Problematic of environment protection in Algerian cities

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Abstract

Today, innumerable damages caused by the city and the action of a man on built and natural environments, are recorded in majority of developed countries and also under development ones, which had created in the last few years, complex problems difficult to solve like: pollutions, destructions of natural and rural landscapes, uncontrolled rejections of waste, problems of water and frequent variations of the climate.

Algerian cities haven’t escaped to this truth and this situation is related with the history of the development process adopted in Algeria, during the years of post independence. The development of these cities was done without looking for or respecting environmental requirements.

Theoretically, Algeria has a complete building formed by different plans and schemes covering environment, land use planning and urbanism fields to raise this challenge and avoid errors of the past, particularly before nineties and after, by adopting a holistic approach and giving a broad sense of environment protection. But until now, just a few great actions recently carried out by the ministry of land use planning, environment and tourism are registered, and the rest confirms that these tools don’t have any effect suspected on ground, for various causes.

The most important causes can be resumed in the lack of dialogue and coordination efforts between concerning actors and theirs institutions, and the absence of an explanation relating to the whole approach able to make these tools even they were appeared in different laws, working as a united body. That’s why these instruments were ineffective and the situation became difficult and critical. The present paper will focus on this reality.

1. Introduction

The city takes rare and non-renewable resources, essential for its life and its activity, in irrational way mainly water, air and various materials. It extends by degrading the parts of its territory and transferring

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the natural and cultivable grounds (agricultural and pastoral spaces) surrounding, whereas they were to be protected and promoted. And unfortunately this situation characterizes most of Algerian cities.

This result is related with the history of the development process adopted in Algeria, during the years of post independence, particularly policies of industrialization and housing (new areas of urban settlements) in the seventies and eighties which have generated a significant migration from rural to urban areas and explosion of urban demographic. The Uncontrolled urbanization and successive delocalization of industrial companies have transformed the city by appearance of the urban peripheral fringes and discontinuous extension of urban cores towards the rural medium during 1990.

During the black decade\(^b\), the insecurity in the country has worsened the situation where several buildings (historical and new) were destroyed. Significant of natural environment areas were burned particularly the forests which are from the primarily mediterranean type. This period was also marked by the missing of the stable government and the significant migration from rural areas and cities touched by this phenomenon towards other saved cities.

The life in big Algerian cities became a hell by the emissions from the transport. The industrial activities continue to generate great quantities of chemical and organic pollution and pour directly into the sea or wadis, generally without purification by networks of cleansing considered as decayed. They have degraded the quality of marine, surface waters and beaches which most of them were unauthorized to bath. Most of poured wadis often pass near cities and constitute a constant threat for the public health.

According to MATET\(^c\), 45 % of population currently lives on a surface of 30 million hectares whose mostly are concentrated in Algeria's coastal zone, in an area that covers 1.8 % of the country surface area [E.U., 2010]. This area becomes over-populated and urbanized containing most industries like cement factories, manufacturing of plaster and lime, oil refineries and phosphate mining. And for lack of land use planning, territorial balance is at work making that the population lives in poverty because it doesn’t have enough choices to access desired services.

To solve these problems, various laws covering land use planning, urbanism and particularly environment are appeared in interval of thirteen years ago since 1990. They have invented different plans and schemes from national scale to local in order to avoid errors of the past. They adopt the comprehensive approach of the territory and give a broadest sense to the environment protection which includes currently inheritance conservation. Specific plans for environment protection and inheritance conservation are created which for their overall coherence, must be integrated in the instruments of land use planning and urbanism even if they are approved by different ministries.

These initiatives are part of the relevant international treaties of environment that Algeria has signed, concerning protection of the sea, water strategy, the natural living resources and atmosphere, and control of dangerous waste and combat of desertification [E.U., 2010]. And also from partnership relations that

\(^b\) From 1990 to 2000.
\(^c\) Ministry of land use planning, environment and tourism.
Algeria has developed with several foreign organizations like AMCE\textsuperscript{d}, CAME\textsuperscript{e}, NECEMA\textsuperscript{f}, UNIMED\textsuperscript{g}, MAP\textsuperscript{h}, MIA\textsuperscript{i}, METAP\textsuperscript{j} and MCEUI\textsuperscript{k}.

But in the reality of Algerian cities, these plans haven’t been developed seriously and haven’t been respected despite they are opposable to third. The missing of an official statement detailing their real integration and cooperation between concerned departments has let these plans working independently and has encouraged destroying actions of the natural environments (fauna and flora in natural reserves and national parks), continue to defy preestablished provisions [Gherbi, 2005-2006].

2. The instruments of environment protection

The interest of Algeria for the environmental problems can be illustrated by the basic official text of 1967 which fixes the regulation concerning excavations, sites and historic buildings, movable and real like those natural, and fixes the criteria, degrees and procedure of classification as well as the agencies responsible of these missions. But unfortunately, it hasn't produced any effect on ground.

In 1974, the national committee for environment protection was created. It was a consultative institution that had the role of proposing essential components of environmental policy within the framework of economic and social development and land use planning.

However in 1983, a fundamental law has come to establish the general principles of Algerian right, and putting the safeguarding of environment in a global vision through worked out general principles defined in national policies of economic and social development and land use planning imposing on administration to respect them. But it hasn't specified appropriate tools to achieve objectives summarized in the following three points:

1. Protection, reorganization and valorization of natural resources in the wide sense and not only limiting to natural sites conservation like it was specified in the legal text of 1967, which thereafter was considered insufficient.
2. Prevention and fighting against any form of pollution and harmful effects.
3. Improvement of framework and quality of life.

One year later, a law relating to forests and water appeared. It came for preserving these rare natural resources following to the situation report on environment in Algeria made in 1980, which announced that the forests located in North and counting 14,6 % of a total surface of the country, were old and had volume in general low on foot. They continue to exist under natural conditions difficult and subjected to strong clearing, overgrazing and multiple fires [The secretariat of the State in charge of environment, 1980].

It should be noted that the environment policy was ineffective because the emphasis was given to the development of the industries and housing without the land use planning policy. So, how could

\textsuperscript{d} African ministers conference on the environment.
\textsuperscript{e} Council of Arab ministers for the environment.
\textsuperscript{f} Environment compliance and enforcement in Maghreb.
\textsuperscript{g} Union for the Mediterranean.
\textsuperscript{h} Mediterranean action plan.
\textsuperscript{i} Mediterranean international association.
\textsuperscript{j} Mediterranean environment technical assistance programs.
\textsuperscript{k} Mediterranean component of the EU water initiative.
government achieve the environmental objectives if it hasn't the deep knowledge of national territory from specific studies not yet made?

The answer to this question has seen the beginning of solution in 1987 by the promulgation of law on land use planning. It has launched two schemes: SNAT\textsuperscript{1} and SRAT\textsuperscript{2}, and had conceived environment policy with the aims of SNAT like stipulate article 28, summarized in the following way:

1. Valorisation and rational exploitation of natural resources.
2. Protection of ecological and natural inheritance.
3. Protection of cultural inheritance.

However, both schemes have never been made and implemented because the text designed as part of the present law specifying procedures of their preparation.

This period didn’t allow real protection of the environment. It was characterized by the entanglement and the dispersed of the environment tasks in different sectors while transversality, coordination and dialogue between these sectors were absent.

2.1. After 1990

The year 1990 marks a line of rupture in the history of Algeria and especially for the environment. It’s marked also by the disengagement of the State from direct management of society’s problems and the acceleration of reforms adapted to market economy.

Two legal texts were promulgated in 1990 which include aspects of the environment. The first is relating to land orientation which requires protection of zones in cultural and natural matter (article 22), and the second concerns installation and urbanism that recognizes to the littoral, the arable lands with raised potentialities and the territory in natural and cultural matter, their singular character and subject them to particular provisions [articles 43 to 49]. This last law envisages two plans that contain the environmental aspects: PDAU\textsuperscript{3} and POS\textsuperscript{4}. They are approved by the ministry of housing and urban affairs (MHU) and the wali. Also this last law was complemented by the law 4-5 appeared in 2004 which reformulates the instruments relating to control of urbanization, and incites on the priori localization by specifying natural and technological risks zones before taking decisions of any type of urbanization.

This law also highlights the participation of residents in local decision-making as a choice guaranteed by the constitution of 1989. The residents were marginalized for a long time and were regarded as figures used in the programming equipment and achievements. In fact, neither their culture nor their taste or their views were taken into consideration. It was the period where everything belonged to the State. Their participation is now guaranteed at certain stages of development of PDAU and POS before their final adoption.

\textsuperscript{1} National scheme for land use planning.
\textsuperscript{2} Regional scheme for land use planning.
\textsuperscript{3} Master plan of installation and urbanism.
\textsuperscript{4} Soils occupation plan.
The text of 1998 relating to the protection of cultural heritage has prevented specific new plans: PPDAS\(^p\), PPSDSS\(^q\) and GPIP\(^r\). All of them are approved by the ministry of culture.

Since 2000, a number of official texts have been adopted covering waste management, land use planning, coastal protection, promotion of renewable energies, and protection of mountain zones [Law, 2001; Executive decree, 2009]. The development of legislative framework has continued with laws and their implementing decrees under preparation on air quality and industrial risk management.

So, the law for the installation and sustainable development of territory appeared in 2001 came to repeal the law of 1987 and created five schemes where PAW is included but placed above PDAU and POS in the following way:

1. National scheme: SN managed by CNDDTS\(^s\).
2. Development and management scheme for the coast: SDAL.
3. National action scheme to combat desertification: SDPTLD. This instrument was invented because the effects of climate change have a significant impact on Algeria where a large part of the country is covered by the desert of Sahara, and desertification is already a major problem.
4. SRAT managed by CRAT\(^t\).
5. Wilaya installation plan: PAW, reinstated in the present law in spite it’s initiated by a law of 1990 relating to wilaya.
6. Directing scheme for metropolitan areas: SDAM able to replace PAW especially for big cities such as: Algiers, Oran, Annaba and where problems of the installation and environment arise with acuity.

Except PAW that is approved by the wali and the wilayal assembly popular, all of these diagrams are approved by MATET. They define different actions and programs for given periods inside contracts of development like stipulates article 59. This law adds that contents and phases of environmental impact assessment will be specified by regulatory way. But since this precision wasn’t born yet to replace the executive decree of 1990 relating to the environmental impact studies considered null and exceeded.

In 2003 and for the first time, the law of finances introduced the tax on industrial waste water and established the funds national to protect the coastline and the coastal areas [articles 94 & 125]. In the same year, another law concerning environment protection within framework of sustainable development had come to introduce a new specific plan of environment protection, called the national environmental action plan for the environment and sustainable development: NEAP-SD, established for a short term, but without other precise details, such as specifying the type of relation (coherence and horizontal coordination) between it and SN and other schemes and plans, as shown in Fig. 1. That’s why it’s necessary to wonder about the way in which will have this plan to be integrated to other schemes which are envisaged by the law of 2001 [Gherbi, 2006].

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\(^p\) Protection plan and development of archaeological sites and their protection zone.  
\(^q\) Permanent plan of safeguard and development of safeguarded sectors.  
\(^r\) General plan installation for park. It concerns cultural and natural parks that are located in wide territories, especially in south of Algeria as Tassili, Ahaggar, Touat-Gourara and Saharian Altas.  
\(^s\) National council for sustainable development of the territory.  
\(^t\) Regional conference of land use planning.
By the way, these instruments mentioned above even if they are created by different laws and in different times, some texts of them need to be revised or completed because the relations between these plans and these schemes aren’t defined to be applied and couldn’t really integrate the environmental dimension in various scales.

The case of PAW and SDAM is an illustrative example. Indeed, neither the process of preparing this plan or its legal impact have been clarified until today, especially if the SDAM exceeds the size of the territory concerned by the PAW as was the case of Algiers. So in this situation, what instrument should be chosen especially when we know that both (PAW and SDAM) are different and that the plan has the
power to impose more than a scheme? These observations therefore deserve special attention to avoid disconcordances between these tools and arrive to stop the continuous degradations of urban and natural environments as it occurred before 1990.

3. Actions for environment protection

The environment was attached to various official structures. In 1977, it was under the ministry of hydraulics, but in 1981, it was related to the secretariat of the State for forests and land use. In 1984, it was the responsibility of the ministry of hydraulics; then the ministry of agriculture and fisheries, after being under the ministry of interior in 1988. The delegated ministry for research and technology was charged of the environment in 1990. It was passed under the ministry of national education in 1992, then the ministry of universities in 1993. The ministry of interior was responsible of the environment in 1994, but in 1995, the ministry of equipment and land use planning assured this mission until 1999. After that, the mission passed under MATE\textsuperscript{u} which changed to MATET by integrating tourism in 2007.

These frequent changes have made negative impact on conceiving and implementing the policy of environment protection and have encouraged the appearance of conflicts inside the institutions responsible of the environment.

Today, a number of ministries are involved in environment issues including ministries of: agriculture and rural development, water resources, housing and urban affairs, tourism, fisheries, industry, energy, mining and oil extraction. At national level, six specific departments are instituted: national center of formations in environment (CNFE), national center for cleaner technologies (CNTPP), national center of development of biological resources (CNDRB), national agency of wastes (AND), national center of development of biological resources (CNRB) and national observatory of environment and sustainable development (ONEDD) [MATE, 2005].

At regional level, five regional inspectorates have been created under MATET in order to enforce the environment regulations. The environmental directorates have been created to work with general directorate for forests and transport, to implement the national policy at the local level and evaluate the state of environment. Their missions and responsibilities need to be more specified but their creation testifies to a political good-will which starts to appear.

According to the report of the E.U. (2010), various plans and national programmes were initiated since 2001, such as the national programme on integrated municipal waste management as part of the programme of investments in 2002-2003, the national programme for elimination of ozone depleting substances, and the national programme of environmental education in schools made in 2002.

The first NEAP-SD was established for the period 2001-2004 which its strategic priorities include increased access to water and sanitation, improvement of solid and hazardous waste management, sustainable management of land and water, forest and biodiversity conservation and resource use efficiency.

\textsuperscript{u} Ministry of land use planning and environment.
In 2003, the national action plan to combat desertification, the national programme for definition of coastal and marine zones, and the national programme for evaluation of pollution in coastal marine waters were adopted.

Several conventions and cooperation agreements with Algerian space agency: ALSA, were signed since 2004. They are relating to contributions of space products and technologies used by ALSA in general, and Algerian satellite: ALSat1 in development of installation and environment tools. These conventions concerned ANAT\(^v\), CDRB\(^w\), CNL\(^x\), and the national observatory on environment and sustainable development. In 2005, a national action plan was adopted to prevent pollution of the sea from land based activities.

On July 12\(^{th}\) 2004, ex-MATE has installed the national intersector committee: CIN, responsible of following each stage of development of SN and its implementing, which will run until 2025. This committee ensures a debate on level of political authority and engages a broad consultation with economic, social and administrative actors.

A national institution of intersector dialogue: HCESD\(^y\) has finally been installed in accordance with the presidential decree of 1994. It’s composed of representatives of twelve different ministries including: environment, national defense, foreign affairs, interior, finance, transport, agriculture, industry, energy, hydraulics, health, and higher education and scientific research (article 3). It’s led by the Prime Minister. In this institution, we note that two ministries (ministry of housing and urban affairs and ministry of culture) which are directly involved in environment aren’t mentioned. So how should the cooperation be efficient if this council didn't include all concerned actors?

According to the report of MATE in the field of environment, different activities have been planned to reduce air pollution due to transportation, replanting 1.2 million acres in the frame of the national reforestation plan (1999-2018), conducting environmental audits to assess the situation of industrial units in relation to environmental management standards such as ISO 14000, and introducing environmental taxes in the fields of industrial and urban pollution. These actions are followed by the upcoming implementation of the policy of economy and energy conservation such as the regulation of thermal building, the thermal control policy of combustion plants, the standardization and labeling of appliances and development of renewable energy.

The quinquennial program of support of the growth 2005-2009 has spent 36.5 billion dinars (365 million Euros) for the implementation of programs related to the environment. They are divided into six types:

1. The national program for integrated management of municipal waste (PROGDEM) for 40 major Algerian cities. This program has received 7 billion dinars (70 million Euros) and represented 20%. Its aims concern eradication of wild dumps, the development of master plans for waste management, the development and equipping of landfill sites, establishing a performant management system and training programs and awareness, and reinforcement of the role of police in urbanism and environmental protection.

\(^v\) National agency of land use planning.
\(^w\) Human living resources development centre.
\(^x\) National management agency for the coast.
\(^y\) High council on environment and sustainable development.
2. The program for preservation of coastal and marine environment and coastal development plans (CAP) with an amount of 6 billion dinars (60 million Euros), representing 17%.

3. The action program for the conservation of biodiversity and natural areas and ecosystems (mountains, steppe, wetlands, areas of sustainable development and urban parks) with a budget of 4 billion dinars (40 million Euros), representing 11%.

4. The national management of special waste (PNAGDES) which was developed on the basis of national land registry and the application of the law on the environment. Revised every ten years, this plan is designed as a tool for management, planning and decision support and offers a choice of modes of treatment options for different categories of waste (special waste disposal and hazardous industrial pollution by watershed). The PNAGDES has received the greater percentage (32%) equivalent to 11 billion dinars (110 million Euros).

5. The awareness of civil society in environmental issues with involving local authorities, local elected officials and industry representatives was translated by using the media especially the print media, the radio and the television. They have devoted topics on the theme of the environment. In the same context, reinforcement operations of environmental education (houses environment) led by MATE in collaboration with the ministry of education and the ministry of training and professional insertion are come to improve the awareness. The amount allocated to these operations has reached 3 billion dinars (30 million Euros), representing 8%.

6. One billion dinars (10 million Euros), representing 2.7% has been reserved for the preparation of SN, SRAT and SDAM.

With regard to climate change, Algeria will implement the relevant provisions of the Kyoto protocol to the UN framework convention on climate change. In this context, the agency of climate change has been created. It’s a structure of regulatory and coordinating cross-sectoral that has as aim reducing the impact of climate change on different sectors. The national plan of climate is the result of the coordination of national efforts of the ministries of energy, foreign affairs and MATET is being prepared on the development of likely scenarios for emissions of greenhouse gas emissions from different energy mixes and proposed climate models adapted to the region for different horizons: 2020-2025-2030-2040. This plan concerns the development of strategies for water, food security, energy, etc., and constitutes a basis for the strategies for public and private actors in environmental action [E.U., 2010].

From 2011 to 2013 and in the frame of the partnership with Algeria, the E.U will provide assistance estimated at 172 million Euros at a rate of 57.33 million Euros per year. The protection and enhancement of cultural heritage will receive a budget of 20 million Euros and protecting the environment will have 34 million Euros especially to finance the integrated management of solid waste and the development of the national plan of climate and integrated management plan of coastal zone.

For the next quinquennial (2010-2014), the Algerian government has allocated 500 billion dinars (5 billion Euros) for the environment to offset the lack in this sector and has scheduled a million hectares of afforestation to combat desertification and recover 5 to 6 million hectares of land. An assessment has been prepared showing that 32 parks were maintained and 30 burial centers of the garbage were achieved. The program will concern also rehabilitation of dumps and creation of landfills in accordance with environmental standards to reduce the uncontrolled wild discharges and final disposal of waste [Algerian TV news, 2010].
4. Conclusion

Algeria has indicated its interest and has benefited from E.U experience and the big number of promulgated legal texts shows that Algeria is one of the most active countries as regards legislation of the environment. In this context, the efforts of some ministries indeed MATET are recordable in spite the insufficiencies noted in texts, in financial resources allocated and in unqualified human resources because of lack of training of personnel for these missions.

Designing a qualitative development for Algerian cities can be made by a new approach based on dialogue, communication and participation of all concerned actors (the State, local authorities, the private sector and citizens (civil society) around the concept of sharing responsibilities and experiences and working together, is the best strategic to avoid inconsistencies of plans and actions on whole of the national territory. The citizens must play their role and mass media must be implemented for their ongoing education and for a deep knowledge about the environment, because at the end "environment protection is the business of everyone".

References


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