The Municipality has the finances so to create the conditions for transition towards better air quality.

4.4.3 Resources and Power

The availability of resources is one of the most important conditions that can restrain or enable a certain action. They are directly related to the actors and their role in the problem solving. The interaction

between the actors discussed above can lead to resources distribution and / or dependency between different participants. This chapter will reveal the resources needed for the air pollution problem solving, discussing also some actors` in/dependency from other actors. In a nutshell, respondents identified the following resources that are needed for tackling the air pollution problem in Sofia: (a) data/information, (b) human resource, (c) environmental education, (d) institutions` power, and (e) finances for different strategies funding.

Data and information availability were a resource discussed by both sectors, along with the human resource. The barriers that will be discussed below in this thesis are to some extent related to the lack of these resources. The country's main source of information and data is the ExEA, an institution that officially measures air quality with its five stations in Sofia. Until 2017, no other organizations and / or institutions, except from the MoEW had air quality data. For this reason, it has been extremely difficult for NGOs and experts to conduct different research, identifying problems and searching for solutions. However, since 2017, in Bulgaria, and most of all in Sofia, the AirBG.Info network has been expanded, which allows citizens to measure air quality by setting up a station in their home / office / villa.

Another important resource, identified by the interviewees was the human one. All institutions and environmental organisations discussed that human resource is from high importance for greener development of the city. Public institutions, as well as EOs need more people that have innovative ideas and are engaged with the city`s sustainability. So far, among the NGOs, It can be said that EOs B and C have larger teams consisting of people working on different topics, being experts in a particular field. On the other hand, among the representatives from different institutions, only the Municipality considered the human resource as enough when it comes to the air pollution. This kind of resource is also strongly linked to another one, discussed during the interviews, namely the environmental education. It can be said that in Bulgaria, environmental issues are something that is talked about in recent years. This topic has never been so much discussed before. Air quality is in the public and social agenda from few years, which is why many people still cannot understand the health and environmental consequences of their practices. When environmental education was discussed with the interviewees, it was meant the teaching of children at school about the environmental problems, as well as the specialization of students, and of people who work for different institutions and organisations. There are still no educational lessons for children where they can understand what the consequences of their daily activities and the ways they can help solving the problem with the air pollution even in the future are. On the other hand, in the Bulgarian universities, there are no bachelor or master programs that are specialized in tackling environmental issues on political level. This makes it more difficult to find employees who are really experts in the field. Most of the universities` programmes are related to the scientific ecology without concerning the societal aspect. This is something that EO A wants to change – a NGO that wants to involve lessons related the health effect of the air pollution in the medical programs in each Bulgarian medical university. These people then can serve as mediators for their patients working on solving the cause of the illness, not only the illness itself. Having more experts, more understandable explanations about the air pollution and its effects on our health and the surrounded environment, as well as more educated population from early age, it will be easier to work on measures that aims at tackling the problem.

Next resource that was discussed is the power given to the institutions. Power is a relative thing when it comes to air pollution. Are institutions doing enough to improve the air quality? Do they exceed their rights, or on the contrary - do they need more? In fact, this was one of the main issues discussed mostly with ExEA, Regional and the main Sofia Municipality – power given to them. In Bulgaria, the responsibility for the air quality in each city is given to the Mayor of the concrete city. However, Municipalities do not have the regulatory power that is necessary when somebody have to be fined for a damaging the environment practice, for example. These rights are given only to the RIEW. Through this institution all others can control the activities of the businesses, as well as of the population. The Regional Municipality claimed that they need more power in order to control the environmental situation in their own region. The representative of this institution was convincing in the claim that if this institution had the rights to fine and control, things would happen faster and in a much more effective way. When each case passes through the RIEW, this slows down the process and increases the chances of corruption since certain people are responsible for the entire municipality. Therefore, it can be said that all institutions are dependent on the RIEW having this controlling and regulatory power that the Regional and the main Sofia Municipality thinks they need.

Finally, the financial aspect will be discussed. Finances are always needed, especially for tackling a complex problem such as the air pollution. According to the Municipality and the ExEA the financial resource in Sofia is enough for doing their job well. Main channels for money receiving by the authorities are: (a) through the Operational Program Environment, applying for different projects; (b) ExEA and RIEW receive some specific budget by the MoEW, deciding what to allocate it for; (c) the Municipality has a different budget (based on the taxes paid in the city), which is also allocated among the different sectors every year. Therefore, it can be said that the MoEW allocates the money for all other environmentally-related national institutions, whereas the municipality – for all others municipal institutions and projects. On the other hand, all institutions are dependent on European money for a lot of the projects that take place in Sofia. These projects are mainly funded through the Operational Program Environment.

Since the main focus of this thesis is the role of the civil society domain in the air-related policy arrangement in Sofia, it is important the role of the civil sector in the resources allocation to be mentioned. According to all interviewees, civil society sector has no role in the budget allocation. NGOs are able to identify the problem, searching for solution and working with the institutions, but eventually, citizens cannot say whether they agree their money to be spent for some specific project or measure. This is considered as a problem by the EOs since the population of Sofia nowadays is developing financially and intellectually and it becomes much more active and informed about the problems that exist in the city, desiring to take part in the problem solving.

4.4.4 Rules of the Game

Formal Rules

In this sub-chapter, all main legislations will be discussed related to the air pollution in Sofia. Firstly, the European policies implemented in the country will be presented, then, Bulgarian national policies, as well as the focus of Sofia Municipality when it comes to legislative documents.

❖ European and national policies

One of the main European Directives that influences Bulgarian`s national legislations is the European Directive 2008/50/EO (Clean Air Directive for Europe) of the European Parliament and Council from May 21st 2008 regarding the quality of the atmospheric air and cleaner air in Europe. This directive leads to national legislative documents that aim at reducing PMs emissions in the atmospheric air. In order to meet the requirements of the Directive, a National Air Quality Program and a National Air Pollution Reduction Program are being developed. The purpose of developing these programs is to identify the sources of pollution, but also the applicable measures, responsible institutions, deadlines for implementation, financing, eventual creation of financial reliefs, etcera, with the ultimate goal of achieving better air quality. European directives affect air related national legislation, demanding specific targets. That is why the EU court in Luxembourg has ruled in a case that Bulgaria has not complied with the fine particulate matters standards in all agglomerations and areas of the country, as well as with the preparation and implementation of air quality plans in order the period of exceeding the limit values to be as short as possible (MoEW, 2017).

On the other hand, on national level, there are few legislative documents identified as important for the interviewees: (a) Law for Purity of the Atmospheric Air is one of the most important national documents since it governs the definitions of air quality indicators and norms, emissions limitation, as well as the rights and obligations of the state, municipal authorities, and people in the control, management and maintenance of the atmospheric air quality; (b) Program Guide for Municipalities` programs/plans – instructions for the development of emission reduction programs for the municipalities and the achievement of the established norms for harmful substances, in the areas for assessment and management of the ambient air quality in which there are exceeded norms; (c) National Program for Air Quality 2018-2024 – due to non-compliance with air quality standards, the Bulgarian Government is currently subject to an infringement procedure before the EU Court. In particular, this concerns twenty-eight municipalities where there is a failure to comply with the requirements of the Clean Air Directive for Europe as regards PM_{10}. Therefore, this report proposes a program of measures to be implemented by the end of 2024 in order to meet the requirements of the Directive. It can be said that the most important legislative document regarding the air quality in Bulgaria is the LPAA. This is also the law that has undergone various changes especially in recent years. This is in fact the main document whose changes are analysed in this research and the role of the CS in these changes. In Table 1 the major changes that have happened in the last few years can be seen. Looking at the table, it can be noticed that standards for solid fuels that are used by the households for heating are applied in 2018, after demonstrations on behalf of the citizens and the EU condemnation regarding non-compliance with the European standards for PMs emissions concentration. Moreover, the law already states that Mayors are responsible for the air quality in the city concerned – a strategy that aims at engaging the Mayors of the cities more in order to work harder on the air pollution topic.

Since the complex problem of air pollution needs a complex solution, some other laws were mentioned by the interviewees as having significant effect on the air quality. This kind of legislative documents are: a) The Administrative Procedure Code – through this law, citizens` signals and proposals can be considered when it comes to higher PMs concentrations; b) Law on Local Taxes and Fees – the problem

with the car taxes, especially in Sofia, was already mentioned but it will be discusses in details below, and c) Spatial Planning Act - this law regulates the public relations related to the spatial planning, investment design and construction in Bulgaria, and sets limits on property for development purposes.

❖   Municipality`s focus

One of the main documents for Sofia only is the Operational Plan for Sofia. Its focus so far is on the better public transport and the changing of the fleet. What the municipality is primarily supposed to invest in is the public transport. Even though there are a lot of improvements related to the public transport, still the concentrations of the PMs do not change drastically. There are two reasons for this:

i.   The legislations so far were not focused on the heating systems used in the households. This is something that has changed in the last year since the Municipality initiated projects in order to change the old heating systems (this kind of programs is LIFE);

ii.   Another reason is the fact that the fleet of the public transport is changed with newer and more environmentally friendly buses, a metro network is built in the city, but still a lot of people do not use it because it is not faster compared to the private car. One of the reasons for this was the fact that a lot of cars were driven in the bus lanes and it took the same time to go somewhere whether traveling by car or by bus. This has changed few months ago when the Municipality put cameras on the bus lanes and now it fines the drivers. Another reason is the fact that very often if people do not have a subways station nearby, a lot of time is needed in order to go to the station. It can be seen that the Municipality is working a lot on the bus schedules improvements, but obviously the buses are not enough for the quickly urbanized city.

Recent Laws Changes

In this thesis, main focus is the last 3 years, and the changes that happened during these years related to the air pollution policy arrangement. Most of the interviewees agreed that some of the most important for the problem solving laws changes have happened in this timeframe, along with others political strategies and measures. As it was mentioned above, the changes in the LPAA will be discussed in this research. EOs A,B and C, as well as Sofia Green and Vision for Sofia are some of the participants that agreed with the fact that these changes are because of pressure on behalf of the EU, and on behalf of the society. Changes that are shown on Table 1 are those that are made due to this pressure and are analysed in the thesis. In 2018 the air pollution problem already has begun to be a painful topic for everyone in Sofia, and all citizens wanted to be understood whose responsibility is the air quality in the city. They also wanted standards for the solid fuels used for heating to be established and the taxes for older cars to increase. All of this was done by the authorities – responsibility is now transferred to the Mayor, not the Ministry, there are some standards for the solid fuels and the coefficient for the taxes was increased. However, according to EO B and Vision for Sofia the increased coefficient for older cars taxes is not an efficient measure because still newer cars taxes are much more expensive from the older ones. It can be said that these three changes are particularly relevant for this research, as well as the role of the civil society domain in initiating these law changes.

Year	Legislation	Additional Documents / Actions	Details / Goals
Changes in the Law on the Purity of Atmospheric Air			
2018	Responsibility shift (MOCB, 2017)		The change in the law holds the mayors responsible for the quality of the ambient air in the city concerned
2018	Quality requirements for solid fuels (coal and briquettes) used for domestic heating by the population (Анев, 2018)	Designation of a control body to apply these requirements with the aim emissions reductions of fine particulate matter (PMF) and sulfur dioxide through the use of higher quality solid fuels for domestic heating	Harmonisation between the European legislation with the national one
Other important regulations on national level			
2019	Taxes increase for older cars (BTV, 2018)		The tax on cars and trucks with a mass of no more than 3.5 tonnes will be determined by a new formula that includes two components - property (power and year of production) and environmental (environmental category)

Table 1: Main changes in the LPAA, relevant for this research (sources: shown for each legislation)

Informal Rules

In addition to the formal regulations that exist regarding the air pollution, some informal rules also take place in the city. These formal rules, as it was said in the theoretical chapter, are related to different 'routines' of interaction such as awareness and knowledge increase by the institutions / organisations. Coalitions of NGOs try to arrange meetings and conferences in order to collaborate with the institutions while looking for decisions. According to Sofia Municipality NGOs are the organisations that can contribute a lot for solving the air pollution problem looking for measures and strategies that can be effectively implemented in Sofia. And they do that. EOs B and C are active in proposing different solutions and informing the society about the issue. The main Sofia Municipality does a lot of informal campaigns through its project Sofia Green. People who work for this project co-work with the other two sectors (business and civil society) on behalf of the Municipality, initiating a lot of initiatives related to the mentality change of the citizens that can contribute to the air quality improvement. One of the main communication campaigns of Sofia Municipality is a media campaign, which shows that 'the air quality depends on each of us'. In that way authorities try to convince citizens that it is not only their job to improve the air quality. Some of the municipality`s initiatives are shown in Table 2. These initatives are chosen because, in addition to reducing PMs concentrations, they would also change the mindset of the people involved regarding the air pollution problem.

Strategy	Details
Green Ticket (BTV, 2018a)	When the forecast of the Department of weather is for yellow fog code, Sofia Municipality has the right to issue a "green ticket" measure - a ticket at a price of BGN 1 (€ 0.50), used for all public transports during the whole day.
"I want to walk" Initiative (Борисов, 2017)	Direct work with students and parents in a particular school and give away awards to those who walk to school.
Network of electric bicycles in Vitosha Mountain (Vitosha, 2018)	A pilot project for sharing electric bicycles (working together with start-up company for electric bicycles Eljoy Bikes).
NOWASTE online platform (NoWaste, 2018)	A guidelines for domestic waste separation (answers to the questions where, when and what can be thrown).
A day without cars (BTV, 2018e)	European initiative that is also present in Bulgaria – one day without cars in the downtown of the city.
Measuring cars emissions in Sofia (APC, 2017)	Remote measurement of vehicle emissions in real time and without the need to stop them (together with Road Police). After measuring them, the Mayor of Sofia has sent personal letter to each owner whose car pollutes the air with recommendations how the car maintenance can be improved.

Table 2: Municipality level strategies related to the air pollution mitigation

So, it can be said that the NGOs (more specifically – For the Earth, Save Sofia and Code: Bulgaria) and the SM are the most active actors in the information spreading among the society, trying to work together for better improvement. Although coordination between institutions and civil society is noticeably increasing (according to EOs A, B and C, and all public institutions), the final decision is still up to the authorities. This decision-making process is also strongly influenced by the business. During the discussion on Event C and the interview with EO C, it became clear that equality among the population is not achieved and the lobbyism on behalf of the private companies has huge impact on the decisions taken by the institutions. The lobbying of fossil fuel and wood logging companies is an extremely difficult obstacle for authorities in order to take the best possible decision that is in the interest of the citizen.

Another aspect of the informal rules, mentioned in the theoretical part of this thesis, was the rules of conflict and resolution or what is considered as being a problem or good decision for the society. Regarding this, during the interviews, it became clear that citizens of Sofia are often against some 'radical' measures that the Municipality wants to take in order to improve the air quality in the city. Such measures include, for example, banning the registration of old cars that are polluting, or restricting the

entry of cars into the city center. The unacceptability of these measures by the citizens leads to the unwillingness of the authorities to take such decisions.

Finally, as an informal rule the participation of different actors in the policies will be discussed. As it was said above, the final decision for air-related policies is to the institutions, and more specifically to the MoEW for national decisions and to the SM for local decisions. CS can play a role in different ways:

- Citizens can identify some pollution in a specific region through their sensors network and to press the authorities for actions.
- Experts can identify a problem through research and analysis.
- NGOs can propose decisions, working together with the municipality for solving the problem.

It is supposed that citizens also can propose their solutions and have their opinion about different projects / plans / strategies through the main channel of communication of the national and municipal institutions – public discussions. These discussions take place before the implementation of a new legislation, giving a chance to the citizens to change some of the decisions taken. However, all EOs, the expert and the citizen claim that these discussions are formal and citizens` opinion is eventually not taken into account.

4.4.5 Discourses

According to all interviewees who took part in my research, air pollution in Sofia is huge problem and a lot of attention should be paid about it. Each institution and each citizen in the city has to be responsible for what they leave behind. The discourse related to the responsibility was among the main ones that were discussed during the interviews. The problem with the air pollution is complex because nobody can say that the responsibility is on only one person / one institution / one city / even one country. Air pollution problem is a global responsibility, which automatically makes it national responsibility for a specific country. Nonetheless, in general, municipalities have a leading role in the responsibility. With the latest changes in the law, the Ministry tried to increase Municipalities` accountability. ExEA and EO B explained that the municipality certainly has more responsibility, but for managing the process. This is its key role. Citizens have their roles at changing their daily practices, which can happen in two ways:

- ✓ Because of personal will and conscious which can make many quality improvements for the air;
- ✓ Due to fines and penalties that citizens may obtain in event of non-compliance with a law.

It is inevitably to be said that the Municipality is working for both strategies. Mostly, it tries to communicate the problem, but lately it also started to rely on sanctions and fines.

In order this shared responsibility to be achieved effectively, according to the EOs interviewed, the coordination between the two domains should increase. More meetings should be arranged by the institutions where citizens and NGOs can actively participate in the decision-making process and in the strategies / measures implementation. The only one EO that is actively involved in the problem solving by the Municipality is the NGO For the Earth (EO C). EO B, on the other hand, proposes a lot of specific solutions that can be used for air quality improvement. As it has been said above, the last word is always

on the institutions and the fact that often civic opinion is neglected reduces the overall motivation of the civil sector to participate in solving the problem. The resource dependency that was discussed in chapter 4.4.3 is also a reason for motivation decrease. All institutions and civic organisations depend on the MoEW and mostly on the ExEA for national data and information. Some part of this dependency can be overcome if the data from the AirBG.Info sensors network is officially accepted. However, this data is still not accepted at all and all information that is needed for official documents should be obtained by the ExEA. This could be an obstacle in some cases, as sometimes the ExEA is reluctant to provide information to the civil sector, although it is required by law. This was also the case with EOs A and C, when they requested accurate information which was not publicly disclosed to be provided during a meeting between public institutions and civil society organizations.

The last discourse discussed with the respondents, mainly with EOs A, C and D, and with Vision for Sofia and Sofia Green, was the overall long-term strategy regarding the air pollution in the city. This is also related to the coordination between the sectors, because, as EO A stated, the consensus for such a long-term strategy is quite important in order everybody to stick to the program in the future. According to my observations during the discussions with my interviewees, the overall perception is about fragmented actions of the institutions and no coordination between the different authorities in order long-term plan with measures to be created.

4.4.6   Barriers Within the Policy Arrangement

Inevitably, when analysing the barriers within the different dimensions of the air pollution policy arrangement, it became clear that all obstacles that were found are interlinked. Almost all of them can be applied for more than one dimension within the arrangement. This is the reason why all barriers will be discussed in the current sub-chapter so to be avoid a misunderstanding that one barrier can be related to only one element of the PA.

After the interviews conducted, it can be said that barriers exist on all level - starting from European level, going through national and municipal institutions and reaching to the society and the behavior of citizens. The description of the obstacles within the policy arrangement will start with European-related barriers. The first one is associated with the European air quality standards and the fact that they have been established almost 20 years ago, some of which are much less restrictive than the guidelines set by the World Health Organisation (WHO) and the levels identified by the most up-to-date scientific data on human health impacts. Comparing the European standards for PMs, which are 25, and the standards of WHO, which are 10, obviously achieving the European Directive`s standard is not going to solve the problem. After the abovementioned explanation about the influence of European legislations on national regulations, it can be noticed that it is quite important what are the requirements given in order Bulgaria to be more motivated to work towards better air quality. On the other hand, the perception of Bulgarian towards Europe is also of high importance. Something that can be identified as the second barrier, discussed during Event C, namely the clear division of Europe that was introduced. There are two myths that divide Europe.

- ✓ The first myth is related to the fact that "*those in Western Europe have become rich because they never lived under the Communist slavery of the Soviet Union. That's why we do not want those rich people to tell us what to do*".
- ✓ The second attempt to divide Europe is when it is said that "*the rich middle class who voted for the Greens because they focused on environmental (climate) problems actually want to rob our poor people in Eastern Europe who live on cheap coal and atomic energy*".

Looking at these two barriers, it can be noticed that the first one is more related to the rules dimension, whereas the second one is societal barrier that detriments the confidence Bulgarians have towards the European policies. Unfortunately, it can be said that this is an idea of more superficial reasoning, which is an effect of another barrier related to the public interest in the pool of information that surrounds us. A barrier called by EO A as 'Headline society' – a society that is influenced only by the noise in the environment without an interest about what is under this headline and what is the actual information.

After briefly explaining the main barriers related to Europe and its influence on one of its member-states, Bulgaria, the analysis will continue with barriers that exist in Bulgaria – most common obstacles that people from different institutions and organisations notice as detrimental.

Firstly, it will be explained what is the perception for the air pollution problem by the authorities, something considered as a barrier, according to all EOs interviewed. They all claim that the bigger part of the institutions still deny that a problem exists at all. This obstacle was discussed mostly with EO C, an organisation that has a theory related to institutions' attitude towards the problem. This NGO stated that if all institutions together admit the fact that there is a problem with the air quality and that there are some shortcomings, which have to be overcome in order the problem to be solved, then everything will change drastically and the authorities will be differently perceived by the citizens. After institutions admit that there is a problem and show a desire to solve it, then the communication and coordination between the different sectors can be increased. Something, considered as a barrier as well. Lack of communication and coordination between the state and the civil society, as well as within the state institutions is identified as a barrier also by Ms. Popova (see: sub-chapter 2.5.1). The obstacles described by her were used as a starting point for the actual analysis of this research, which is why these concepts were discussed with the respondents. According to EOs A, B and C, the coordination and communication between the civil sector and the MoEW mostly, and the coordination within the institutions needs to be improved. There are no channels of communication, and meetings between the representatives of all institutions are not arranged. This leads to the different directorates to be unacquainted with what the other directorates are working on, leading to fragmented actions and taking measures not previously planned between all directors. Unfortunately, according to the EOs, this communication problem exists even on local level, in the SM, not only in the national institutions. Good communication and coordination are quite important for a good partnership between the sectors. Basically, all actions must be coordinated because everyone is involved in one way or another. The interviewee from the Regional Municipality agreed with the fact that air pollution is a complex problem and its decision should also be complex. Unfortunately, very often people do not hear what they are explaining and there is a misunderstanding between the two sectors. More communication is needed between these two units. The good news, according to all participants, is that a new partnership network is created in Sofia. It is in

its beginning, and it is mainly with the Municipality, not with the national institutions and the MoEW, but this is again a characteristic of the real democracy that Bulgarians so much want to achieve.

Although the municipality focuses on communication with citizens, harder measures are also important at some point to be implemented. However, their use is often impossible, as only one institution in Bulgaria dominates in that sense and can have regulatory power over business and citizens. This institution is the RIEW and its controlling power is used by all other national and municipal units. The main and the regional municipalities have no power when it comes to fines and penalties towards the citizens. The principle "Polluter pays" is not very well applied in Sofia since the procedure for fining somebody due to an action that harms the environment is very long and almost impossible. According to the Regional Municipality, even if someone is fined, very often this money is not collectable but if this institution has more power, the law will be more effectively implemented.

Next, a barrier mostly related to the resources dimension and identified by all respondents will be discussed – lack of data and enough information. This was already hinted in the resources and discourses dimensions, and it is definitely described as an obstacle by the respondents. Data is actively gathered in recent years, and it is not possible actual comparisons to be made. Moreover, even now, the data is not enough – there is no classification about the systems used for heating, or about how each system harms the environment and our health. Due to the lack of information and data available to the institutions and organisations, this also hinders research and analysis conduction on the air quality improvement in the city. According to EO C, for tackling the problem, it is extremely important to be known: what are the factors and how they impact in order the appropriate measures to be taken. Therefore, more research on the topic is needed, as well as data gathering. The lack of compatible data collection leads to the lack of knowledge integration, which, in turn, leads to universities fragmentation and insufficient analysis and research on the subject. Another main resource identified as scarce but from the NGO sector was the level of environmental education. The need of environmental education is one of the main problems in the country – something understood during the interviews with environmental organisations, as well as during the events attended. Children should learn more about the consequences of our activities for the planet and for our health, as well as people need more understandable explanations about the air pollution and its actual impact on human being. The combination of lack of education and research leads to people who have no enough competences to tackle the air pollution problem. In agreement with the EWC, more skills are needed, not only in the state/municipality institutions but also in the NGOs. More experts are necessary who can gather and analyze data related to the air pollution. People in NGOs say that they need collaborators not only for the work but also people who have innovative ideas for tackling the problem. Lack of skills can be associated also with the need of more experience exchange. Something that was mentioned by the Regional Municipality as a significant barrier for further improvement of their work. Usually, knowledge and experience exchange exist for the employees of the main Sofia Municipality. People in the smaller institutions need some trainings and meetings with different people so to learn best practices and to implement them in their regions.

Last resource barrier that was mentioned by all participants is related to the human resource - a problem that is noticeable everywhere, in the state institutions and NGOs. However, there are different

reasons for that. On one hand, in the NGOs people may not want to participate in some initiative because:

- ✓ They are not well informed about the problem;
- ✓ They think that the problem should be solved only on behalf of the state/municipal institutions;
- ✓ The volunteer education in the country does not exist and people are not well informed;
- ✓ They consider the time spent for something which is against the state`s activities, as a wasted time because in the end the state takes the decision.

On the other hand, in the state institutions, the salaries are not very high, which leads to:

- ✓ Lack of young, motivated people with innovative ideas;
- ✓ Often shift in the staff.

Most of these reasons can be related to the motivation of people. The lack of inner motivation is also described as a barrier. When it comes to motivation, sooner or later the metaphor of carrot and stick comes to the front. This is something that almost all of the respondents used during the interviews. This notion mainly was used in order to be explained that very often people in Bulgaria have no direction shown by the state which they have to follow. This means that there are no rewards or incentives for people who contribute to the better air quality. Concisely, it can be said that the carrot is missing for the Bulgarians or in other words – the right direction they should go for a cleaner future. According to EO A and EO B, there is no inner motivation for NGOs because of burn out – they work a lot and channel a lot of efforts for something that eventually is so elementary to be done. There is also lack of volunteer initiative among the citizens in order to help NGOs in different activities. More engaged and motivated people on municipal level as well as among the citizens are needed.

The lack of inner motivation on the part of the authorities can also be linked to their political fear. Except for desire, political courage is needed for solving such a difficult problem as the air pollution is. Often, in Sofia, politicians are worried about the discontent of the citizens, which leads to the lack of hard tools used in order the problem with the air pollution to be solved. Together with the high corruption level in the country (compared with the other member-states, Bulgaria has the highest corruption perception index), and the powerful lobbyism that exist (when it comes to the influence of companies, which work with solid fuels and wood logging), all this leads to the lack of laws implementation. Lack of law implementation is another barrier that was described by all EOs interviewed, as well as by Vision for Sofia, the Regional Municipality and discussed during the Event B. By law implementation it is meant the control of citizens` actions through the law and its real imposition in the city in order the air quality to be improved. So far, there is no policy of fining citizens for their practices that pollute the air in any way.

The implementation aspect has a lot in common with the strategy problem as well. There are some very good measures taken by the Municipality, but they are not properly implemented and therefore there is no improvement after them. This kind of measures are the 'Green ticket', for instance (see: Table 2) – this is a great idea, which, however, should not be implemented once per year, after three days of polluted air. Notwithstanding, maybe the most important example is with the car taxes, something that

was recently discussed very actively – taxes of older emitters are increasing in order people to be motivated to buy new cars. Eventually, it turned out that only the coefficient of the car taxes has been changed and even now one older car is again cheaper than the new one. Moreover, according to EO B, car taxes in Sofia are generally the cheapest compared to the taxes in the whole country.

The strategy problem identified in Sofia can also be associated with the lack of long-term overall strategy for the city related to the air pollution. Vision for Sofia, Sofia Green and EOs A, C and D stated that no concrete plan with measures, which can be implemented in the city so to tackle the problem, exists. Moreover, during the Events A and B, it became clear that nobody is estimating different future scenarios and policy options when plans are created. This can be considered as an obstacle while undertaking any measures in order to improve the air quality. Lack of overall strategy and the existence of fragmented actions are always not well perceived by the society. However, there is one very important barrier on societal level that can be said to be influential when it comes to the implementation of such long-term strategy. One of the paradoxes in Bulgaria is that some measures that people consider as 'radical' are in fact something absolutely normal for Western Europe, for example. That was something discussed during the Events B and C, as well as with the ExEA, Municipality, EWC and EO B. Here, measures such as forbidding diesel cars or putting stickers on the cars with their environmental class are perceived as unacceptable. The authorities can feel citizens` dissatisfaction when introducing more restrictive measures and sanctions. In that sense, two regulations are currently under development, which will set standards for these types of fuels that can be used for heating. The problem will come with the control after this, because it will be very difficult people to stop using coal/wood/fuel for heating, just because it is cheaper. According to the climatology expert, the prosperity of each country depends on energy, on the extraction of energy, and if cheap, abundant at any moment, energy cannot be provided, everything else is unnecessary to be discussed. The most environmentally friendly heating is insanely expensive in Bulgaria, there is no nation in the EU, like Bulgaria that pays as expensive absolute value of natural gas, and if the price is taken as a salary ratio, Bulgaria is a recorder on the expensive gas. People are getting richer, but if there is no liberalized market so everyone to be able to build gas and steam network, there is no way to tackle the problem.

So, after discussing all these barriers, one thing became clear during the interviews. Almost all interviewees agreed with the fact that the resources needed for tackling the air pollution problem are probably not enough, but if the state organizes and uses effectively everything that is available so far, much more can be achieved. One of the problems Bulgaria has is the fact that the resources are not organized efficiently. There are a lot of competent people in the state institutions, as well as in the civil sector, who are not at the right places, taking the right decisions. Moreover, a lot of the interviewees said that very often the state does not take into account the feedback of the people, as well as their innovative ideas. Money are allocated for out-of-date projects (such as a project for an incinerator in the downtown, which will be discussed below), but not for innovative ones. If the resources are organized more effectively also the coordination between the two sectors will increase since coordination is also linked to resource dependency (something discussed in chapter 4.4.5). Different types of resources, such as money, legitimacy, knowledge and personnel should be effectively coordinated among the actors in order the resource organisation to be as optimized as possible.

The same barrier related to the inadequate used of resources, can be said to exist for the legislations and their lack of effective implementation and control. All of the interviewees agreed that in general the legal framework is good, but it is not well implemented and controlled. These are two of the main barriers that were mentioned, especially by the EOs regarding the rules dimension. There are a lot of documents that forbid different practices, and if each of these laws is implemented properly, the emissions of PMs will drastically decrease. An example discussed with the EO B was the purchase of 7 gas-analyzers in 2018 by the SM, which were given to the traffic police in order they to measure the concentration of harmful emissions emitted from cars. A check after few months revealed that these analyzers had never been used.

According to the Regional Municipality and all environmental organisations, the first step to the success is the communication. This is something that has to be improved. Then the fines and sanctions come. Once the direction is shown, a push is necessary so people to know what they should not do. Then the imposition of law comes, but its real imposition. Unfortunately, often, even the three elements are not presented very well in the city. Communication is improper; there are no sanctions and fines, as well as no implementation. EO D enumerated all elements, which one law should have, namely: (a) rules it gives, (b) bodies to carry it out, (c) a financial framework that overlaps the implementation of this law, (d) report, and (e) accountability. Only if one of these elements is missing, then the law cannot work effectively for the interests of the citizens. Moreover, if not all of these elements are presented, the planning between the plans / programs / strategies cannot be possible. Most of the NGOs identify this as an obstacle, because this means fragmented actions, which lead to not achieved goals.

Finally, two last barriers will be discussed in this thesis, barriers that were described as mostly detrimental for the problem solving. The first one is a barrier that exists in both domains – state and CS, namely the responsibility transfer. Responsibility transfer is something that can be observed in the country as a whole, but also in the city, especially among the institutions but also when transferring the responsibility between the society and the institutions. According to EOs A, B and C, as well as the Regional Municipality and Vision for Sofia, the MoEW is trying to transfer its responsibility to the municipalities without considering the resources available for them. The Ministry has said that the taxes for older cars will be increased, but few months after it has understood that the taxes are a duty of the Municipalities, automatically the Municipalities became responsible for the car taxes. The same example is the responsibility transfer to the Mayors personally – each Mayor is responsible under the law for the air quality in the certain city. A responsibility transfer discussed with the participants was also the one between the two sectors – state and CS. Often society considers that institutions should improve the air quality somehow without the change of the daily practices of citizens. All respondents agreed with the fact that firstly the Municipality has to create the proper conditions for improving the air quality – better synchronized public transport, for example, and then people have to change their daily life by using the bus, not their private cars, for instance.

The last barrier, which can be said to be a consequence of almost all others enumerated above, is the mistrust in the authorities on behalf of the society. All this can be described as a 'vicious circle' where each shortcoming in the institutions leads to mistrust of what they do and how they do it, but at the same time this mistrust leads to the same barriers such as interfering the coordination between the two

sectors being an obstacle for partnership. Due to distrust the coordination between the two sectors (state and civil society) is quite troubled since all environmental organisations claim that national institutions do not give enough information to the NGOs, providing fragmented data that cannot be analysed. On the other hand, citizens have their own network with stations and have their own data, which however is not accepted by the state as official. Therefore, it turns out that the state does not trust people`s data and citizens do not trust the state`s data.

4.4.7 Relationship Between Barriers

One of the goals of this thesis, except for identifying the barriers that exist regarding air pollution problem solving in Sofia, is to analyze the relations between all four dimensions of the policy arrangements, as well as between the barriers that exist in these four dimensions. However, according to Liefferink (2008), even if the four dimensions of the policy arrangement are interconnected, this does not mean that the policy arrangement is stable and harmonious. The policy arrangement is part of the society, which automatically means that some changes in the policies can lead to the involvement of new actors, such as citizens or NGOs. On the other hand, changes in the society`s culture or structure can bring about changes in the policy processes. This can be said to be shown in Sofia, since some shift in the overall mentality of the municipality can be seen due to the intellectual and economic development of the citizens. In this sub-chapter an analysis of the relationship between the different barriers and their links to a particular dimension / or set of dimensions within the policy arrangement will be conducted. Figure 9 reveals the links between barriers, which were identified in the previous sub-chapter and are considered as most important among all obstacles enumerated. Analysing their root of cause and their links probably will lead to a conclusion that reveals which dimension within the PA deserves most attention for a change.

If we first take the barrier related to the lack of environmental education in the schools and universities, it can be said that when people are not well educated about the problem and are not acquainted with the seriousness and complexity of the issue, they do not accept their societal rights to be disrupted and restrictions to be implemented that violate the freedom to which everyone is entitled in the 21st century. The environmental education being a resource that people need so to perceive the problem differently can be linked to the dimension of resources, whereas the unacceptability of different measures is mostly linked to the informal rules dimension, together with the political fear, because these two barriers influence the decision-making process of the institutions regarding different strategies and measures implemented in the city. On the other hand, the lack of political courage to admit a particular problem or the failure to deal with the polluted air leads to a barrier that is linked to the discourses dimension, namely the responsibility transfer. State and CS sectors sometimes perceive the problem with the air pollution as something that has to be solved by only one of these sectors. People often claim that authorities have to tackle the pollution by themselves, whereas the authorities think that citizens have to change their activities in order the air quality to be improved. Except for this kind of transferring, this barrier is also related to the responsibility transfer between the different state and municipal institutions. This is happening when one institution blames another for a particular problem, the other blames a third one, and so responsibility is constantly transferred. This transferring is also often caused due to the lack of communication and coordination between the institutions. A barrier

that can be linked, on one hand, with the discourse dimension because it is associated with the way of governance and the collaborative governance, which is necessary for better measures implementation (more coordination between the state and CS sectors), and on the other hand, with the resource dimension because coordination is always linked to resource dependency and the fact that some resources have to be coordinated among different actors. Therefore, lack of communication and coordination can lead to bad resources organisation among the actors. When there is no coordination between the actors but also there is lack of enough resources such as data and information, this leads to the impossibility an overall long-term strategy to be created and implemented in the city. This barrier will be linked with the discourse dimension as well.

After describing these barriers, we will take the other part of the figure, starting with the obstacles related to the powerful lobbyism and the corruption. Both of them are linked to the informal rules dimension since they strongly influence the decision-making processes by the authorities. Both of them can be said to lead to the lack of 'Polluter pays' principle in the city because when business to some extent makes political decisions (whether through money or through the power it has among the political circles), then the business will not bear the consequences of its actions. The same thing applies to the society - when people always find a way through which to bypass the law, then this principle will never be valid. The lack of this principle applied in the city is also caused by the lack of law implementation, a barrier that is related to the formal rules dimension and is also caused by the political fear.

Looking at the figure where the relations between the barriers are revealed, it can be seen that what was said in the previous sub-chapter (see: p.55) really applies for the case of Sofia, namely the fact that almost all barriers lead to the mistrust in the authorities. From the chosen barriers here, political fear, responsibility transfer, lack of communication and coordination, lack of long-term strategy, lack of data and information, bad resources organisation, lack of law implementation, corruption and powerful lobbyism are all facts that cause people not to trust the institutions.
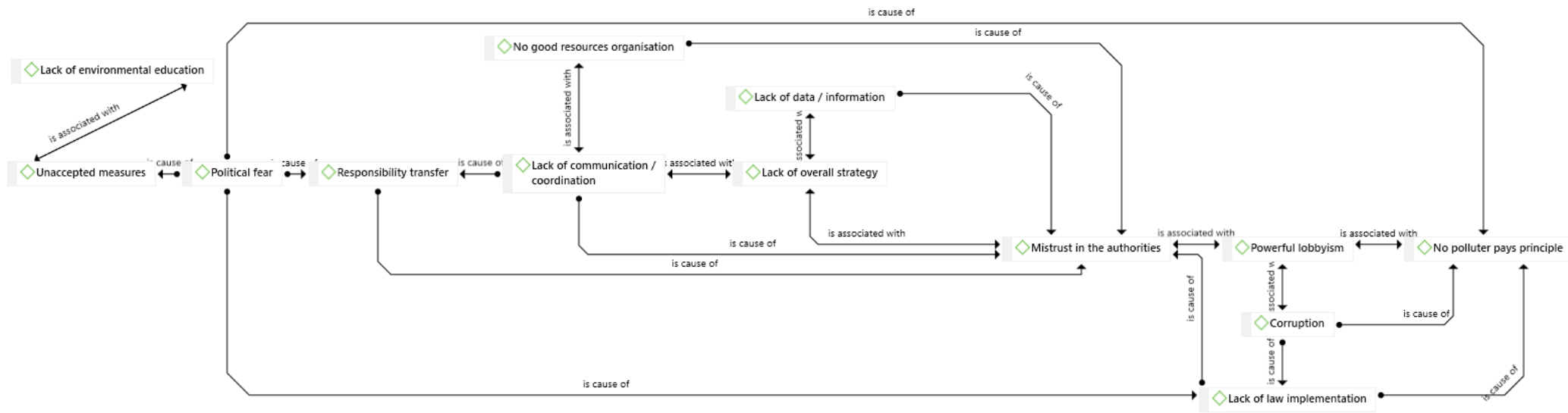
Figure 9: Links between the barriers (work of the author)

4.5 State and civil society domains in Sofia

This sub-chapter aims at discussing the political and societal landscapes in the city of Sofia with the aim more comprehensive view of the situation to be obtained.

4.5.1 Defining the state

In this sub-chapter, it will be discussed how the state works in general and what the interviewees see as shortcomings that detriment the air pollution problem solving. What was noticed by me was the fact that most of the participants (especially the EOs) associate the way of working of the institutions as a whole with the Communism`s mentality. Few main barriers were identified during the events attended and the interviews. Lack of transparency is one of them. During Events A and C it was discussed the fact that there is no transparency regarding the activities of the institutions. For this reason, it is very difficult for people to get acquainted with their work, which leads to the reluctance of the authorities to get feedback from citizens, something that has been discussed with EO A. According to this participant, the paternalistic model of governing still exists to some extent in Bulgaria, especially when it comes to the national institutions such as the MoEW. EO C stated that the Municipality is more open to civil initiatives and partnership with NGOs, whereas the Ministry "*is in a war with the civil society sector*". Some residues from the Communism regime can be noticed also by the fact that, according to the EO C, by law, citizens cannot appeal laws / programs / plans designed by the state.

When explaining the Communist regime in Bulgaria and its effects even today on the Bulgarian government, few characteristic can be mentioned: a) its mentality, b) the bureaucracy, c) attitude towards civil sector, and d) the instruments used. It was interesting for me to understand that almost each of these characteristics refers mainly to the national institutions, not municipal ones. Talking about institutions` mentality with the interviewees, it was discussed the channel of communication with the citizens. The main channel of communication with the citizens of state institutions is the public discussions where they discuss different projects, plans, strategies. When it comes to the air pollution, these public discussions are visited by a lot of people. However, for the Regional Municipalities this can work, but for the Ministry – no. People see that even if they give an opinion during these discussions, everybody agrees on it and the institutions accept it, in the end nobody takes it into account during the decision-making process. Bureaucracy is also something that is considered as typical for the Communism regime in this thesis and is something that still detriments a lot of the processes in the country. Long procedures and delay of public procurements that slow down the work of different institutions and organisations, are some of the things discussed with the ExEA, Municipality and its project – Vision for Sofia, as well as with EO C.

When the instruments used by the state are discussed, however, there is some contradictory. Especially when it comes to the way of work of Sofia Municipality – there is lack of hard instruments for the problem of air pollution. Soft tools prevail and the Municipality tries to convince people to give up their cars or their emitting heating systems only through warnings. There are no sanctions based on the 'polluter pays principle' and the communication is one of the main instruments used. However, all participants agreed that combined method is necessary. Something that Sofia Municipality is starting to do now.

4.5.2 Defining the civil society

For the aims of this thesis, it was important to be understood whether, according to the interviewees, the NGO sector is a separated sphere or has some political or / and economic interests. Interestingly, there were some contradictory opinions of the participants. EOs B and C consider the NGO sector as a separated sphere from the business and the state that serves only the interests of the citizens. On the other hand, ExEA and EWC claim that the NGOs chase their own economic and / or political interests. According to EO D again these organisations are a copy of the system, not looking for the truth, falling into the essence of the problem, but looking only for the demonstration and mass effect. One of the reasons for this was mentioned to be the lack of sustainability (regarding the discussions with EOs A and B) for the organisations: "*In order to have sustainability, one NGO should have a steady income that does not depend on specific things. This is very difficult. Precisely because there is no funding in this sector most civil organizations literally are struggling*". EO A described the work of the NGO sector in Bulgaria, explaining that most of them are part of the so called TreeHuggers. They do not have a specific business model in order everything to be organized with a specific budget and plan. This means that the management thinking does not exist in these organisations, which leads to fragmented actions, having no specific plan.

When the function of the NGOs regarding air pollution problem in Sofia was discussed, most of the interviewees agreed that their role is combined. They inform the public, work with the institutions (conducting research, giving proposals, looking for solutions), show bad practices. They communicate with citizens through social media mainly and through events (where the discussions are in main focus). Sofia Municipality considers the NGO sector`s function as a corrective one of the institutions: "*NGOs are non-governmental so to be a corrective to us. We can work together, but also they can show us bad practices, so we to take into account the bad experience and to not apply it on our territory. I believe that this is their function - a corrective of the state body*". In general, it can be said that the role of the NGOs is to organize the civil movement so to be more powerful towards the institutions. However, this sector has to start mobilizing people, not only motivating them, in order this movement to really function.

4.5.3 State – CS relationship

Except for identifying the barriers that exist for both sectors (state and civil society) in tackling air pollution problem in Sofia, this thesis aims at analysing the relationship between these two sectors, as well as the role of the citizens and NGOs in solving the problem. The Structuration theory of Giddens was used in order this relationship to be analysed, and the interaction between structure (in our case – institutions) and agency (in our case – civil actors). After analysing the data gathered through the interviews, it can be concluded that there definitely is some interaction between both domains. In the last 2-3 years, the interviewees agreed that citizens have become more educated and aware when it comes to air pollution. Due to this, the state has expanded its publicity – different national and municipal institutions have created websites/platforms/networks where more information about their activities related to the air is explained. The issue now has top priority in the agenda of the government. Obviously, the more active people have influenced the agenda and the administration in general. It can be noticed that because of the more active CS that pressure the intuitions they in turn set new regulations and fines related to the bad daily practices of the citizens in order to improve the air quality.

Now, Sofia Municipality has a new function – to inform people. Solving the problem with the air pollution is not possible without the civil society sector – something that the Municipality knows, but the Ministry still does not realize. When we go back to the theory (see: sub-chapter 2.3) it can be said how institutions work and what are the instruments used. Sofia Municipality, as well as the Regional Municipality claim to mainly use the communication as a way of working with the society. SM initiates a lot of educational and informational campaigns where people are warned for the consequences of their practices over our health and environment. On the other hand, when it comes to the MoEW, it is quite difficult to be said what are the instruments used (whether communication, power or sanctions). Respondents could not specify some specific tool of the Ministry due to the inability to communicate with it at all.

Despite the fact that citizens and NGOs can have more active role in the political processes (specifically in the Municipality), during the Event C, it was discussed the need of more openness towards the civil sector on behalf of the institutions, not only in Bulgaria, but in the whole European Union. Shrinking space of civil society is one of the restrictions that youth is facing. People who are underrepresented for the decisions taken are vulnerable or age-based discriminated. There is a huge need for meaning participation because whatever will happen in the future, will happen to us. Generally speaking, it can be said that the civil society sector (including citizens and NGOs interviewed) have some idea how the state should behave. People want to work together with the institutions, not only with the Municipality, but also with the Ministry. They want to have some role in the decision-making processes, helping tackling the problem. According to the participants form this domain, authorities do not realize what unique resource they have – people who live in the city can cooperate in so many ways so to help them solving the issue. However, the first thing, which should be done by the institutions, is to admit the fact that air pollution problem exists, and being a complex problem it requires a complex decision, involving all actors.

This is the moment of the research when we can go back to the propositions delignated in sub-chapter 1.4. As it was said in the same chapter, these propositions` role is not to be formally falsified or verified but they just guided the analyses during the interviews towards more sensitive ideas. These propositions will be discussed here. They were as it follows:

a) As a residue of the communist regime, the bureaucracy detriments air pollution solving because most of the approaches are top-down.

As it became clear during the PA analysis, there are some residues from the communist regime that can be seen in the administration. And although the bureaucracy is not only associated with Communism, it is absolutely typical for this regime, and is therefore addressed in this thesis. Long procedures and the need for one document to pass through countless units and people, are facts that slow down any process, as well as many people's work. Vision for Sofia`s employees are one of them, people who work for the municipality and claim that the work they do for 2 years can safely be done for 1, but all these procedures slow them down. On the other hand, it has already become clear that CS is not actively involved in political decision-making process and in the allocation of resources among participants. This was demonstrated by all EOs and all national and municipal institutions that were interviewed.

Therefore, it can be said that in reality, some residues of the communist regime (such as the bureaucracy and the prevail of top-down approaches) detriment problem solving in the city.

Except for the long procedures, some other characteristics of the communist way of working still exist in the city, namely the fact that national institutions do not accept to communicate and co-work with NGOs and citizens, as well as the denial of problems by institutions that appear to exist.

b) As a consequence of Bulgaria's EU accession, there is an economic upturn which leads to more cars in the country and more air pollution.

In fact, it cannot be concluded whether only the EU accession contributed to the economic development in the city. This has been certainly one of the main reasons, but overall the causes are complex. However, it can firmly be said that the EU accession has given to the Bulgarians some other opportunities that have an effect over the air pollution situation today, more specifically – on the political issue related to the air pollution. After the EU accession, inevitably people can travel more. Moreover, after the Communism fall, people also have access to much more information compared to years ago. All of this leads to more informed society and to a civil society rising right now, according to all participants in this research.

c) As a consequence of a citizens-led project called AirBG.Info where sensors for measuring the air quality are distributed among the population, citizens are more aware of the problem and more active, demonstrating their desires.

Undoubtedly, the AirBG.Info project is something that has led to a long awaited change. All EOs interviewed agreed that this project has made the first step, which people needed, namely to make one problem that is invisible, visible. In this sense, it can be said that because of this project, people have become much more informed, as a result of which they are more active, demonstrating their desires and pressing the institutions for taking more measures related to the air pollution problem solving.

d) Main changes happened in the last two to three years in the national policies are influenced by civil society through NGOs' lobbying and citizens demonstrations on the street.

As it was said above, the project AirBG.Info definitely has contributed to the awareness increase. This project has occurred in 2017. After the distribution of sensors that were installed by the citizens, and the air quality was visible for the whole city, people started to participate in different demonstrations and initiatives regarding the air pollution. On the other hand NGOs started to lobby more for measures on behalf of the institutions regarding the air pollution because of the support they have from society.

However, this proposition has in focus only one of the factors that has triggered more measures and actions on behalf of the authorities. After the European Commission punished Bulgaria for underperforming of PMs standards, the state is taking measures to get this charge dropped.

5. Conclusion

This thesis` primary goal was to identify the main societal barriers so to be understood how the population can change the situation with the polluted air by shifting its daily practices, as well as the institutional barriers, which exist on administrative level that hinder the air quality improvement in Sofia, Bulgaria. Another focus of the thesis was on the role of the civil society domain in causing / solving these barriers and in the law changes in the last 3 years. For achieving these goals, answers to the research questions will be given in this chapter. To be able to answer the main research question, firstly, the thesis` sub-questions will be answered, namely:

1. What are the actors, resources, rules of the game and discourses involved in the policy arrangement for air pollution problem in Sofia, Bulgaria?
2. What are the barriers that exist based on the actors, resources, rules of the game and discourses within the air pollution policy arrangement in Sofia, Bulgaria?
3. What is the role of civil society in the last 3 years in the policy arrangement for air pollution in Sofia, Bulgaria?
4. What is the role of civil society in causing / solving these barriers that exist in the air pollution policy arrangement in Sofia, Bulgaria?

The answers of all questions are already hidden in the previous chapter. Therefore I will epitomize the information above in order the answers to be clearer for the reader. Sub-questions one and two will be answered together in the tables below. Since the explanation of the dimensions and the barriers in these dimensions in the result chapter is quite sufficient, it is not necessary to repeat myself in explaining the whole policy arrangement and its barriers. In Tables 3 and 4, one can see a summary of most important aspects of the dimensions and the barriers considered as obstacles for solving the air pollution problem.

Dimension	Aspect
Actors	European Union (EC and EEA)
	Ministry of Environment and Water and its sub-institutions (ExEA and RIEW)
	Sofia Municipality, all its Regional Municipalities and projects (Vision for Sofia and Sofia Green)
	Business
	Non-governmental organisations
	Local initiatives
	Citizens
Resources and Power	Data / information
	Human resource
	Environmental education
	Institutions' power
	Resource dependency

Rules and Regulations	Clean Air Directive for Europe
	Law for Purity of the Atmospheric Air
	Program Guide for Municipalities` programs/plans
	Operational Plan for Sofia
Informal Rules	Informal and educational campaigns
	Private companies lobbyism
	Citizens perception for radical measures
	CS participation in decision-making process
Discourses	Communication and coordination
	Resource dependency
	Responsibility
	Overall strategy

Table 3: Policy arrangement dimensions and their phenomena (author`s work)

Barrier	Explanation
Dominance of RIEW for regulatory power	RIEW is the only institution that can execute controlling power and all other institutions rely on it.
Dominance of ExEA for data	ExEA is the only institution that has national data regarding the air pollution and when this information is required by the citizens, it is not available in its entirety, ready for analysis.
Lack of classifications	There are no classifications regarding types of stoves and cars that pollute in order effective measures to me implemented.
Lack of environmental education	There are no university programmes that prepare experts in the environmental problems on political level, as well as there are no school lessons for children.
Lack of human resource	This resource is scarce for both sectors. Reasons are explained in sub-chapter 4.4.6.
Lack of inner motivation	Missing carrot or lack of direction shown by the authorities through incentives and rewards.
Political fear	Because of politicians` worrying about the discontent of the citizens.
Corruption	Influence authorities' decisions.
Powerful lobbyism	Influence authorities' decisions. In Bulgaria and example for a lobbyism that contributes to the air pollution is the lobbying of companies that distribute wood, which is used by the population for heating.
Lack of law implementation	There is no real imposition of the law
Lack of long-term strategy	Long-term overall strategy for the city related to the air pollution is still missing. This means that all measures taken so far are fragmented and lead to no positive result.
Unaccepted measures	Citizens do not accept some radical measures that the municipality wants to implement, and because of the political fear often these kinds of measures are never used.

Resource organisation	The city has enough resources and good legal framework, but do not use them effectively. If all resources are properly coordinated among actors and all laws are imposed, the problem will be to great extent solved.
Lack of communication and coordination	There is no proper communication between the CS sector and national institutions, as well as there is lack of internal coordination between al institutions (on national and local level)
Responsibility transfer	Responsibility transfer exists within all public institutions, as well as between the two domains – state and CS.
Mistrust in the authorities	A barrier that is a consequence of almost all enumerated above.

Table 4: Summary of the barriers within the policy arrangement (author`s work)

After identifying the main barriers and aspects of the policy arrangement`s dimensions regarding air policies in Sofia, Bulgaria, next goal was to analyse the role of the civil society sector in this policy arrangement in the last 3 years.

The assumption, which was stated in the beginning of this thesis, was that civil sector has initiated all of the law changes in the last 2-3 years. However, according to the participants, most of the changes are consequences mainly of the fact that the EU Court condemned Bulgaria due to the polluted air. Probably this has been the first step in considering measures for polluted air by the state institutions in Bulgaria. After this, the project AirBG.Info gave the opportunity to the population to measure the air quality themselves, which led to the visualization of the problem. In that way people understood what is happening in reality and started to talk more about the problem, informing them and being active through demonstrations and social media. People stood behind the NGOs, which led to more lobbying on behalf of them and more pressure towards the institutions for better strategies. And here we are, today, when everyone talks about the polluted air, not only in Sofia, but all over the country. The topic can now be said to be painful for everyone and first on the agenda of the authorities. People, besides the polluted air, have begun to talk about many other environmental issues that until a few years ago were not discussed at all. Even though, citizens and NGOs have not been the main catalyst for the law changes in the last 3 years, they succeeded in many other things – a) institutions expanded their publicity by new websites and informational campaigns, b) the cooperation between the NGOs and the Municipality specifically is on much higher level than years ago, c) the communication of the Municipality towards the citizens has increased, d) there are two new projects of the Municipality that are related only to the environmental issues, and mostly to the air pollution, and other similar positive developments that improve the situation in Sofia.

So, it can be concluded that even an indirect role, civil society has a very important one in the legal changes over the past 3 years through its activities and lobbying, which in turn has prompted new strategies and measures taken by the institutions. This is answering the third sub-questions.

The last, fourth sub-question is related to the role of the same civil society in causing / solving barriers that exist in the policy arrangement. It can be said that the civil sector (including citizens, experts and NGOs) cause some of the barriers, as well as try to solve others.

Causing barriers

The corruption is a problem not only of the institutions but of the whole population. This is something we are living with, we have used to live in a world where there is always a chance to get rid of the obligations through various so-called "under the table" methods. Bulgarians, as a nation, do not like restrictions. This is something that also leads to the barrier 'Unaccepted measures'. Often people require something to change, but when this happens and people are obliged to follow specific rules, they start protesting, which leads to the political fear of the authorities. 'Lack of volunteer work desire' is also a problem of the society. In my research on people's motivation to participate in the AirBG.Info project, it has been found that people want something to be changed, they want more measures to be taken by the municipality and the government, but they themselves are unwilling to actively participate in volunteer activities. Lastly, but not least, sometimes, the NGOs, when trying to show some bad practice of the institutions, in this way they set people more against the government and the municipality, which leads to the mistrust in the authorities by the people.

Solving barriers

According to my impression during the events and the interviews conducted, it can be said that mostly NGOs and experts are trying to solve the barriers enumerated above. Firstly, experts are people who, together with NGOs, gather data / information and conduct research with the aim to identify the problems and to contribute to the implementation of better strategies. When we are talking about the barrier 'Problem denying' on behalf of the authorities, it can be noticed some pressure put by the NGOs towards the institutions in order they to realize the seriousness of the problem. Moreover, NGOs are the organisations that are struggling with the coordination and are trying to work with the institutions as much as possible. Except for working with the institutions, they attempt in putting pressure over them in order the political fear to be overcome and the law to be implemented when it is necessary. In that way, the 'Polluter pays' principle is more efficiently applied in recent years.

After answering the sub-questions, we also have answered to the main research question, which was: "*What are the barriers related to the implementation of air pollution policies in Sofia, Bulgaria and what is the role of the civil society in causing and/or solving these barriers for the last 3 years?*" Obviously, obstacles exist in the city for tackling the air pollution problem. These barriers can be said that are relevant to the Communist regime existed before 1989 in the country. Institutions still cannot perceive citizens as their co-workers, and still hide information for a lot of the problems. However, citizens on the other hand, develop intellectually and financially. The open sources, which people have access to, and the opportunity to travel more than before, allows them to be more informed and educated about what is happening all over the world and how other countries tackle the same problem. This leads to more pressure over the state because people in days of democracy have the right to demand from the institutions, not just to perform, as it was in the time of Communism.

6. Discussions

This thesis brought us to a more complete understanding of the barriers that exist on institutional and societal level in Sofia, Bulgaria when it comes to the air pollution problem. Moreover, this research gave a deeper explanation for the relationship between both domains – state and civil society – regarding the air pollution policies in the city. It became clear that obstacles exist on all levels including European, national, municipal and societal. This chapter will reveal some of the thoughts of the researcher, as well as reflections and recommendations on the matter.

6.1 Epilogue

The purpose of the epilogue is to discuss some of the topics that were conferred with the interviewees, including an example that can be used as an illustration for the barriers identified in this thesis. It can be said that conducting this research as well as all the interviews was an exceptional experience for me. I learned a lot about the real situation in the city, not only regarding the air pollution but also for all environmental problems. It was interesting for me to meet so many people who are differently engaged with the topic and whose perspective I was able to find out about the various problems that exist in Sofia. Barriers on all levels were discussed with them, and what I have noticed was the fact that some of the priorities of the institutions (European and national / municipal) should be changed, but also the public's attitude towards environmental issues, including air pollution. Since, the air pollution can be considered as a transboundary problem, the only key thing that is necessary to exist is stronger international solidarity around the world in which all people feel committed to the support of the struggles that are taking place in every corner of the world. Every struggle around the world should be our own world. Otherwise, things are done one by one by, in certain countries or people, which really do not lead to the results that need to be achieved in order to improve the quality of the environment that surrounds us. This is something that applies to each individual citizen as well as to each institution. If we look only at the European Union, it can be said that the EU needs to be challenged to come up with a new agenda. The agenda now is very neoliberal. The well-being of every citizen should be at the core of the agenda, and the limits of the environment. For the case of Sofia, this also can be applied for the Sofia Municipality. As it was discussed above, being politically afraid because of the dissatisfaction of the citizens, authorities often are quite liberal towards the population, which leads to no improvements of the air quality. On the other hand, my opinion, after conducting this research, is that Sofia Municipality and state institutions really have to involve the civil society sector into the politics. This will lead to more collaborations and innovative ideas that the city desperately needs.

Here is the time to be mentioned an example of Sofia Municipality`s project which sharply reduced the good reputation of the municipality and turned all civic organizations, movements, as well as ordinary citizens against it. It is about an incinerator building by the Municipality almost in the city center.   The project went to the court as citizens and NGOs appealed the municipality's decision to create something so out of date in a downtown neighborhood nearby the center. Unfortunately, after many of the important documents related to the environmental footprint of the project were hidden and important arguments of the citizens were ignored, proving that the project was not in the interest of the population, the case is lost by the citizens and the incinerator will be built soon. This example shows the

attitude of the institutions towards the opinion of the population. These are also the type of cases that totally lead to a loss of trust in the authorities, which in turn leads to reluctance for working together.

Despite projects such as the one for the incinerator, generally speaking, it can be said that all participants are very positive about the future of Sofia regarding the air pollution. Each institution / organisation has different obstacles, which should be overcome but nobody of them thinks that these barriers can detriment the city`s future improvement. The Regional Municipality claimed that there are two extreme options for the city and no middle option is possible: a) there will be a change, which will not be accepted by the citizens because of the restrictions applied, or b) the system will work with full force and will change the whole state structure.

Most of the participants, pointed out the consciousness and mentality of the people as a future barrier for the air quality improvement in the city. However, the Sofia Municipality and ExEA were quite positive also for this. They stated that 3-5 years are necessary in order all the measures of the institutions to be applied and the mentality to be changed. Even if all this happens, still it will be very important the inner motivation of the people to exist in order them to change their daily practices.

6.2 Reflection

The choices that were made for the theoretical framework and methods used for this research have strengths and weaknesses. When it comes to the theory used, it can be said that the policy arrangement approach and Giddens` structuration theory were very good choices having in mind the goals of the research. The structuration theory allowed me to analyze the relation between the state and civil society, emphasizing how they influence each other and how, by changing the behavior of one of them, this leads to a change in the behavior of the other. An example of this is the more active society, which leads to more transparency regarding the actions of the institutions. On the other hand, the PAA gave me the opportunity to describe the whole policy arrangement with all its dimensions and to see the relationship between the different aspects of the arrangement and the barriers within them.

I could say that the most difficult part when using the PAA for me was the fact that I had to link each phenomenon to a specific dimension of the arrangement. Sometimes, some of the phenomena can be applied for more than one dimension or to be in the border line between two. Despite the difficulties, I believe that the PA has been successfully described. Eventually, this is one of the strengths of the PAA – the fact that everything is interlinked and this approach can analyse exactly these relations between all dimensions.

Regarding the methods used for this research, it can be said that the choice of semi-structured interviews as a primary source of information was possible to misinform the researcher. One of the disadvantages of these kinds of interviews is the fact that sometimes the respondent can be influenced by the interviewer, depending on the way how the question is asked (Yin, 2009). For avoiding this I tried to be as objective as possible while asking the questions. However, sometimes I was feeling that the participant was influenced by me, giving the answer that was expected to give. This is also something that can be discussed related to the reliability of the answers. When it comes to the representatives of different public institutions, who were interviewed, it could be noticed that some of their answers were

influenced by the institution itself and they did not give any additional information such as their own opinion. This is probably normal, when you are talking on behalf of a whole institution, to be more reserved and carefully to answer to each question. However, this to some extent hindered my analysis because mostly I had full answers on behalf of the NGOs and citizen / expert interviewed.

Leaving these shortcomings aside, I can claim that for the time that I had available to conduct all the interviews, I think that they were sufficient, although I was unable to interview all participants from different institutions and organizations. I think they were enough for the reason that at some point there was saturation of the data and I noticed that I did not receive any additional information from the interviewees. The other method of data collection that could be used is the survey. However, I think that for this kind of research, the survey was not appropriate method since the aim of the interviews was to get deeper understanding of the participants' point of view.

When it comes to the social reflection and my observations on the society and its perception regarding the air pollution problem in Sofia, it can be said that the overall attitude of people towards environmental problems in Sofia is changing. Society is increasingly interested in what the air we breathe is and how polluted air affects our health. However, this does not change the fact that these same people contradict themselves quite often, using their car every day, not recycling and using, for example, plastic bags for every day-to-day shopping. I think we all need to be more engaged and think about what and how we can change so to contribute to cleaner air.

The findings of my research are relevant for the overall policy arrangement in the capital of Bulgaria, Sofia, in the context of air pollution. Further research can zoom into more specific policies in order to analyse the shortcomings of these policies and try to give recommendations for their improvement. In the next chapter, I will discuss my opinion on the topic, I will also reflect on the theory and methods used, and try to give recommendations regarding the findings of this research.

6.3 Recommendations

It is inevitable that people have to change their daily practices and general way of thinking in order the air quality in Sofia to be improved. However, it is quite important the state to create proper conditions for this to happen. That is why, my recommendations are mainly towards the institutions. Firstly, authorities have to be clear what their focus will be so to be able to demand certain behaviour from the population. Few clusters can be said to be main ones in which they have to channel their efforts:

- ✓ Infrastructure development for electromobility;
- ✓ Smart public transport, with smart interchanges, intelligent traffic system and apps;
- ✓ Distribution of renewable energy by attracting more people to put solar panels on their houses;
- ✓ Distribution of cheaper energy by reduction of gas prices in order more people to use gas or electricity for heating their households, instead of coals/wood/fuel.

Green and sustainable growth should be an overarching goal of public policy makers. The mentality of the institutions, as well as of the citizens should be changed soon. Otherwise, Bulgaria will lag too far behind. For doing this the institutions can undertake some small steps, such as:

❖ Authorities can accept the citizens` data and use it as basis for plans and strategies. Even if it is not 100% reliable, it is accurate enough so to be understood that there is a problem somewhere.

❖ Institutions can and should be honest with the citizens. If everybody admits that there is a problem and try to find a solution together with the people, citizens will perceive the authorities in drastically different way and the mistrust between them will be reduced.

❖ More external coordination of the Ministry with the civil society sector is needed, as well as more internal coordination between the institutions and between the different sectors in one institution. Both of them can happen by arranging more meetings, especially between the institutions. They have no channels of communication so far which leads to fragmented actions from all institutions. All of them have to create plans / strategies together.

❖ Classifications are needed – classifications of the heating systems in the city, their level of pollution, as well as the average age and number of the cars.

❖ Carrot and stick must be in operation at the same time – combined instruments are needed. People have to know that there is a law, which is really implemented in order to follow the rules. On the other hand, people need the direction to be shown. Every good practice should be encouraged, as well as any harmful one - punished.

❖ My last recommendation, which I consider as one of the most important is the increase of environmental education. More educational and informational campaigns should take place in schools in order children to grow up with the idea of environmental protection. Moreover, universities can create programmes related to the environmental protection, including the political, economic and societal aspects, not only the scientific one.

Overcoming a complex problem such as the air pollution needs integrated research approach and innovative and timely urban development. The stake for this is the health of the largest number of citizens living in one place in Bulgaria, which is determinative for the future of the country.

7. Appendix 1 – Interviews and Events

7.1 Interviews

1. Aleksandar Simidchiev – Air for Health (NGO): **Environmental Organisation (EO) A**

Non-governmental association incorporated with public benefit by few doctors with the same cause. The purpose of the organisation is to educate the doctors about health effects of the air pollution, making them mediators. They can explain comprehensibly to the patients how the pollution affects their health and what kind of preventive measures can be taken.

2. Boris Bonev – Save Sofia: **EO B**

Non-governmental organization, whose main objective is the improvement of the urban environment, the urban transport and the quality of life in Sofia. The methods for achieving the important goals that they have set by Spasia Sofia include offering solutions to solve the accumulated problems of the Bulgarian capital and showing the wishes and needs of the citizens to the respective institutions.

3. George Rachev, Prof. – Climatologist: **Expert**

He is an expert in the field of climatology at Sofia University. He is involved into the air pollution problem by being involved in few meeting with the Ministry and the Municipality, by giving proposals for solutions and by explaining the problem in a scientific way.

4. Ivaylo Popov – For the Earth: **EO C**

Independent, non-governmental organization uniting the efforts of people determined to work so to create a natural and equitable life on our planet that excludes the exploitation of people and nature. The NGO is very active on the topic. It is working closely with the Municipality on different program/plans/strategies.

5. Petko Anchev – Sofia GREEN: **Sofia Green**

Sofia Green is a project of Sofia Municipality that aims at preparing the city for the European candidacy for Green Capital. Except for that, they coordinate the policies of the Municipality related to the sustainable development of the city. They work actively with the other two sectors – CS and business.

6. Rashid Rashid – Vision for Sofia: **Vision for Sofia**

Vision for Sofia is an initiative of the Sofia Municipal Council, not the administration. What aims is to put a framework on all strategic documents that are produced with some vision that is up to 2050. The document that is invented does not have this framework of normative document like everyone else, it is a free electron, however, who wants to be a hat of everything, i.e. it will become a political tool in which any subsequent municipal council will be able to set its own goals and strategies, but some big goals will always remain, they will not be able to change.

7. Silvana Miteva – Sofia Municipality, Ovcha Kupel district: **Regional Municipality**

Sofia Municipality has 24 regional Municipalities in Sofia. Ovcha Kupel is one of them. Silvana Miteva is the expert ecologist in the Regional Municipality.

8. Stefan Dimitrov & Petar Kirov – Code: Bulgaria, project - AirBG.Info: **EO D**

This project was founded around 2 years ago. It aimed at visualizing the problem with the air pollution. Stations for measuring the air quality are spread among the population of the country and now there is an online platform that shown the actual pollution in real time. The number of the sensors now is almost 900 for the whole country.

9. Teodora Polimerova – Sofia Municipality: **Municipality**

Mrs. Polimerova is director of one of the directorates in Sofia Municipality, namely: Climate, Energy and Air. She is working very closely with the Mayor of Sofia regarding air and climate policies.

10. Valeri Serafimov – Executive Environmental Agency: **ExEA**

A sub-institution of the Ministry – EEA informs the population about the air quality by monitoring its quality. This institution has overall 50 station, 5 in Sofia, which measure the air pollution.

11. Vasil Tsvetkov - National Assembly: **Environment and Water Committee (EWC)**

Mr. Tsvetkov is a member of the Parliament and part of the National Environmental Committee

12. Nikolay Petkov – **Citizen**

A citizen who, together with the NGO - For the Earth sued the Municipality about a project related to the building of an incinerator almost in the downtown of the city. he can just be described as an active citizen who showed me very well how the stat works.

7.2 Events

1. What do we not know about the air – 13.02.2019 **(Event A):** arranged by the NGO For the Earth this event it aimed to acquaint all attendants with everything we do not know about the air. There were few panelists who presented the obstacles related to their work (NGOs, experts in different fields and representative of the Municipality).
2. SOFAIR (European Air Quality Conference) – 12.04.2019 **(Event B)**: arranged by Sofia Municipality this event is international high-level air quality conference that aims at bringing together representatives of different state institutions in different countries of NGOs and of the private business sharing their problems / obstacles / experiences and good practices. In that knowledge is exchange between the actors.
3. Protecting the environment in conditions of limited democracy – 04.06.2019 **(Event C)**: arranged by the NGO For the Earth this event aimed at showing the contribution of the civil society sector in Europe when it comes to environmental protection. Experience was shared with Friends of the Earth network presenting different problems related to the shrinking space for civil activism.

8. Appendix 2 – Full coding scheme

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9. Appendix 3 – Interview Guide

General information about the person:

1) What is your name?
2) Where do you work?
3) What is your function in this institution / organisation?
4) What do you think is the biggest challenge regarding air pollution in Sofia? What are the main sources of pollution according to you?

Actors:

1) Which institutions / NGOs are involved in solving air pollution problem?
2) What is their exact role?
3) To what extent do you think that NGOs and citizens are involved in the problem?
4) How do you communicate your interests towards the society – through communication / power / sanctions?
5) Can you explain the involvement of the different actors, according to you, using this figure?
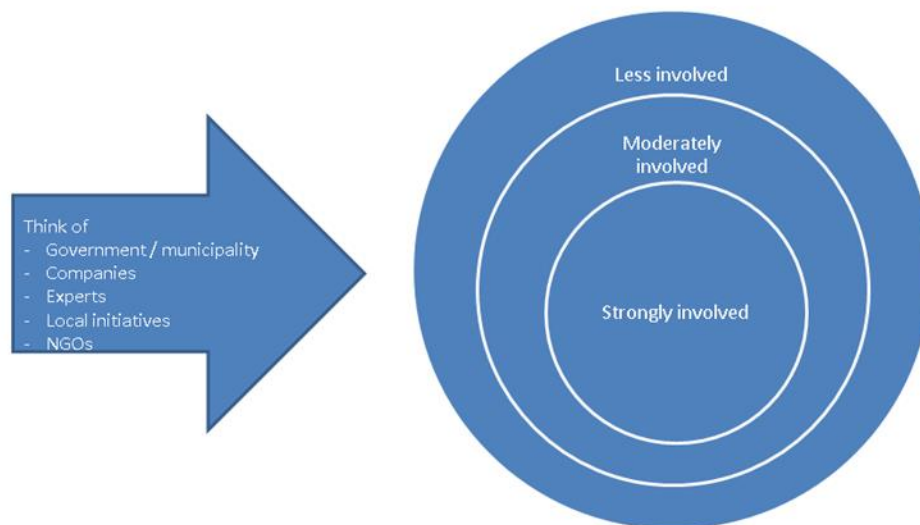
6) Do you think that most of the NGOs are driven by economic or private interest or they are more as a separate sphere having pure intentions?
7) What is the function of the NGOs according to you?
   - To powerfully influence the social political agendas (as advocates)?
   - To impose social control, stakeholder pressure, and private standards?
   - To strengthen the social capital in local communities?

Resources and Power

1) What do you need to carry out your work (money, knowledge, skills)?
2) Who is responsible for the allocation of the money?
3) To what extent your organisation depends on these resources – money, knowledge, skills?
4) What is the role of the NGOs and citizens for the allocation of the resources?
5) What kinds of barriers exist for the allocation of the resources?
6) How motivated and aware / educated are the citizens in recent years? How do you motivate them?

Rules of the game

1) Which laws are relevant to the air pollution in the city (for the institutions)? Are familiar with the laws that are relevant to the air pollution in the city (for the CS sector)?
2) Is it true that last 2-3 years most of the changes related to the air pollution policies have been made?
3) If yes, what has induced these changes (EU, citizen initiatives, more polluted air than before)? Are citizens more aware?
4) What is the specific action plan for Sofia? What it focuses on?
5) What is the role of NGOs and citizens in the implementation of air pollution policies?
6) Are there some informal rules (information campaigns; education programmes etcetera) within your organisation?
7) When did they occur? Why?
8) What is their effect over the society consciousness?
9) The law states that the Mayors are responsible under the law for the air quality in the respective city. Do you agree that this responsibility should be transferred more towards the citizens or the Municipality should be only responsible for the air pollution?

Discourses

5) Which actors do you consider as most important for air pollution solving?
6) To what extent do you think that the following actors are responsible for the problem?
   • Municipality
   • Citizens
   • NGOs
7) According to you, which method is most suitable for solving this problem?
8) How do you see the future regarding air pollution?
9) How does the internal collaboration work (between state institutions)?
10) Is there enough communication between state's institutions and citizens / NGOs?
11) Which method do you consider as the main one for the work of public institutions (communication, sanctions, power)?

12) So, do you think that network governance (partner relationships into a network, in which the principles of trust and reciprocity prevail) exists or still the approaches are more top-down where citizens and NGOs are not so involved in the decision-making process?

13) What do you think are the obstacles that you have experienced in concrete situations related to:
   - Resources
   - Rules
   - Collaboration
   - Organisation
   - Communication
   - Sustainability
   - Actors involved

14) What kind of barriers do you think that your institution can face for changing the situation towards better?

15) Do you think that the municipality / ministry are in general open to new citizen-led initiatives?

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