ENVIRONMENTAL PRESERVATION STRATEGY IN NEW ROMANIA: INSTITUTIONAL AND BEHAVIOURAL CHALLENGES

Abstract: This paper aims at highlighting the institutional and behavioural challenges to Romania’s environmental preservation strategy, so as to answer questions as: to what extent is the Romanian society able to adapt to environmental change? which are the mechanisms, the instruments that can be employed to face this change and to attain the objectives proposed? Without denying the role of financial means and technical change in such processes, this paper focusess on the need of real, radical changes of institutional, legislative framework as ell as in terms of behaviour, mentalities, attitudes. In this context the role of local public administration and local communities is particularly stressed.
1. Introduction

Sustainable development is the world’s greatest challenge at the confluence between the XXth and the XIst century. This challenge is twofold, aiming to improve and maintain both the well-being of people and ecosystems. The key elements underlying sustainability - “equity (the achievement of widespread social justice in the distribution and accessibility to resources both in space and time), environment (acknowledgement of nature’s rights and values), development (economic development able to guarantee both the quality and quantity of natural resources)” [1] - make it be seen as a long-run objective, gradually addressed. In the beginning only the big challenges of environmental preservation are to be focused on, so that some trade-offs in terms of positive and negative changes in some components will be allowed. This means that in a first stage the emphasis is put on weak sustainable development which “implies a rise in the overall welfare function, but allows substitution and compensation phenomena...” [11]. A strong sustainable development, without allowing a decline in any component is only the final goal. In other words sustainable development entails integrating economic, social and environmental objectives, and making choices among them when integration is not possible. People are a key factor in this process. They “need to improve their relationships with each other and with ecosystems that support them, by changing and or strengthening their values, knowledge, technologies and institutions” [3]. Major obstacles like the lack of agreement on what should be done, resistance by interest groups, uncertainty about costs and benefits of alternative actions come from people as well.

In order to provide “a framework for analysis and focus for debate on sustainable development and processes of negociation, mediation and consensus-building” [3] and to plan and carry out actions in acordance with priority issues, sustainable development strategies are required. As sustainability is a global challenge with concrete spatial implications, these strategies may be international, national and local. Without neglecting crucial environmental problems such as acid rain, global warming, the destruction of tropical forests, and the exploitation of oceans, that are now subjects of international concern and diplomacy, each country is confronted with specific cases of air, water, soil pollution, resource depletition, etc. making it necessary to conceive and implement adequate national sustainable development strategies. In various countries these strategies go by different names
(sustainable development strategy, environmental preservation strategy, environmental action plan, environmental management plan, environmental policy plan, etc.), reflecting their different histories. This paper is to present the case of Romania.

Romania, like other Central and East European countries, is undergoing a stressful and often painful process of radical change regarding the transition to the market economy. As transition does not represent a purpose on its own, the strategy conceived for this period must take into account not only the objectives specific to this stage but also the long-term goals, expressing the time continuity of strategic choices. Therefore, according to the requirements of the modern society, this strategy must consider sustainability as a critical challenge. Obviously, it has to be addressed in the specific context of Romanian realities, with a particular distribution over time and space of the main objectives. They are strongly influenced by the communist ‘heritage’ and by the transition constraints as well.

Thus, prior to 1990 the central planning system had a set of priorities that focused on production maximization while environmental concerns had lower priority. Although there was no incentive to pollute (since there was no opportunity for private profit) that set of priorities created serious environmental problems: high degree of air and water pollution, harmful solid waste originating in residential and commercial use, poor quality food, deteriorating human health. Hence it must be admitted that centrally-planned production is not necessarily more ‘environment-friendly’ than market-directed production.

Considering these realities the transition to a new society, based on democratic values, with a market-directed economy has to face important environmental challenges, at the same time with great political, economic, social, organizational, cultural, behavioural ones. In an integral approach the solutions should focus on all the elements of the structural reform, namely the institutional and legislative framework for the market economy; the reform of enterprise structures; the physical structure for a competitive economy; human capital and attitudes [15]. Accordingly, the national strategy developed in 1995 to prepare Romania for joining the European Union (deriving from the national programme of reform and restructuring) contains, as one of the main components, the strategy of environmental preservation, closely related to other strategies that take into account environmental
constraints too (such as sectoral strategies, the strategy of socio-economic regional
development, the national physical plan and so on) [9], [6], [10]. Even though the
integration of all these components was a major concern, it cannot be said that this has been
really achieved. But the development of the environmental preservation strategy is only a
means to an end, implementation, monitoring and evaluation being also required. In this
respect it is apparent that, whatever the importance of financing this strategy, the whole
society’s participation, as well as communication/information and adequate education are a
cornerstone for carrying out the proposed objectives. It is absolutely acknowledged that
“successful strategies are participatory” [3]; participation must be conceived in terms of both
government (national and local) and non-governmental actors (corporate sector, non-
governmental organizations as well as direct involvement with communities and individuals).
In order to carry out their specific functions these actors have to rely on an appropriate legal
framework, economic instruments and mechanisms for mediation and conflict resolution. The
commitment of the participants involved as well as a conducive political and social climate are
critical in a ‘people-centred’ approach to environmentally sustainable development strategy.

Starting from these overall conditions this paper aims at highlighting the institutional
and behavioural challenges to Romania’s environmental preservation strategy. Two
preliminary steps have been considered useful in this respect, namely an analysis of the
ecologic environment situation before and after 1990 and a critical synthesis of the
environmental preservation objectives, as they result from the environmental preservation
strategy. They can help to answer questions as: to what extent is the Romanian society able to
adapt to environmental change? which are the mechanisms, the instruments that can be
employed to face this change and to attain the objectives proposed? Without denying the role
of technical change in such processes this paper focuses on the need of real, radical changes
not only in terms of institutional, legislative framework but also in terms of behaviour,
mentalities, attitudes. The reason is that the long communist period had a very bad influence
on the Romanian society’s behaviour: the way of perceiving the democratic values, the
attitudes have been perverted to a great extent, so that the transition to a democratic society
has to face enormous challenges in order to transform the wrong mentalities and attitudes. The
approach will be a behavioural one: “behaviour simply means what people do, as opposed to what they say they do or what they are supposed to do, in legal and institutional terms” [17].

2. The situation of environmental preservation in Romania

The analysis undertaken in this section has proposed to reveal the degree of environmental degradation in terms of natural resource and energy waste, air pollution, water pollution, soil degradation, waste disposal problem, habitat and species distruption, forestry damage. Even though Romania has not suffered extensive environmental damages it has had to face significant/serious environmental problems. Their roots can be mainly found in the socialist (forced) industrialization policy as well as in the deficient, formal policy of environmental preservation. After 1990 the natural environment situation has been improved in some degree, as a result of important changes in the institutional and legislative framework, intensifying the direct measures and actions for environmental preservation; it has been also favourably influenced by factors emerged from the economic situation.

2.1. The situation before 1990

The forced industrialization policy was the major cause of environmental degradation in Romania’s communist period. It concentrated on the development of heavy industries such as metallurgy, heavy machinery, chemistry, electricity production - considered the driving force of the economic development - whereas other sectors like agriculture, infrastructure were paid a little attention. The main goal was production maximization, environmental concerns having lower priority. Under these circumstances the rapid economic growth recorded in the 1960s and 1970s (of an annual rate of about 11% in some periods) was accompanied by negative phenomena like a high degree of energointensiveness (thus, the energy consumption per unit of GDP was approximately three times greater than in OECD countries), overconsumption of natural resources, deterioration of natural environment and human health. These phenomena were encouraged by irrational price structures, that kept low prices for both natural resources and electricity, these ones being subsidizes by government. No incentives were created for industries to become more efficient. Some comments upon the environmental damages caused by the main polluting industries are necessary now.
These industries are responsible for air and water pollution - that concerns both surface and underground water - the latter being directly related to soil pollution.

Air pollution is much higher in towns and cities and in their neighbourhoods than in villages due to polluting industries located in their immediate vicinity. The air is locally polluted mainly by non-ferrous metallurgy (which discharges heavy metals like zinc, copper, cadmium), iron and steel metallurgy, cellulose and paper industry, fertilizer and chlorosodic plants (sulfur dioxide, carbon monoxide, carbon dioxide, nitrogen oxides, etc.). In general terms, energy-intensive industries are responsible for approximately one half of air pollution, as follows: sulfur dioxide - 74%, carbon monoxide - 41%, nitrogen oxides - 23%, suspended particulates - 45%. Even though the European average is exceeded only for nitrogen dioxide and ammonia, the point is that certain local areas and regions have to face major environmental threats; their solving cannot be delayed without irreparable damages for nature and human health.

The aforementioned polluters are also sources of water (surface and underground) and soil pollution. A special case of water pollution is that of the Danube river, with important polluters out of Romania, in upstream countries (nitrogen oxides, phosphates, pesticides) as well. There are about 2770 treatment plants for waste-polluted water in Romania, but nearly 300 are not working, while more than 500 are badly working. Moreover, there is no treatment plant for phosphate and nitrogen oxide polluted water, that causes eutrophication, with fish population changing and eventually disappearing. A bad treatment of water polluted by chemical plants located in neighbouring area is also a major cause of polluting the Black Sea.

The Romanian agriculture has to face many environmental challenges too. It is a source of pollution and is damaged by pollution at the same time. Thus a big amount of solid wastes with negative effects on water and soil quality originates in agriculture (slaughter wastes, orchard prunings, harvest residues). A common form of water pollution resulted from the discharge of pesticides, nutrients and sediments into rivers. Chemical fertilizers were a major source of eutrophication, while sediments tend to make the water shallower, cause the silting of water accumulation for hydroelectric power stations and jeopardize their protection dikes. Also, organic waste from livestock that enters the rivers directly, particularly after heavy
rains, threatens seriously the water supplies of several towns located in Eastern counties. On the other hand nearly 75% of the agricultural soil has been damaged by one or more pollutants such as: pesticides, chemical fertilizers improperly used, heavy metals, petroleum, etc. and by disruptive phenomena like drought, flood, erosion, salting, increase in acidity, for which little remedy has been brought so far. Therefore, despite its natural qualities only one third of the arrable soil meets the standards for an environmentally sustainable agriculture.

Many of these pollutants have been harmful for the quality of forests too. A common threat for both forests and soil as well as for air, flora and fauna is acid rain. It originates in local polluters that release sulfur dioxide and nitrogen oxides, but cross-border polluters, especially from west and north-west are responsible as well.

Without being exhaustive this presentation has aimed to offer an image on the proportions of environmental deterioration in Romania. But, besides the economic factors, those related to the legislative system and information monopoly played a significant role too.

As a general feature of the former environmental regulations, their provisions were almost similar to those applied in the developed countries in the 1960s. Unfortunately these standards and regulations were weakly enforced and fees were so low that it was easier and cheaper for industrial polluters to pay penalties than to improve their environmental record. The state also granted many exemptions from its own regulations, making them ineffective. Furthermore these regulations did not cover the whole range of environmental problems and were not connected with institutions specially designated to implement and supervise the observance of the established rules.

The information monopoly of the communist regime made it possible to conceal environmental statistics and most information on the quality of environment. Environmental data were secret and the public did not have any access to environmental information. Local communities did not have a real image of the environmental conditions in their regions, excepting those living in areas where environmental devastation was obvious. The lack of information led to a lack of interest among the public about environmental issues. Like in other communist countries [14], Romanians who tried to express their unsatisfaction, disagreement with environmental policy were persecuted.
2.2. The situation after 1990

Compared with the previous period a *favourable evolution* of the environmental preservation measures and actions as well as of the characteristic environmental factors has been recorded after 1990 (especially in the first years). This situation has been possible and favoured mainly by the following: a considerable improvement of the institutional and legislative framework, economic situation factors, direct measures and actions for environmental preservation. As a special section is devoted to institutional and behavioural aspects, the improvement of institutional and legislative framework is not discussed now.

As concerns the economic situation factors, they are mainly related to the pronounced decrease of industrial production, by 30% - 50% in the first years of transition compared with 1989 level, that has directly led (without any extra measures) to a quite important percentage decrease of emissions and release of various pollutants. However, these results are only *temporary*, the slight economic recovery, the growing private car (still burning leaded gas) ownership and other circumstances being expected to bring about additional environmental damages. It is very clear that the market-oriented economic transition will not necessarily lead to improving environmental quality in Central and East European countries and ‘free market mania’ can result in wasting the opportunity to restructure the economies toward a sustainable path of development [14]. The implementation of market principles alone is not able to solve the pollution problems and needs to be associated with further governmental actions.

In Romania several important measures and actions have been undertaken to face environmental problems. They refer to: improving working parameters of the existing equipment, with direct consequences in terms of pollution reduction; developing research studies on pollution issues in Romania, so as to establish the most damaged areas and the priorities in allocating resources for environmental preservation; carrying out investment projects to diminish pollution effects in the most damaged areas; intensifying air and water quality monitoring; ecological reconstruction works supported by the World Bank in the Delta of Danube, one of the biosphere reservations.
But, in general terms, the estimates of environmental cleaning-up costs show that Romania is unable to allocate the sum required when facing growing economic and social problems. Nevertheless the transition to the market economy and the democratic system makes it possible to overcome the biggest obstacles that prevented communist environmental policies from being effective. First, the new institutional and legislative framework should allow the coordination of environmental and economic policies, via enforcement and incentive mechanisms that were missing in the centrally-planned economic system. Second, the democratization of society creates the adequate framework for an active participation of the public in promoting environmental preservation projects in accordance with its own interests: it may protest against pollution practices and demand better governmental action.

3. Environmental preservation strategy: institutional and behavioural challenges in the transition period

3.1. The institutional and legislative framework

After 1990 serious efforts have been undertaken in order to create a new institutional and legislative framework of environmental preservation in accordance with the exigences of the modern, democratic society and radical changes required by transition to the market economy. Appropriate institutions and legislation were considered a prerequisite to building a realistic and effective environmental preservation strategy. This process has been a multi-track one, in which the two components - creating institutions and developing specific acts - have been occurred simultaneously with other elements of strategy preparation phase (information assembly and analysis, policy formulation, action planning, document preparation). Although some mismatches between the new and the old could not be avoided in various stages (for example the Ministry of Environment was set up soon after December 1989 whereas the Environmental Preservation Act was issued by the Parliament just in December 1995) this procedure has been considered more effective than a single-track approach, in which most would have occured sequentially.

Before 1989 Romania had a quite comprehensive environmental legislation but it was largely ineffective. Most laws were issued in the ‘60s and ‘70s and some of them revised in the ‘80s: Environmental preservation Act (1973), Water Act, Forest Act, Hunting Act,
Agricultural Protection Act, Nuclear Activity Control Act, Toxic Substances and Products Act and so on. Nevertheless the environmental preservation was very fragmented since there was no central institution dealing with environmental protection, management and enforcement of existing regulations. Instead, various ministries such as the Ministry of Agriculture and Food Industry, the Ministry of Forest and Woodworking Industry, Water National Council, the Ministry of Health, the Ministry of Culture, the Ministry of Building, the Commission for Natural Monuments Preservation were responsible for different areas of environmental protection and management.

The immediate institutional changes after December 1989 included a new organizational framework for environmental preservation as a national priority. In this context the Ministry of Water, Forest and Environmental Preservation (usually named ‘the Ministry of Environment”) was set up in 1990, aiming at an integral approach of environmental management, so that to prevent pollution from transmitting among various environmental factors.

At regional level the Ministry of Environment relies on the activity of territorial agencies. These agencies have been set up at county level in order to carry out the tasks and responsibilities of the Ministry of Environment in their counties. Unfortunately their actual position is pretty weak owing to the insufficiency of adequate equipment, trained personnel and financial means. Many efforts are to be undertaken at this level in order to promote the decentralization of environmental management. Related to this matter; some proposals referred to reformulating the tasks of two self-administrated authorities - ‘Apele Romane’ (responsible for water consumption and quality) and ROMSILVA (involved in biodiversity preservation, in aproving hunting and fishing permits). Concretely, the transformation of these self-administrated authorities into public utility companies was proposed, at the same time with transferring their responsibilities with environmental management to the Ministry of Environment and territorial agencies [16].

One of the most important achievements of the Ministry of Environment has been the development of a new, modern Environmental Preservation Act, issued by the Parliament of Romania in December 1995. A range of principles underlie this act, quite similar to those expressed in international agreements and other domestic legislations. These basic principles
are combined with some strategic elements, as follows: the precautionary principle; the principle of preventing ecologic risks; biodiversity and ecosystem conservation; the “polluter pays” principle; priority in removing the most harmful pollutants, inflicting damages on human health; creating the integrate monitoring system; the principle of inter-generational equity; maintaining, improving the environmental quality, as well as reconstruction of deteriorated areas; creating the framework for non-governmental organizations and population participation in decision-making process and implementation; the subsidiarity principle; developing international collaboration in order to ensure the needed environmental quality [7]. As these principles have a high degree of generality, it is very important to be cast in a way which reflects the cultural, political and economic nature of Romania and the communities within it. In author’s opinion this is one of the greatest challenges to this act. It is also worth mentioning that “these principles work best when applied together, especially when some circumstances would mean that the rigorous application of one principle alone might be impracticable or inequitable” [3]. Special chapters of the Environmental Preservation Act are devoted to regulation of economic and social activities with significant environmental impact (via assessment of environmental impact studies, environmental permits, explicit conditions to firms and individuals with activities related to harmful substances and wastes), natural resource preservation and biodiversity conservation (with regard to technical norms, exploitation permits, emission standards, quality standards that have to be established by the Ministry of Environment for water, air, soil, subsoil, flora and fauna, protected areas and nature reservations), tasks and responsibilities of the authorities charged with environmental preservation, penalties (from fines to punitive sanctions). A critical assessment of the system of instruments used by environmental policy is to be performed in the next subsection. To be truly effective the Environmental Preservation Act must be followed by other 17 acts, to be issued within approximately two years (Water Act, Forestry Act, Flora and Fauna Protection Act, Nuclear Activity Control Act and so on). A proper application of the whole regulation system into practice, based on the commitment of all key participants represents one of the most important elements for developing and implementing an environmentally sustainable development strategy.
3.2. Building environmental preservation strategy

Environmental preservation strategy has been developed by the Ministry of Environment as a component of the national strategy of transition to the market economy and structural reform. The great changes entailed by an unexperienced before transition to a new society, based on democratic values have induced characteristic features of building environmental preservation strategy. Thus, just from the beginning the strategy has been seen as a process, not as an isolated event. This process is *adaptive*; it develops as it goes along and responds to change. It is also a *multi-track* process, whereby most of the strategy components occurs simultaneously \[3\]. The need of a new institutional and legislative framework specific to the new, emerging society made the Ministry of Environment deal with developing a new legislation and diagnosis, designing objectives and actions for environmental preservation at the same time. An important lesson that can be learnt from the international experience is that the components of the strategy process - information, assembly and analysis, policy formulatin, action planning, implementation, monitoring and evaluation - must continue together and reinforce one another. Moreover, the strategy process is *up-dating, cyclical*, over a period of several years the main components being repeated. It has been necessary to understand that a strategy does not need and should not try to do everything at once. The case of Romania has shown that the strategy of environmental preservation has grown in scope, degree of participation, relations with other components of the general strategy as capacities to undertake it have been built. A relevant expression of this evolution is the up-dated environmental preservation strategy developed in 1995 and based on new economic, social, environmental facts emerged as a result of fulfilling the first steps of reform. It has become a component of the national strategy to prepare Romania for joining the European Union, with two stages: 1995 - 1999 (at the end of which the objectives of transition will be carried out) and 2000 - 2004 (when the European Union’s standards will be probably met).

The actual strategy of environmental preservation has been conceived as a *national multi-sectoral strategy*, closely related to other components of the general strategy (sectoral economic development strategies, the national spatial plan, the strategy of socio-economic regional development, as a synthesis of the strategies developed by each county and Bucharest
city, etc.). It includes both objectives of local and regional character and global objectives, entailing responsibilities at national and international level. From the time period viewpoint the strategy contains short- and long-run objectives [9].

The short-run objectives have either immediate results (and require relative small costs) or long-term results (these ones cannot be postponed without irretrievable consequences). They have been selected carefully, considering two main reasons: a strategy is more likely to be implemented successfully if it concentrates on a few priority issues; the financial means are very confined in this transition phase. Related to the latter aspect, it should be mentioned that the annual average investments needed in the next years for environmental preservation have been estimated at 400 - 750 million USD, while the amount that can be assured is 250 - 400 million USD. First of all short-run objectives concentrate on institutional capacity reinforcement. The main concern is a better cooperation between the Ministry of Environment and other ministries responsible for activities with environmental impact, local authorities, non-governmental organisations and international ones. It is also the environmental legislation that must be completed as soon as possible and continuously improved. Another basic issue refers to environmental factor monitoring, based on caution principle. The actual monitoring network is uneven spatially distributed (in respect to the objective needs). Moreover new requirements have appeared related to other factors monitoring (solid waste, sediments, noise, acid rains, cross-border pollutant transportation and so on), the improvement of data base administration, the self-monitoring at the pollution sources. From sectoral viewpoint the main industries inducing major pollution risks have been identified as priority regulation targets, namely: non-ferrous metallurgy, ferrous metallurgy, chemicals, fertilizers, petro-chemistry, synthetic fibres, pulp and paper, cement, etc.. Electric energy production and transportation have to be taken into consideration as serious pollution sources too. With regard to the spatial location of the major pollution sources, 14 highly polluted areas have been established as emergency action zones, with immediate and strong intervention. Examples are: Baia Mare (suspended particulates containing lead from the plants treating lead ores), Copsa Mica (carbon black factory), Zlatna (air pollution by copper and hydrogen sulphide from the treatment of copper ores), Bacau-Borzesti and Savinesti (water pollution by petro-chemistry and synthetic fibres), Ploiesti-Teleajen (petrochemistry). In
some cases even closing, new location for certain enterprises or reducing their dimension have been proposed. There are also strategic action plans for the Delta of Danube (as biosphere reservation), Danube river, the Black Sea ecosystem, in which various international organisations are involved too. A special attention is to be paid to improving urban infrastructure, especially as regards water supply, sewer systems and treatment plants. A recent programme in this field has begun with the direct support of ERDB (more than 80 million USD).

Specific global objectives refer to forest, flora and fauna preservation and the protection against natural catastrophes (droughts, floods, earthquakes, etc.).

Long-run objectives are basically related to the ultimate goal of environmentally sustainable development, namely improving and maintaining the well-being of people and ecosystems. In order to meet the corresponding standards the Romanian legislation must be harmonized with the European Union’s legislation. As this requirement addresses a big number of acts, some priorities must be established, as well as firm deadlines for their implementation. Another basic issue focuses on interregional and cross-border cooperation for a clean environment.

Last but not least, all these objectives must be supported by adequate training and scientific research programmes as well as by large information and educational ones, able to change the behaviour of the people and to increase their involvement in promoting ecological projects.

After defining objectives, the emphasis has to be put on policy instruments, action planning, implementation, monitoring and evaluation. For understanding the context in which these phases are to be performed, some comments on the main characteristics of the Romanian environmental strategy would be useful. As mentioned before, the strategy of environmental preservation is a national multi-sectoral strategy, including a spatial dimension as well. Considering the close links between socio-economic, environmental and spatial dimension of the development processes, an integral approach of all these elements is recommended. As resulted from the above presentation, environmental sustainability is seen as a long-run objective, gradually addressed. In the beginning only the big challenges of the
environmental preservation are to be focused on, so that some trade-offs in terms of positive and negative changes in some components will be allowed. This means that in a first stage the emphasis is put on weak sustainable development, which implies a rise in the overall welfare function, but allows substitution and compensation phenomena in different areas of the spatial system. A strong sustainable development, without allowing a decline in any component, is only the final goal [11].

A specific Romanian answer to these reflections, taking into consideration each county’s sectoral structure - that involves specific environmental challenges - is the concept of ‘mosaic ecodevelopment’ [8]. This concept proposes the implementation of sustainability principles at smaller area level; these areas will be gradually enlarged so that they will cover the whole national territory in the long-run. In this view the ecological space should look, in its ideal form, like a chess board, where large agricultural areas should dovetail with more confined industrial and infrastructure ones. This alternation is entailed by an uneven distribution of natural resources as well as by economic, social and environmental criteria. In such a framework ecology and bioeconomy can bring about original solutions for spatial planning, so that corresponding ecological areas will be allotted to agriculture, forestry, industry and service infrastructure in accordance with specific parameters such as: the existence and availability of energy sources for these economic sectors; the functional complementarity of agriculture and industry so as to amplify their outcomes; the need of local processing of fossil raw materials, taking into consideration the exponential influence of distance on their processing costs; the necessity to avoid industry/agriculture interference in terms of polluting effects of industry upon agriculture.

But the critical question to be addressed is: how can the concept of mosaic ecodevelopment become operational, so as to contribute to the development of an environmentally sustainable sectoral structure at regional level? [5] A possible answer would be including it (followed by corresponding policy instruments) in regional development strategies, sectoral strategies and national spatial plan as well, as an expression of the complex relation between environmental patterns and spatial organizations. In this way the national environmental preservation strategy, the strategy of socio-economic regional development and the national spatial plan would acquire an important element for a real complementarity.
The practical solutions should focus on all the components of the structural reform, namely the institutional and legislative framework for the market economy, the reform of enterprise structures, the physical structure for a competitive economy, human capital and attitudes [15].

Thus, as regards the institutional framework, within the obvious tendency to decentralization, specific to the transition phase, the regional strategies concentrate on regional (local) efforts to foster socio-economic development, according to the natural advantages of the local economies, highlighted by mosaic ecodevelopment principles. But “viewed in the context of an unexpected intensification of spatial polarisation tendencies in East European countries, it should be avoided in the discussion of local authorities, local initiatives, and local efforts and their role in regional development policy to see them as an alternative to the policy conducted from the perspective of the spatial organisation of the whole country or of a group of countries. Both national or even supranational and local level of regional policy must be complement one another” [2]. In other words, “think globally and act locally”. Accordingly, the actual Romanian strategy of regional social-economic development integrates both the top-down and bottom-up approach.

In the phase of emerging of a new, democratic society the importance of local efforts is considered truly enormous. In the past, despite the declarative formulation of local self-administration, local authorities and communities were treated as voiceless executors of commands from central level. Therefore, empowering the local, democratically elected authorities, providing them with legal, financial, and other instruments of action within their regions is a necessary component of the basic social and economic reform. As the national environmental preservation strategy stipulates, the Ministry of Environment is mainly charged with promoting environmental legislation, a special emphasis being put on formulating strategies and organising the coordination of the whole process; the responsibility of implementing the environment legislation and the corresponding strategy and policy at county level belongs to the territorial environment agencies. Unfortunately, as already mentioned, their actual situation is generally pretty weak, owing to the insufficiency of adequate equipment, trained staff, and financial means. Many efforts are to be undertaken at this level in order to promote the decentralisation of environment management. The reinforcement of the
local tax revenue base and the automatic budget transfer from the state should be a positive contribution. Also, the spatial externalities linked to the land use patterns and site-specific development create the basis for territorial agencies intervention, using various regulatory options (altering market incentives so as to discourage pollution or bypassing market incentives with some forms of regulatory intervention). Thus, the territorial environment agencies are expected to play an active role, of a great importance for the quality of environment in their responsibility areas, contributing to a new perspective on the effectiveness of economic activities and to a new spatial planning outlook.

Other dimensions of the economic reform entailing particular aspects from both sectoral and regional viewpoint refer to the economic restructuring and privatization. These processes are of a crucial importance for the long-term economic health of each county, creating the basis for employment and income increasing. Of course, each county is to be confronted with specific problems, depending upon its actual sectoral structure. Again, as mentioned before, the mosaic ecodevelopment could bring about original solutions for regional structural adjustment strategies and policies, according to environmental preservation constraints, so that an environmentally sustainable sectoral structure at regional level could be focused on. As far as the privatization process is concerned, the responsibilities and obligations of the new owners with regard to present and future pollution effects are to be stipulated in the final privatization documents. Also, their obligations for previous pollution cases are to be negotiated. However, these requirements and especially the stages of carrying them out are conceived so that not to become very tough constraints that could seriously affect production continuity and competitiveness. As a general rule, the environment authorities will stipulate the main objectives regarding the environmental quality, allowing the firms to find out the most efficient ways and means to fulfil these objectives.

Many initiatives related to indigenous development allowing for environmental constraints and according to the solutions that could be brought about by bioeconomy and ecology in a mosaic ecodevelopment view concentrate on the importance to establish and support small and medium enterprises. After revolution SMEs have been developed to a great extent. Now, this sector is accounting more than 35% of GDP and 30% of the export value. They are mainly engaged in commercial activities, but also in other services and production.
The development of SME activity is stimulated by many international programmes (PHARE, UNDP, USAID, British Know-How Fund, Canadian Task Force, Dutch Government, etc.) by consulting and finance. As commercial activity is more risky, the financial support covers manufacturing, agriculture, construction, etc.

From regional strategy viewpoint the economic development initiatives such as providing factory premises, industrial sites, advisory services for SMEs, and direct financial assistance to small firms have to be assessed in respect to their impact on local economy, taking into consideration that the multiplier effects of a given expenditure injection vary between different types of firms in different local authority areas. In a wider regional policy context the local authorities need to coordinate their economic development policies, considering the spillover effects. Also, as far as the spatial interactions between the neighbouring areas are focused on, *internal/external sustainability* question has also to be addressed [11]. Internal refers to sustainable development (be it weak or strong) inside a given area, while external refers to resulting sustainability in the adjacent areas. In author’s opinion the coordination of regional development policies acquires new aspects when border regions are involved in, as an expression of the European integration process. Another aspect focuses on the *coordination* between the national level and county (local) level of regional policy when, for example, large infrastructure projects, more and more crossing-regional and international borders in a complex network economy, are to be carried out. In this way the environmental and regional strategy and policy are closely related to the spatial planning that attempts to coordinate the projects with spatial implications and to find out solutions to the conflicts in terms of land use - large scale infrastructure projects - environmental protection.

In general terms sustainable development involves trade-offs among economic, social and economic objectives. Related to this aspect it is very important to stress the idea that such concessions cannot be determined by ‘scientific’ means alone. They are value judgements, and, therefore, ‘people-centred’ approaches to sustainable development strategies are needed as well [3]. Under these circumstances the challenge of participation is considerable, this paper addressing it in a special sub-section. Undoubtedly, defining objectives, planning the strategy, proposing economic policy actions are major components in
the strategy process, but the most difficult time for most strategies is when plans must be turned into action. The international experience shows that many strategies have not made the transition; others have been only partially implemented. For some, the strategy process appears to have stopped dead following the preparation of the main document. Aware of this trap, the national action plan developed to support the implementation of the national environmental preservation strategy concentrates on priority issues in short and medium-run and instruments to carry out the measures proposed.

*Promoting action* is a cornerstone in this process and the possibilities of doing it should be carefully considered. They mainly refer to promoting action through *regulation* and promoting action through *economic instruments*.

*Promoting action through regulation* is a traditional command-and-control approach, very much reflected in the Romanian environmental preservation acts. But considering the permanent need of improving the strategy process and understanding that, especially in the case of countries in transition, a strategy cannot do everything at once, the strategy and the national action plan should be revised in the next years so as to concentrate to a greater extent to the possibility of using the *market-based mechanisms* too (taxes, charges, subsidies, deposit/refund schemes, creation of property rights). The tools corresponding to these approaches will need to be applied *together*, in combinations specific to each situation. Five *criteria* proposed by OECD can be used to judge whether economic instruments and/or regulations would best tackle a given environmental problem: environmental effectiveness; economic efficiency; equity (distributional effects in society of the instrument); administrative feasibility and cost; acceptability to groups who will be affected by the policy [12].

Strategy implementation does not need only appropriate tools, but also the required *financial support*. So far the main source for financing the implementation of environmental preservation strategy is the state budget. Considering the deep recession Romania has had to face, only 0.08% of GDP can be allocated for environmental purposes, compared with the normal percentage, 3 - 5% in the developed countries. In order to increase financing capacity in this field, the creation of the *National Environment Fund* is now one of the main concerns. It aims to attract financial resources not only from the state budget but also from donors, from international financial institutions.
Finally, assessment should be considered an integral part of environmental preservation strategy, covering all aspects: objectives, participation, communication, policy formulation, action planning, implementation, results. It should combine monitoring, evaluating and reporting on the strategy, not only in terms of environmental sustainability but also in terms of economic, social and institutional sustainability. Related to the last two aspects, in author’s opinion behavioural challenges - participation, communication, attitudes, mentalities -, even more than financial constraints, are crucial for the real success of environmental strategy in new Romania.

3.3. Behavioural changes: a key element of a new perspective on environmental preservation

Participation and communication are crucial elements of the strategy, pervading all others. ‘People-centred’ approach to sustainable development strategy entails the participation of stakeholder groups in decision-making and all tasks of the strategy cycle, taking different forms for each task. It will result in a more realistic strategy, with a broader base of knowledge, understanding and commitment from the groups involved and with better links to promising local initiatives.

All actors involved in environmental preservation strategy can be identified in this phase: national government, local governments, corporate sector, non-governmental organizations, and, last but not least, communities and individuals. Participation in this strategy is both horizontal (across sectoral interest groups, ministries, and communities in different regions of the country) and vertical (from national to local level, or from leaders down to marginalized groups and individuals). Thinking that participation is entirely a non-government affair would be a big mistake: government is the one that can help provide the right conditions for participation; it should build structures and empowering policy environment to actively support participation. Moreover the strategy should be able to survive changes in government, in other words it should not be overly dependent on political patronage [3]. The socio-politic situation in Romania after November 1996 elections confirms that the strategy for environmental preservation has successfully survived changes in government, parliamentary and other political processes being used to endure cross-party support.
Within the clear tendency to decentralization in new Romania local public administration is expected to play an increasing role in implementing environmental preservation strategy. As mentioned in the previous sub-section, there are close links between this strategy and regional development strategies, based on rational combination of top-down and bottom-up approaches. Generally, the sooner the national strategy is really complemented by local strategies and other local activities, the better.

In Romanian actual context, the actions concentrated on public administration reform as an obligatory condition for the success of all components of the transition strategy cannot be considered completed without a real commitment to the renewal the corresponding organizational structures, in order to essentially transform the existing mechanistical structures into organic ones, more flexible, more effective and, certainly, less bureaucratic.

The other side of the coin regards the participation of non-government sectors in environmental strategy process. Potential non-government participants are: environmental organizations, community groups, academic and research institutions, industry and business, the media, professional associations, schools, teachers and parent-teacher associations, trade unions, women’s groups, international organizations, individual members of the public. When involving non-governmental interest groups care has to be taken to ensure their representativeness, accountability and fairness [3]. Before discussing the involvement of non-government organizations and community groups in participation, some other key participants should be mentioned. These are professional associations and corporate sector. Many professional associations have been set up in Romania after 1990, being considered very effective in various sectors. If government is able to offer conditions conducive to increasing participation these associations can also be an important source of support for companies that want to improve their environmental performance. Industry and business (corporate sector) should also be attracted in the movement for sustainable development, both in the growth of new environmental enterprises and in increasing environmental sensitivity of established companies [4]. As regards their size, not only the big business and industry (responsible for a big part of resource use, waste creation and unemployment) are important but also the smaller-scale ones, which can be of interest for social (employment) and environmental viewpoint (e.g. tourism).
A successful transition to sustainable development require substantial strengthening of non-governement organizations (NGOs). Many definitions of NGOs have been formulated in the environmental literature. For the Romanian case the most representative NGOs are ‘concern’-based NGOs (e.g. environmental and animal welfare campaigning and advocacy groups) and ‘solution’-based NGOs (e.g. education, information groups). The increasing concern with environmental preservation has resulted in setting up numerous NGOs (more than 500). Even though many of them do not act properly, some NGOs have been effectively involved in organizing a wide range of activities in environmental preservation field: conferences, workshops, round tables, an active presence in mass-media, information campaigns, educational programmes - all of them contributing to increasing public awareness about environmental problems. They also organized protests and brought actions against major pollution cases.

The activity of NGOs would be substantially improved if a real, deep engagement with community groups and individuals were realized. It has been demonstrated that the local level is the most practical one for public participation. Although the involvement of every community is neither practical nor possible, the participation of the communities most affected by priority issues, of those from various geographical regions, ecological zones and livelihood types should be ensured. Unfortunately this goal is far from being achieved.

In Romania the long communist period had a very bad influence on the local communities' behaviour as well as on the whole society: the way of perceiving the democratic values, the attitudes have been perverted to a great extent, so that the transition to a democratic society has to face enormous challenges in order to transform the wrong mentalities and attitudes. After nearly fifty years of environment information monopoly and lack of real education in this field it is hard to believe that a completely new way of perceiving environmental issues can be realized in a few years, burdened with the difficulties of transition. Even though it cannot be denied that the efforts to create a real environmental culture are under way, the economic and social problems such as production decline and growing unemployment have made public concerns shift away from environmental issues to more stressful ones in their immediate view: falling real wages, growing job insecurity.
But, even under these circumstances there were some cases when the capacity of the pressure groups to determine important decisions for cleaning up the environment was very strong, as a result of large information campaigns (a very well known example refers to the great campaign for sending back to Germany a big quantity of toxic waste imported as pesticides in an outstanding natural beauty area, Sibiu).

To conclude, Romanian society still suffers the consequences of communism: they did not disappear at the same time with the totalitarian state. And, as a famous Romanian journalist has just written: “We will be able to talk about the failure of totalitarianism only when our souls, our minds will be completely decollectivized. This ‘privatization’ is infinitely more difficult than that occurring in the economy and, in fact, it has started only at instinct and good will level. Under these circumstances how could one discuss about post-transition?” [13]

4. Conclusion

Environmental sustainability has a complex significance. It is both a theoretical concept and a practical challenge, that implies a specific approach, allowing for concrete time and space circumstances. Romania, that experiences a stressful and often painful process of transition to the market economy, has to face important environmental challenges at the same time with great political, economic, social, organizational, cultural, behavioural ones. Therefore environmental preservation strategy is closely related to other components of the national strategy and reform that take into consideration environmental constraints too. The concept of ‘mosaic ecodevelopment’ is proposed as an element able to create a relation of complementarity between all these components. The development of a new institutional and legislative framework has been considered a prerequisite to building a realistic and effective environmental preservation strategy, whereas the behavioural challenges - participation, communication, attitudes, mentalities have been seen as crucial elements of the strategy, pervading all others.
References


