Community-based Social Marketing, Additional Instrument of Traditional Public Policies' Instruments: Case study – Controlling Air Pollution in Romania

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COMMUNITY-BASED SOCIAL MARKETING, ADDITIONAL INSTRUMENT OF TRADITIONAL PUBLIC POLICIES' INSTRUMENTS. CASE STUDY – CONTROLLING AIR POLLUTION IN ROMANIA

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ABSTRACT

The major macroeconomic changes occurred in the last years at global level represent real challenges for contemporary governments which had to rethink their public policies for getting a real impact on citizens' behaviour.

In this paper, we explore the instruments promoted by social marketing, especially the community-based social marketing, and the goal is to analyze its potential to foster the behaviour change. The analysis reside in the investigation the capability of Romanian public authorities to use community – based social marketing in order to supplement the traditional instruments used to influence the citizens' behaviour relate to atmospheric protection, in particular, to control the air pollution.

KEYWORDS
social marketing, public policies, community - based social marketing, air pollution control

1. INTRODUCTION

The increasingly accentuated unbalance of the relationship between the environment and mankind imposes the rethinking of the relations between man and environment, the formation of the ecologic conscience and the modification of the attitude towards nature. In general sense, the goal of the public policies is to change the behaviour of individuals, organizations, to answer certain public needs, by means of external factors, such as financial incentives (taxes, subsidies) or regulations (rules prohibiting or development standards).

In most public policy fields, the traditional instruments for influencing behaviour are functioning well, but there are also fields (health, education, environment) where behaviour influencing is very difficult and complex, and the efficiency of the traditional instruments may be limited if we do not resort to new instruments. Given that they would remain only words if they are not properly implemented, applied and respected (Matei, Dogaru, 2012), it is necessary a better understanding of the manner in which the traditional for influencing behaviour, regulations (legislation), sanctions, taxes and subsidies, the supply of public services can be completed by instruments promoted by social marketing and the theory of behavioural change.

Individual behaviour is the cause of a significant number of environmental problems, and provisions regarding the control of individual behaviour are quite absent in the legislation (Kennedy, 2010, p. 1141). Thus, the general understanding of behaviour (both at the individual, and at the societal level) implies the acknowledgement of the influence and importance of certain intra- and inter-personal factors. Certainly, the financial and legislative instruments will represent the main instruments of public policies used by the political decision-makers; actually, the specialty literature mentions them as being the main instruments for managing the policies targeting climatic changes (EC-IILS, p. 8). Still, the efficiency of the public intervention depends, as mentioned before, also on the formation, reconsolidation of the attitudes, reasons and norms within the community.

Public interventions in view of solving the environmental problems generally face certain barriers in what concerns the reaching of the objectives targeted, because the achievement of the ladder largely depends on citizens' participation. Therefore, preponderantly for this type of intervention, the specialty theoreticians recommend the use of a mix of instruments, stating that the „complementarily co-existence between the instruments may improve the efficiency of the public policy activities, in general" (DEFRA, 2009, p. 27). With respect to the environmental protection, the Defra studies distinguish four categories of instruments for the public interventions regarding the environment:

- legislation, which includes standards and legislation;
- economic instruments – their goal is to „change the polluter's behaviour by means of price mechanisms";
- information supply instruments – in order to allow the citizens to make informed choices, for example, the eco labels;
- marketing strategies elaborated for the purpose of promoting the emotional and behavioural attitudes regarding the adoption of a good conduct (persuasion, awareness campaigns).

2. Public policy instruments

Researchers attempted many times to identify and classify the instruments available for those who elaborate and implement the public policy. They were susceptible of several definitions, among which the „public policy instruments are the means or resources that government has at its disposal in order to implement the public policy elaborated upstream" (Miroiu, 2002, p. 115). The public policy instruments are „varied types of actions by means of which the decisional factors within the governmental structures address the public policy problems" (Weimer and Vining, 2004, p.196). In a brief form the instruments of public policy are the real means or devices that public administration has at its disposal for implementing the public policy and from which it has to choose (Matei, Dogaru, 2012, pp. 65-67).

2.1. Traditional public policy instruments

In general, governments attempt to regulate and influence the behaviour of individuals and organizations by means of a varied range of public policy instruments. The specialty literature is generous in what concerns the classification of the public policy instruments, as well as the advantages and disadvantages of their use. In general, the public policy instruments are classified in different categories, such as (UNEP, 2007, p.11):

- regulation and control mechanisms, „the legislation and the regulations regarding its implementation;
- the economic or market-based instruments are usually based on the market mechanisms and comprise elements of the voluntary participation and action, although often they are initiated and promoted through the incentives regulated by norms;
- fiscal instruments and incentives, usually those regarding the price-setting mechanisms;
- support, information and voluntary actions are instruments that target the consumers' persuasion to change their behaviour, by supplying information.

For our study, a useful classification is the one offered by Howlett and Ramesh, who offer a spectrum of public policy instruments starting from the research performed by Doern and Phidd, who ordered the instruments depending on the legal coercive power. Doern and Phidd considered the interior order regulations as being the less coercive ones, and the public property as being the most coercive. Starting from this classification, Howlett and Ramesh (2004, pp. 82-99) outlined the following types of instruments:

Voluntary instruments; governance deliberately decides to sometimes not act on a certain problem, because it considers that the desired results can be better obtained by letting the family, the community, the free market or the non-governmental organizations to freely solve the respective problems. The social norms prevalent in a society, supported by the individual initiative and the role of the community may lead in many situations to better results than if the state would intervene through coercion. Within this category, we find: (1) the family and the community that provide, in many cases, solutions preferable to any state intervention; (2) the non-governmental organizations, (3) the market, in the conditions of the existence of a real market, the goods and services are produced at the lowest price.

Mandatory instruments, in the sense that they constraint or direct the action of persons or institutions. The best known instruments in this class are: (1) the regulations, which represent an essential mechanism for prescribing certain activities or behaviours of the persons and institutions (both public and private); (2) public enterprises; (3) direct supply.

Mixed instruments, which combine the characteristics of the voluntary instruments with those of the mandatory instruments (Howlett, Ramesh, 2004, p. 98). The state's involvement varies from the simple dissemination of the information to the settling of fees for performing certain activities. Specific to this category are: (1) information and counselling; (2) subsidies; (3) biddings and property rights; (4) taxes.

Usually, in most public policy fields, the traditional instruments for influencing the behaviour are functioning well, but there are also fields (health, education, and environment) where behaviour influencing is very difficult and complex. In these cases, the efficiency and efficacy of the consecrated instruments is placed under the doubtful mark, reason for which the use of a mix of instruments becomes inherent. In this context, the literature explores the use of techniques complementary to regulations, followed by the exploration of case studies in which the social marketing programs based on the community were applied in order to consolidate the regulations' efficiency (Kennedy, 2010, p. 1139).

2.2. Community-based social marketing – complementary instrument of the public policy instruments

In spite of the increasing tendency to use obligatory instruments, it was established that numerous public problems can be solved by resorting to the voluntary public policy instruments, more precisely, to family and community. They are preferred in more states because of the low costs involved, of the conformity to the cultural norms and individual freedom, but also because they support the connections existing within the community (Howlett and Ramesh, 2004, p. 99). The appeal to the family and community can be achieved either indirectly, by reducing the duties of the administrative structures, in the hope that the family or the community will take the initiative, or directly, by promoting their involvement.

For citizens, the public policy instruments are the most visible components of the public intervention manifestation (Varone, 2001). In this context, in the last years, a new approach emerged, namely community-based social marketing. Community-based social marketing is a creation of social marketing, using marketing principles and techniques to influence a target group to accept, reject, modify or abandon behaviour for the good of individuals, groups or society as a whole (Kotler and Lee, 2007, pp. 188-211).

Community-based social marketing proved to be an efficient method for behaviour change and for the modification of attitudes, undertaking an interactive approach of information supply and involving behavioural change instruments developed by the social sciences researches. With an orientation towards surmounting the barriers of behavioural change, the mechanisms of community-based social marketing offer an instrument complementary to regulations. The main elements of community–based social marketing are:

- communication;
- commitment;
- incentives;
- prompts;
- social norms.

Communication as community-based social marketing instrument finds its grounds in the marketing theory which underlines that attention must be drawn in order for the behavioural change to occur (McKenzie-Mohr, Smith, 1999). Communication is used for achieving effective convictions, in order to educate and to communicate the behavioural chances desired, such as to contribute to reaching the public policy objectives. Thus, it is necessary to create frame-messages for the new ideas to reach the community.

Commitment is used in order to obtain a commitment from the persons, in order to get involved in changing behaviour and in reaching the objectives targeted. The argument for using this instrument consists in the fact that once a person makes a commitment on an idea or action, an implicit change occurs in his/her attitude, in the sense of the idea or action undertaken.

Incentives are a useful instrument for motivating behaviour changes. The specialty literature emphasized that incentives produce the results desired when they are visible and that positive incentives are must more efficient than negative ones.

Prompts are visual or audio elements which remind a person to execute a certain activity which the person might forget. In order to be efficient, the signs must be easy to remember and placed close to the location where behavioural change is attempted.

Social norms are also, one of the community-based social marketing instruments. Vandenbergh and Steinemann (2007, p. 1706) claim that social norms are „informal obligations which are put into application by social sanctions and rewards". Social norms guide the behaviour of a person (Pickens, 2002).

3. Case study: Controlling air pollution in Romania

The objective of this study is to analyze the capacity of the Romanian public authorities to use community-based social marketing in order to complete the traditional instruments used in order to influence citizens' behaviour regarding the atmospheric protection, the control of air pollution. In order to reach this, the qualitative research methods were preponderantly used, more exactly, the analysis of the reports regarding the environmental condition in Romania, of the public policy documents, asking for data through public information request by Law no. 544/2001 on free access to public information submitted to the Ministry of Environment and Forests and environmental agencies and the study of the specialty literature.

In view of materializing the results, the study has as research sample the development regions in Romania, and the period subjected to investigation is the time-frame 2006-2011. In time, the institutional and legislative system specific to regional development was subjected to consolidation and improvement; for instance the completion of the negotiations regarding chapter 21 – Regional policy and the coordination of the structural instruments in 2004 and the adoption of a new law regarding regional development, Law no. 315/2004. The development regions are areas comprising the territories of the counties in question, respectively of the City of Bucharest, established on the basis of agreements concluded between the representatives of the county councils and, as the case may be, of the General Council of the City of Bucharest, and function on the grounds of the provisions of Law no. 315/2004[1]. They do not have legal personality and correspond to the NUTS-II level divisions within the EU.

Nowadays, in Romania functions eight development regions, namely:

- North – East development region – which groups the counties of Bacău, Botoşani, Iaşi, Neamţ, Suceava and Vaslui;
- South – East development region – which groups the counties of Brăila, Buzău, Constanţa, Galaţi, Vrancea and Tulcea;
- South - Muntenia development region – which groups the counties of Argeş, Călăraşi, Dâmboviţa, Giurgiu, Ialomiţa, Prahova and Teleorman;
- South - West Oltenia development region – which groups the counties of judeţele Dolj, Gorj, Mehedinţi, Olt and Vâlcea;
- West development region – which groups the counties of Arad, Caraş-Severin, Hunedoara and Timiş;
- North - West development region – which groups the counties of Bihor, Bistriţa-Năsăud, Cluj, Sălaj, Satu Mare and Maramureş;
- Center development region – which groups the counties of Alba, Braşov, Covasna, Harghita, Mureş and Sibiu;
- Bucharest – Ilfov development region – which groups the City of Bucharest and Ilfov County.

The main limitation which arose due to the methodology used were crystallized in the absence of cooperation for environmental protection agencies, means they not answered the request for data, insufficient answers of some agencies that avoided providing details about using the community-based social marketing, measurements inconsistent of the data from environmental reports analyzed.

3.1. Diagnostic analysis of air pollution in Romania

The prevention of atmospheric pollution constitutes a public, national and international interest problem, because it is the widest and, at the same time, the most unpredictable vector of propagation of pollutions, whose effects are felt directly and indirectly by man and the over environmental components (REPA Bacău, 2010). Therefore implementing the public policy, particularly the environmental policy is not an easy task at all, its complexity intensifying as far as: (1) the authority level where the public policy has been designed is far away from the performers, (2) the content of the policy that will be implemented is not sufficiently clear and precise for elaborating the programs for

[1] Art. 6, Legea nr. 315/2004, privind dezvoltarea regională în România, Monitorul Oficial nr. 577 din 29 iunie 2004.

achieving the objectives of this, (3) the public policy triggers hostile reactions at the level of public opinion, (4) the performers do not appreciate the positive incentives offered for succeed (Matei, Dogaru, 2012, pp. 65-67).

For a global view on the current environmental condition, in Romania were analyzed, for each development region, data regarding the best known sources of pollutant emissions: (1) emissions of gases with acidifying effect; (2) emissions of organic volatile non-methane compounds; (3) emissions of heavy metals; (5) persistent organic pollutants (the data is exhibited in the appendix, for each separate region).

NE development region

The North-East development region is made up of six counties (Bacău, Botoşani, Iaşi, Neamţ, Suceava, Vaslui) in which there are 46 towns (out of which 18 municipalities), 506 communes and 2414 villages. Among the country regions, it is the region with the greatest surface, 36,850 km^2, representing 15.5% of the total surface of Romania. The evolution of the main pollutants in the NE development region is illustrated in table no. 1 and chart no. 1.

An overview of the evolution of the most important emissions at the level of the NE development region indicates that during the interval 2006-2011 the majority of pollutants record a descending trend, except for the interval 2010-2011. Particular fluctuations are registered by pollutant NMVOC, whose value decreases with approximately 50% in the last three years, and by the pollutant hereinafter mentioned, suspended powders (PM_{10} and $PM_{2,5}$), whose value doubles in 2011 compared to the first analysis year (2006).

The air quality monitored at the level of the NE region underlines that the pollutants values are below the limits established by Law no. 104/2011 regarding the quality of the surrounding air. Still, according to the reports, in the attention of the authorities remain the indicators regarding suspension powders and ammonium. In comparison to the values of the emissions registered at the national level, the emissions coming from the North-East development region know a descendent trend.

West development region

As part of the territory of Romania, the West region represents 13.44%, having a surface of 32,034 km^2. In its composition there are four counties: Arad, Caraş Severin, Hunedoara and Timiş and a number of 12 municipalities and 42 towns.

The current condition of the environmental factors for the West development region is reflected by the data in table and chart no. 2. It is established a descendent trend for most of the indicators monitored at the level of the West region; for instance, the value of the indicator Sulphur dioxide is approximately 70% lower in 2011, compared to the value in 2006, and that of indicator NOx with approximately 50%. The heavy metals emissions experience two periods: (a) 2006-2008, period characterized by strong emissions, finalized with a significant decrease of the values, and (b) 2009-2011, which maintains constant the drop recorded in 2009.

Still, in spite of the reductions recorded by the air polluting emissions, at the level of West development region there is exceeding of the limit-values established by the regulations in effect. Preponderantly, this exceeding was recorded by the indicators: sulphur dioxide, suspended powders and ozone (Environmental condition Report, West region, 2010).

South – East development region

The South-East region is located in the south-east part of Romania, covering 35,762 km^2, which represents 15% of the country's total surface, being the second region in size, out of Romania's eight. The administrative-territorial structure is made up of 35 municipalities and towns, 354 communes and 1447 villages.

A detailed image on the evolution of the main pollution factors in the South-East region can be found in table no. 4 in the appendix. We notice the descending tendency for the majority of pollutants, except for ammonium, which, throughout the period analyzed has an ascending evolution. We also notice the presence of critical moments, such as: in 2009, sulphur dioxide registers the highest value in the entire period analyzed, similar situation also for NMVOC (in 2008).

From the interpretation of the data supplied by the reports regarding the monitoring of the environmental factors for the south-east region, we can derive the conclusion that the regional level, lately, there was not recorded the exceeding of the values imposed by the normative acts; the only problems are at the level of the indicators suspended powders, where, for certain time intervals and days there was even consecutive exceeding.

Bucharest-Ilfov development region

Air pollution in the Bucharest-Ilfov region has a specific character, first of all because of the emission conditions, respectively because of the existence of multiple sources, different heights of the different pollution sources, as well as the non-uniform division of these sources, however, dispersed on the entire territory and especially in the City of Bucharest (Report, 2011).

Although overall the values of the monitored pollutants are descending, it was necessary to put together an Integrated Air Quality Management Program, because in the period 2007-2008 the value of indicator nitrogen dioxide was exceeded by 18 times, situation which also continued throughout 2009 and 2010. The exceeding of the limit value were also recorded by indicator suspended powders; in year 2010 the daily limit value was exceeded by 35 times in almost all monitoring stations (Report, 2011, p. 22). For more details, see table no. 4.

South – West development region

The region preserves and hides evidence of the oldest cultures, being formed of five counties, which, in total, represent 12.25% of Romania's surface.

The centralized data situation (table no. 5) regarding the environmental condition in the SW region shows that the environmental condition indicators recorded significant fluctuations during the period analyzed. For the emissions of atmospheric pollutants, 2008 is a critical year, now recording the highest values from the period analyzed. The reports on the condition of the environmental factors elaborated by the regional environmental protection agencies show an improvement of the environment quality, the exceeding of the limit values reducing considerably over the last 2 years. The ammonium emissions decreased from year to year, except for 2010, when we notice their slight increase.

Centre development region

The Centre region comprises six counties, and from the administrative viewpoint, we identify 57 towns (out of which 20 municipalities), 357 communes and 1788 villages.

For the Centre development region, the analysis period is narrowed by two years, because for year 2010, respectively 2011, there were not elaborated monitoring reports. In this context, from the data available (table no. 6), we can see that the sulphur dioxide emissions record a significant increase in the period 2007-2008, although the environmental legislation was implemented, and the main pollution source comes from a company in Sibiu county (Copşa Mică). The high quantity of ammonium recorded in year 2006 is mainly due to the zootechnical sector.

A particular evolution also has the indicator NMVOC, whose value doubled in 2007 compared to 2006 and which maintained approximately constant also for the following period. The heavy metals emissions are also characterized by important fluctuations during the period analyzed.

North-West development region and South Muntenia development region

We chose to simultaneously present these two regions because at the level of South Muntenia region there were elaborated analysis documents from which we only able to deduce the current environmental condition, the only reports available being addressed to some counties part of its structure. Still, in the second part of the study, (the use of community-based social marketing instruments for the control of air pollution) there were mentioned the activities performed by both regions.

From the administrative point of view, the two regions present certain similarities; the North West region has a number of 42 towns, out of which 15 municipalities 386 communes and 1823 villages, and South Muntenia region has a number of 28 towns, 15 municipalities, 481 communes and 1552 villages. The evolution of the environmental quality in the North West development region can be found synthetically presented in table no. 7.

3.2. Interventions for the air pollution control

The solving of the problem regarding air pollution has constituted the objective of different policies elaborated at the world, European or national level in the last years. Thus, according to the directives regarding air quality, the local and regional administrations must develop and implement air quality management plans and programs in the areas where the air is polluted, actions which complete the measures taken according to the Directive regarding the national emissions ceilings and the UNECE Protocol of Gothenburg. These documents establish national limits of the annual emissions for sulphur dioxide (SO_2), nitrogen oxides (NO_x), organic volatile non-methane compounds (NMVOC) and ammonium (NH_3). Also, the implementation of the Euro standards regarding the emissions of vehicles and of the directive regarding the large burning installations, significantly contributed to the reduction of the emissions of powders, SO_2, NO_x and NMVOC.

For the protection of the atmosphere and the improvement of air quality, there are necessary measures for monitoring, control and prevention of pollutant emissions. For this reason, in the continuation of the research, attention is oriented towards the identification of the instruments used by Romania for the implementation of the environmental policy, emphasizing the dimension of using the community-based social marketing instruments for air pollution control.

In Romania, the regulation and control mechanisms constitute the main instrument through which the public institutions attempt to influence citizens' behaviour in order to solve the problem of atmospheric pollution.

At present, the *legislative* instrument through which the national environmental policy is implemented is Law no. 104/2011 regarding the surrounding air quality. This law led to the abrogation of the National Strategy regarding the atmospheric protection approved through Government Decision (GD) no. 731/ 2004 and of the National Action Plan in the field of atmospheric protection, approved through GD. 738/2004.

The purpose of the law is to protect human health and the environment as a whole, by regulating the measures destined for maintaining the quality of the surrounding air, where it corresponds to the objectives for the quality of the surrounding air, established through this law and its improvement, in the other cases (Law no. 104, 2011, art. 1). In order to reach the objectives, the law is completed with GD no. 1879/2006 for the approval of the National program for the progressive reduction of the emissions of sulphur dioxide, nitrogen oxides, organic volatile compounds and ammonium, GD no. 440/2010 regarding the establishing of certain measures for limiting the emissions in air of certain pollutants coming from large burning installations and GD no. 321/2005 regarding the evaluation and management of the surrounding noise.

The enforcement of the legal provisions is executed by means of the National System for the Integrated Evaluation and management of air quality, divided into two large sub-systems: (1) Air Quality Monitoring National System (in original, SNMCA) and (2) Atmospheric Pollutants Emissions Inventorying National System (in original, SNIEPA). All data supplied by the two sub-systems are integrated by the Air Quality Evaluation Centre.

Another instrument to which the Romanian authorities resort for the management of the air pollution problem is the *financial instrument*. Romania used in this sense the pollution fee. With a long history full of controversies, this fee was officially established in 2012 through Law no. 9/2012 regarding the fee for the polluting emissions coming from motor vehicles. Mentions regarding the environmental pollution fee are found in Law no. 571/2003 regarding the Fiscal Code, which refers to the special fee for cars and motor vehicles, in Law no. 140 of 2011 for the approval of Government Expedite Ordinance no. 50/2008, but also in Law no. 104/2011.

Often, the statistics data show a decrease of air quality that denotes sometimes that regulations are not enough. In this context, the regulations should be complemented with approaches and tools which involve all the motivational factors that fostering the behaviour of individuals, citizens, organizations. Such an approach is community - based social marketing.

So, looking through the lens of the new approach, the activities of public authorities for reducing air pollution are found mainly in the *communication, engagement and social norms* toolkit. From these, communication takes the largest place.

More *communication* activities with citizens and other public institutions are carried out at each region level. For instance, in 2011 there were organized several workshops with citizens, information, awareness campaigns, campaigns for supporting the citizens (European Mobility Week, In town without my car) whose main topics were air quality, waste management, the provisions of environmental legislation. „Let's do it" is the biggest project of social involvement held in Romania on pollution issues.

Data regarding the air quality are made public through a national network for air quality monitoring by continuous displaying, in real time, on display panels located in public places, on interior panels located in city halls or on internet. At the national level are 107 public information points (48 outer panels and 59 inner panels). Data gathered and interpreted by the national network for air quality monitoring come out from 142 stations located in Romania. Since 2009, outer panels show also the air quality indices in order to facilitate the public information. They are a coding system of the recorded concentrations of certain pollutants. For their presentation are used Arabic numbers and colours and are displayed hourly (figure no. 1).

Environmental action plans emphasize another element of community-based social marketing that is *commitment*. The content of the plans consists in measures to reduce pollution and to maintain air quality. Also, an agenda of environmental events are assumed at all environmental agencies level and for achieving these were involved also local public authorities, such as city halls, NGOs (MoreGreen, Green Revolution), companies (Petrom), volunteer teams who took commitments for developing fostering people's behaviour initiatives. Among the most popular programs carried out by the communities mentioned above we outlining: „The pedals", „Andrew's Country", „CO_2 Stop", „Bike with tie", „I Love Velo", awarded with the highest eco international distinction, Energy Globe Awards, etc.

The *social norms and various prompts* and *images* for fostering the citizens' behaviour in order to reduce air pollution are used in a narrow proportion. For example, through „Friends of the environment" project are employed the volunteering culture and public opinion sensitisation. Appealing to social norms, specifically to the behaviours one is done also by the Environmental Guard which develops an awareness campaign for drivers regarding the environment protection with „Do not copy me" message and uses as prompt figure no. 2 from appendix.

It is worth to note that community-based social marketing offers the opportunity to realize a mix of complementary instruments of the traditional instruments for public policies implementation and foster the change of target groups' behaviour (Kennedy, 2010, p 1153).

This study showed that air pollution (table no. 8) is a major problem in Romania that has not yet been resolved and for that is still looking for a solution. It was noted from the analysis of the environment reports carried out by the environment agencies that the main pollutant in Romania is the atmospheric emissions in general from stationary sources (large combustion system) and from mobile sources (road traffic). They have a significant impact both on environment, causing the acidification of the atmosphere, increasing the concentration of particles in suspension, heavy metal particles, affecting the ozone production and on human health.

Given the frequent exceedances of values limit for the period under review, the public authorities responsible for implementing environmental policy have tried to rethink the tools used to engage and influence, to shape more and more the behaviour of different "communities". In this respect, although the analysis outlines the lack of a formal document, a strategy or a program that consciously exploits the benefits of social marketing instruments, more precise, the community-based social marketing, still it could be identified elements of the latter mechanism. Unfortunately, its elements are used independently without being embedded into a single document as we mentioned above.

The analysis also revealed that ignorance the advantages of this instrument led to use especially only some elements of community-based social marketing, the most visible one being the communication. Moreover, both defenders of legislative instruments and advocates of community-based social marketing stated that the instruments aimed to change the norms will be useful together with effective and innovative communication campaigns (McKenzie-Mohr, 2000, pp. 546-549). The results of the awareness campaigns, rewarded with prizes are a proof that citizens' involvement defining contributes to successful implementation of environmental policy and objectives set.

4. Conclusions

Air pollution control remains a global issue that requires rethinking the public initiative interventions, the public policies. In general, public policies by their multidimensional nature require a wide range of implementation tools. From these, traditional instruments such as, regulations (legislation), penalties, taxes and subsidies, public service delivery are most common and usually lead to goals achievement. There are also cases when these tools are not sufficient being necessary to supplement them with new approaches focused more on participation and shaping the behaviour of target groups.

Such a perspective is offered by social marketing tools and behaviour change theory. Social marketing involves a new conception, a new way of looking to public policy and relationship between authorities responsible for public policy implementation and citizen. From the instruments of this new approach in the last years increasingly the references to community-based social marketing. This tool was developed in the social marketing field as an efficient means to complete legislation in order to implement public policies developed in sensitive areas.

So, taking into account the empirical data and different perspectives stressed into the content of literature still we find actual the Lin's statement "efforts to change the behaviour of individuals should not rely solely exclusively on any single approach, such as voluntary behaviour change or imposition of it through law. The extent and severity of the problem referred through the policy demands the deployment of a range of policy tools, including traditional instruments such as regulations, economic incentives, control" (Lin, 2009, p 1148).

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Annual reports on status of environmental factors for each region analyzed for the 2006-2012 period.

Appendices

Table no. 1: Evolution of the main pollutants for NE region 2006-2011 period

North-East development region						
Year / *Poluant* (tonnes)	*2006*	*2007*	*2008*	*2009*	*2010*	*2011*
SO_2	11544.40	7263.90	5314.80	5517.60	6976.18	6956.10
NO_x	19050.80	19496.70	18212.40	18692.00	19691.00	19705.30
NH_3	24484.30	30942.10	25664.10	20123.10	20311.70	20519.20
NMVOC	90064.50	93532.60	94135.10	47802.00	40198.26	40498.71
CO_2	1868.58	1752.96	1087.08	940.72	986.25	991.12
CH_4	71443.30	82252.10	86918.17	53398.96	57242.79	57342.50
N_2O	8095.12	7823.20	7588.42	7795.99	7025.31	7099.67
TSP	13547.05	14400.12	17991.90	22470.65	31738.80	31821.40
Mercury	0.61	0.41	0.39	0.26	0.39	0.40
Cadmium	0.19	0.15	0.15	0.10	0.13	0.10
Plumb	7.29	9.17	1.66	1.50	1.98	2.50
POP	0.0002	0.0001	4×10^{-5}	0.0007	0.0008	0.0007

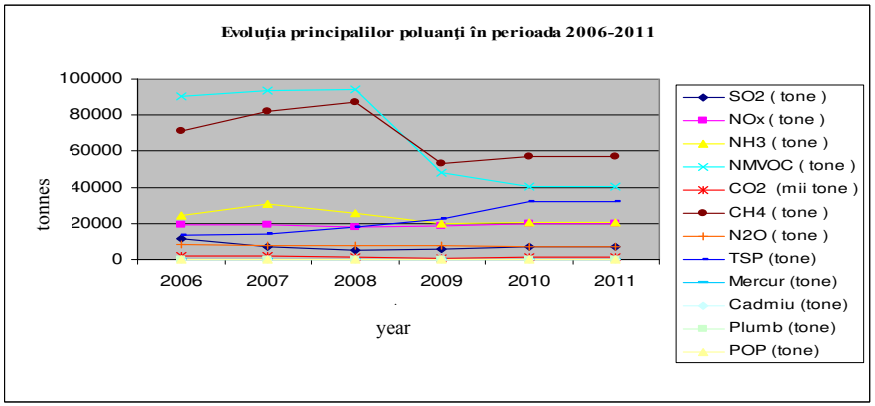
Source: Annual report on status of environmental factors for NE region, 2006-2012

Table no. 2: Evolution of the main pollutants for West region 2006-2011 period

West development region						
Year / *Poluant* (tonnes)	*2006*	*2007*	*2008*	*2009*	*2010*	*2011*
SO_2	76683.00	63071.00	52894.00	32361.00	26935.00	25435.60
NO_x	26326.00	23284.00	25732.00	24150.00	15737.00	13037.00
NH_3	16647.00	18921.00	19700.00	17963.00	16584.00	16504.90
NMVOC	47132.00	37933.00	37310.00	37450.00	36157.00	35271.30
CO_2	-	-	-	-	-	-
CH_4	-	-	-	-	-	-
N_2O	-	-	-	-	-	-
TSP	-	-	-	-	-	-
Mercury	1.03	0.59	0.46	0.21	0.25	0.20
Cadmium	0.20	0.30	0.20	0.13	0.10	0.10
Plumb	8.05	12.44	8.78	1.52	1.52	1.52
POP	-	-	-	-	-	-

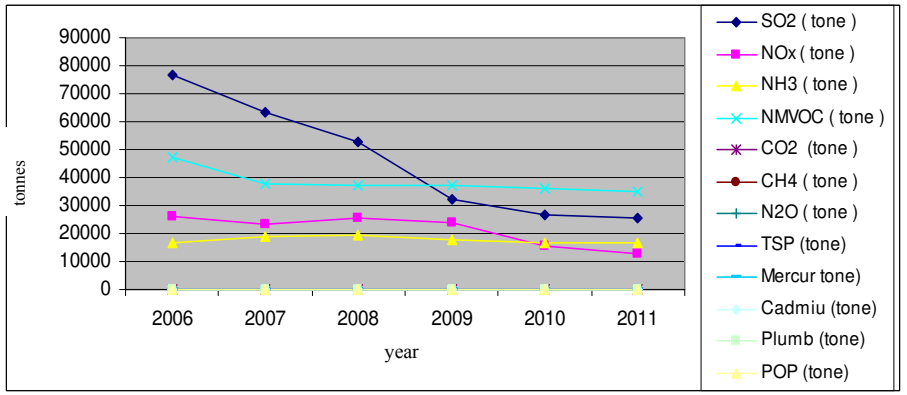
Source: Annual report on status of environmental factors for West region, 2006-2012

Chart no. 1: Evolution of the main pollutants for NE region



Source: the authors based on data provided by regional environmental agencies

Chart no. 2: Evolution of the main pollutants for West region



Source: the authors based on data provided by regional environmental agencies

Table no. 3: Evolution of the main pollutants for SE region 2006-2011 period

South-East development region						
Year / *Poluant* (tonnes)	*2006*	*2007*	*2008*	*2009*	*2010*	*2011*
SO_2	63138.40	38726.57	40950.14	73917.77	5450.17	5341.10
NO_x	45994.00	33761.00	26471.00	26649.14	10800.18	9876.12
NH_3	12279.00	15227.00	14401.00	14592.22	18547.71	19312.07
NMVOC	29858.00	31572.00	46857.00	23643.00	19938.00	19542.00
CO_2	-	-	-	-	-	-
CH_4	-	-	-	-	-	-
N_2O	-	-	-	-	-	-
TSP	-	-	-	-	-	-
Mercury	0.83	0.85	0.78	0.10	0.05	0.04
Cadmium	0.82	0.78	0.61	0.47	0.05	0.05
Plumb	60.91	59.89	45.42	22.08	0.37	0.42
POP	0.10	0.10	0.13	0.08	1.71	1.82

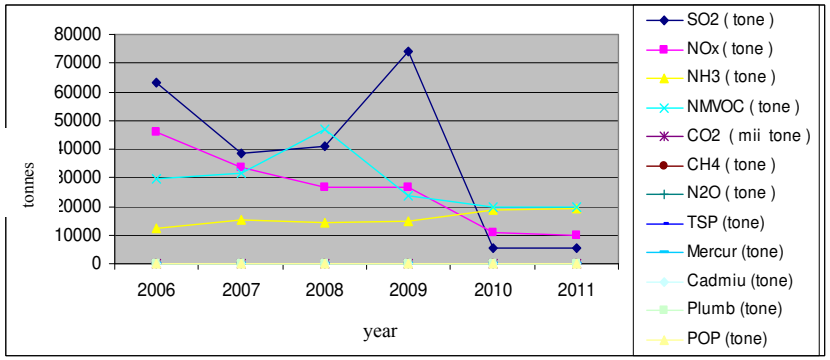
Source: Annual report on status of environmental factors for SE region, 2006-2012

Table no. 4: Evolution of the main pollutants for Bucharest-Ilfov region 2006-2011 period

Bucharest-Ilfov development region						
Year / *Poluant* (tonnes)	*2006*	*2007*	*2008*	*2009*	*2010*	*2011*
SO_2	10974.00	11178.00	2286.00	3347.00	2450.00	2230.15
NO_x	19083.00	13049.00	21127.00	18109.00	17432.00	16659.00
NH_3	1229.34	655.73	897.04	1015.62	1048.53	1079.45
NMVOC	27803.00	13428.00	17377.00	10487.00	10301.00	10212.64
CO_2	-	-	-	-	-	-
CH_4	-	-	-	-	-	-
N_2O	-	-	-	-	-	-
TSP	583.60	764.77	1881.10	994.21	887.50	880.00
Mercury	0.26	0.28	0.26	0.02	0.02	0.03
Cadmium	5.49	3.82	3.00	3.56	4.02	4.10
Plumb	6.05	4.74	5.88	4.21	4.88	4.61
POP	0.002	0.04	0.03	0.01	0.01	0.01

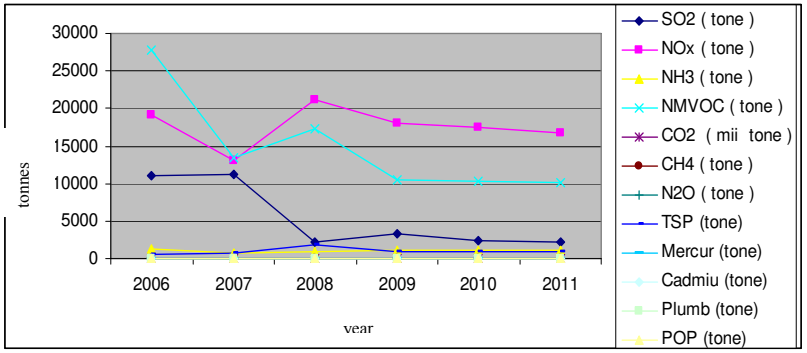
Source: Annual report on status of environmental factors for Bucharest-Ilfov region, 2006-2012

Chart no. 3: Evolution of the main pollutants for SE region



Source: the authors based on data provided by regional environmental agencies

Chart no. 4: Evolution of the main pollutants for Bucharest-Ilfov region



Source: the authors based on data provided by regional environmental agencies

Table no. 5: Evolution of the main pollutants for SV region during 2006-2011 period

South-East development region						
Year / *Poluant* (tonnes)	*2006*	*2007*	*2008*	*2009*	*2010*	*2011*
SO_2	419832.00	465585.00	443237.00	365593.00	334226.00	-
NO_x	60539.00	64468.00	70801.00	60248.00	53625.00	-
NH_3	11203.00	8218.00	6469.00	3347.00	4869.00	-
NMVOC	58397.00	34816.00	47607.00	23538.00	20751.00	-
CO_2	-	-	-	-	-	-
CH_4	-	-	-	-	-	-
N_2O	-	-	-	-	-	-
TSP	-	-	-	-	6704.00	-
Mercury	1.82	1.67	1.21	1.04	0.84	-
Cadmium	0.31	0.23	0.21	0.12	0.09	-
Plumb	5.54	3.55	3.21	1.18	0.91	-
POP	-	-	-	-	-	-

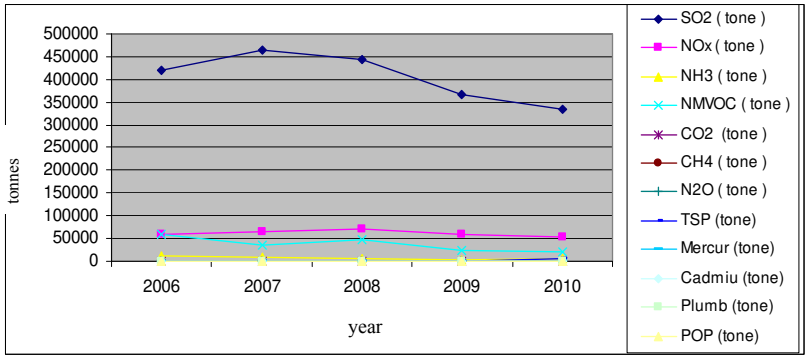
Source: Annual report on status of environmental factors for SV region, 2006-2012

Table no. 6: Evolution of the main pollutants for Centre region during 2006-2011 period

Centre development region						
Year / *Poluant* (tonnes)	*2006*	*2007*	*2008*	*2009*	*2010*	*2011*
SO_2	19016.91	43850.55	38616.52	7858.64	-	-
NO_x	49336.13	33549.11	37721.53	26076.58	-	-
NH_3	39230.76	28888.94	27040.00	20018.73	-	-
NMVOC	48495.44	77438.85	76021.64	74513.40	-	-
CO_2	12982.95	12277.42	12185.96	11283.23	-	-
CH_4	102.43	129.07	128.70	74.30	-	-
N_2O	14330.00	16953.30	17529.04	12023.45	-	-
TSP	-	-	-	-	-	-
Mercury	0.13	0.11	0.44	0.99	-	-
Cadmium	0.78	0.47	0.72	0.33	-	-
Plumb	48.73	42.11	46.54	14.63	-	-
POP	0.08	0.07	0.04	1.08	-	-

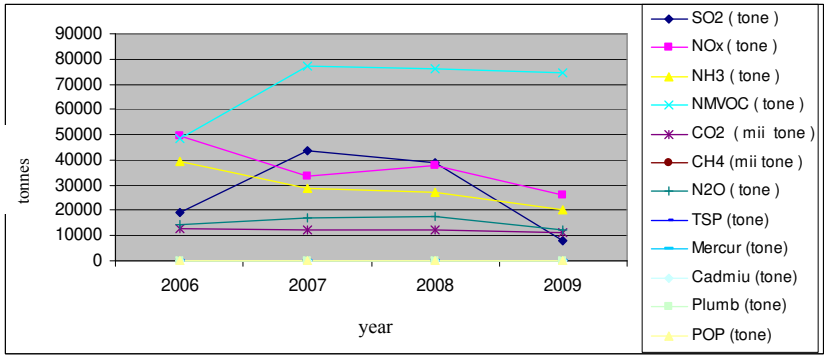
Source: Annual report on status of environmental factors for Centre region, 2006-2012

Chart no. 5: Evolution of the main pollutants for SV region



Source: the authors based on data provided by regional environmental agencies

Chart no. 6: Evolution of the main pollutants for Centre region



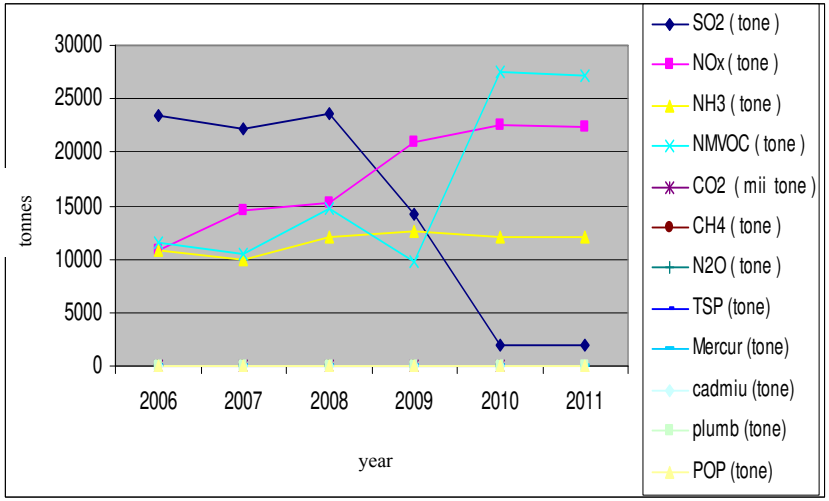
Source: the authors based on data provided by regional environmental agencies

Table no. 7: Evolution of the main pollutants for NV region during 2006-2011 period

North-West development region						
Year / *Poluant* (tonnes)	*2006*	*2007*	*2008*	*2009*	*2010*	*2011*
SO_2	23356.17	22155.18	23644.72	14284.25	1908.97	1900.01
NO_x	10898.14	14594.79	15202.20	21018.21	22518.66	22420.32
NH_3	10855.36	9947.42	12054.42	12604.02	12058.40	12012.03
NMVOC	11611.82	10513.49	14818.63	9700.42	27554.00	27220.56
CO_2	-	-	-	-	-	-
CH_4	-	-	-	-	-	-
N_2O	-	-	-	-	-	-
TSP	-	-	-	-	-	-
Mercury	23.52	14.99	5.73	3.79	2.86	2.91
Cadmium	-	-	-	-	-	-
Plumb	-	-	4.57	2.17	1.97	1.52
POP	0.4358	0.13	0.003	0.01213	0.86	0.78

Source: Annual report on status of environmental factors for NV region, 2006-2012

Chart no. 7: Evolution of the main pollutants for NV region



Source: the authors based on data provided by regional environmental agencies

Tabel no. 8: Emissions limit and recorded values for Romania in the period under review

SO₂ (tonnes)					
	2006	**2007**	**2008**	**2009**	**2010**
Romania	697590	576200	557330	459870	784500
Limit	918000				
NOₓ (tonnes)					
	2006	**2007**	**2008**	**2009**	**2010**
Romania	293830	320440	289280	247260	350390
Limit	437000				
NH₃ (tonnes)					
	2006	**2007**	**2008**	**2009**	**2010**
Romania	196180	202840	186780	187030	206080
Limit	210000				
NMVOC (tonnes)					
	2006	**2007**	**2008**	**2009**	**2010**
Romania	415480	429710	447410	432180	342840
Limit	523000				

Source: Annual report on status of environmental factors for NE region, 2010

Figure no. 1: Quality Indices for environment

Source: National network for monitoring the air quality

Figure no. 2: Awareness message addressed to the citizens

Source: National Environment Guard