

Environmental Policy and Land Use Planning in Algeria, Overview and Perspectives

BOUCHERIT Sihem¹, SEGUIA Saoussene²

¹*Faculty of Architecture and Urban Planning, Architecture, Urban Environment and Energy Efficiency Laboratory, Constantine University3*

²*Faculty of Earth Sciences, Geography and Land Management. University of Constantine1*

Received: January 03, 2023

Accepted: January 23, 2023

Published: January 26, 2023

Abstract

If public policy is described as a decision-making process generated by governmental actors who intervene and decide on a course of action related to numerous issues and concerns, then environmental policy may be defined as the interplay between nature, ecology, and society. The purpose is to manage natural resources effectively and to develop environmental knowledge. This article focuses on the inclusion of environmental concerns into Algerian strategic planning tools at the territorial and national levels. Two major issues have been raised: to what extent has Algeria's new environmental policy enabled it to respond to new sustainability difficulties at both the national and international levels? What are the implications of the national environmental strategy for strengthening the regulatory and institutional framework? The analytical method proved to be the most effective in resolving these issues. Indeed, we begin by focusing on Algeria's handling of environmental concerns in both its national and international contexts during the 2000s. Then, we'll talk about the evolution of Algeria's legislative and institutional framework for environmental preservation and development. Finally, the National Land Use Plan will be used to examine Algeria's environmental policy.

Keywords: Environment, Environmental policy, Algeria, Land use planning, SNAT.

INTRODUCTION

As part of the ecosystem and ecology, the environment is a cohesive whole made up of various components that interact with one another (Merlin and Choay, 2010). Thus, global challenges such as climate change and natural resource depletion have raised public awareness about the need of protecting biodiversity and ecological compartments. This has been reflected in stringent policies linked to sustainable land management and a green economy that is environmentally conscious (World Bank, 2022). Furthermore, every public policy is the product of a decision-making process produced by government actors who intervene and decide on a course of action including various topics or problems (Turgeon and Savard, 2012). This strategy on the interaction between nature, ecology and society (Gautier and Benjaminsen, 2012) aims to manage natural resources and develop environmental knowledge (Benjaminsen and Svarstad, 2009). However, the basic significance of the territory in the approach to sustainable development has encouraged governments to construct an international strategic policy that incorporates the component of multi-scale territorial cohesiveness.

Algeria, like the other Mediterranean nations, is not immune to the same challenges and issues that create an alarming scenario in terms of the environment, territorial imbalance, and fragmentation. Algeria has implemented, in conjunction with international devices, many principles connected to sustainability in its national policy of land use planning, and this through planning instruments, in order to balance its socioeconomic growth with a more sensible use of its natural resources (United Nations Commission on Sustainable Development of Algeria, 2011). This article focuses on the process of incorporating the environmental factor into territorial and national strategic planning instruments. It seeks to provide answers to the following questions: To what degree has Algeria's renewed environmental strategy enabled it to adapt to new sustainability problems developing at the national and international levels? What are the consequences of the national strategy for the environment and sustainable development in terms of institutional strengthening? We used an analytical technique to comprehend the issue of Algerian environmental policy and appropriately react to these

concerns. As a result, we will first examine the depiction of environmental challenges in Algeria since the year 2000, both nationally and internationally. Second, we will discuss the growth of Algeria’s legislative and institutional framework controlling environmental preservation and development. Finally, we shall discuss Algeria’s environmental strategy through the National Land Use Plan (SNAT).

Assessment of the State of the Environment in Algeria

Before facing the renewal of Algerian public policies within the framework of sustainability, it is unavoidable to identify the primary environmental risks in Algeria. Thus, we were able to produce, using World Bank data, an evaluation that declares a grave condition, which is described in table 1.

Table 1. State of play of the threats to the environment in Algeria

Threatening Aspects	State of Play
Intensive use of energy	Increase from 3.5MJ/USD in 1997 to 4.2MJ/USD in 2015
The ecological footprint	Higher than the world average and increased from 1.4 Ha/capita in 2000 to 3Ha/capita in 2014.
Increasing CO2 emissions that threaten ecosystems	Increased from 80,050 KT in 2000 to 171,250 KT in 2015 as a result of the use of non-renewable energy
Air pollution is the leading cause of morbidity related to the environment and health degradation	Increased to 39Mg/M ^l in 2017
Freshwater scarcity and declining water resources due to climate change	Decrease from 353 M ³ (2002) to 266 M ³ (in 2018).
Human activity has accelerated soil degradation and desertification,	the area of arable land per capita between 1995 and 2015 decreased by 28%.
Excessive urbanization of coastal areas	more than 15% of the area built by coastal belt in 2015
Significant solid waste generation	exceeding 300Kg/capita/year in 2016

Source : synthesised by authors

Awareness and Management of Environmental Issues in Algeria During the 2000s

Faced with numerous environmental issues stemming primarily from the post-independence period’s intensive development strategy, the Algerian government decided, beginning in the 2000s and following a critical assessment of Algeria’s environmental situation, to strengthen its institutional and legal framework. This reinforcement was primarily based on the implementation of numerous environmental programs, notably the “National Action Plan for the Environment and Sustainable Development,” which was launched for a ten-year term. The latter is the federating aspect of the country’s overall environmental policy renewal. This revitalization demonstrates the Algerian government’s determination to match national concerns with the numerous strategic issues established at the international level.

Thus, Algeria has showed an interest in environmental issues since 1972, while sticking to the premise that the environment is a worldwide problem and that any action must be assessed in the context of the international community. This became clear after its participation in the first international conference on the environment, held in Stockholm under the auspices of the United Nations. As a result, the national environmental policy, both legislatively and in terms of land use planning, has changed in order to be consistent with the different United Nations programs, most notably the Millennium Development Goals.

- The United Nations Human Settlements Programme
- The United Nations Environment Programme
- The United Nations Development Programme

It should be noted that the periodic reports of the UN commissions, prepared under the auspices of UNEP, UN-HABITAT, and UNDP, deal with the need to take charge of the major environmental problems while addressing the necessary means for:

- Identifying and addressing the growing threats caused by climate change and natural resource depletion.
- Increase local capability in development planning to effectively manage the environment and create sustainable human settlements.
- Create systems for environmental governance.
- Improve impoverished people’s housing circumstances and eliminate urban divides.

At the national level, the “National Report on the State and Future of the Environment” (RNE 2000) painted a bleak picture of Algeria’s environment. Its goal was to:

- Create a report on Algeria’s environment.
- Describe the physical and institutional environmental threats.
- Define and prioritize the broad lines of a national environmental policy that is compatible with the country’s socioeconomic interests.
- To give the tools required to build a National Environmental and Sustainable Development Action Plan (PNAE-DD).

We highlight that the RNE is at the root of the expansion of the legislative arsenal in the sector of environment. It not only filled gaps and inconsistencies by bringing it in line with current national and international data, but it also established the National Strategy for the Environment (NSE) and Sustainable Development. This was converted into the National Action Plan for the Environment and Sustainable Development (PNAE-DD) in 2002, with the primary objectives summarized in Table 2.

Table 2. Objectives of the PNAE-DD

Objectives	Tools for Action
Improved health and quality of life	by improving access to drinking water and sanitation, improving air quality in large cities and industrial areas, reducing waste production, developing environmental management of cities and protecting cultural heritage.
Conservation and enhancement of natural capital	Promote sustainable agriculture, protect fragile ecosystems, develop a coastal management strategy, clarify the status of agricultural land, ensure local and rural development
Reduction of economic losses and improvement of competitiveness	Rationalize the use of resources by industry, increase the recycling of waste, transform (eventually close) the most polluting and least economically viable companies...
Protection of the global environment	increase forest cover, increase the number of protected areas and wetlands, protect oases, reduce GHG emissions

Source :synthesised by authors

Thus, the approval of the PNAE-DD enabled the renewal of environmental policy, notably via the strengthening of the institutional and legislative framework, the implementation of numerous environmental programs, and even the establishment of a cohesive national strategy in terms of land use planning.

Evolution of the Legislative and Institutional Framework Governing the Protection and Enhancement of the Environment in Algeria

Since the country’s independence till today, the country’s environmental legislation has been defined by the simultaneous evolution of various laws impacting the urban sector. These statutes are summarized in Table 3 below.

Table 3. Evolution of the legal arsenal relating to environmental protection in Algeria

Law	Enactment objectives
law 62-157 of 3 December 1962	Algeria has renewed the French legislation on the protection of historic sites and monuments. This law was supplemented in 1967 by Ordinance 67-281 on excavations and the protection of historic and natural sites and monuments.
From 1970 to 1980	A whole series of sectoral laws were enacted during this period to regulate a number of activities such as hunting, fishing and the protection of the natural heritage in general.
Law n° 83-03 of 5 February 1983	<p>This law, which introduced a new environmental policy based on :</p> <ul style="list-style-type: none"> - Protection, restoration and enhancement of natural resources - The prevention and fight against all forms of pollution and nuisance - Improving the environment and quality of life. <p>The law also sets out a series of rules relating to the protection of nature and the natural heritage, the protection of receiving environments and imposes impact studies.</p>
Law n°87-03 of 27 January 1987	<p>This law stipulates that land-use planning must take into account :</p> <ul style="list-style-type: none"> - Environmental protection - Safeguarding natural sites - Protection and restoration of historic sites. <p>Two instruments are introduced: SNAT and SRAT</p>
Law n° 83-17 of 16 July 1983	Relating to water. Aims at Ensuring rational and planned water use on a national scale. To ensure the protection of water against pollution, wastage and to prevent the harmful effects of water - Rights and obligations of users.
Law 90-29 of 1 December 1990	<p>The PDAU is based on the Urban Planning and Development Act. It favors the delimitation of certain parts of the territory such as the coastline, agricultural land with high or good potential and territories with a marked natural and cultural character.</p> <p>The PSMV provides for the creation of nature parks: "Areas characterized by the predominance and importance of the cultural properties found there and which are inseparable from their natural environment are classified as nature parks.</p>
Law n° 06-06 of 20 February 2006	This law provides for the orientation of the city. It is implemented with in the framework of decentralization and local management
Law 01-20 of 12 December 2001	<p>Relating to the planning and sustainable development of the territory. It aims at a harmonious development of the whole territory according to the specificities and assets of each regional space. Among the objectives of this law is the protection, development and rational use of natural and cultural heritage resources. The orientations and planning instruments introduced by this law are:</p> <ul style="list-style-type: none"> - The National Spatial Planning Scheme - Master plans for development - Regional development plans - The wilaya land use plans. - Master plans for the development of metropolitan areas
Law 02.02 of 05 February 2002	On the protection and enhancement of the coastline. It advocates the establishment of a commissioner's office in charge of the coastline.
Law n° 07-06 of 13 May 2007	on the management, protection and development of green spaces
Act No. 03-10 of 20 July 2003	Relating to the protection of the environment in the framework of sustainable development. Aims at the preservation of biological diversity, the non-degradation of natural resources, the polluter pays, information and participation, fixing the fundamental principles and rules of environmental management, promoting a sustainable national development by improving living conditions

<p>Law No. 04-20 of 25 December 2004</p>	<p>On the prevention of major risks and disaster management in the frame work of sustainable development. It dictates the rules of prevention of major risks and management of disasters within the framework of sustainable development, precaution, prudence and participation, promotes preventive and corrective action by priority at the source, promotes the integration of new techniques</p>
<p>Law n° 99-09 of 28 July 1999</p>	<p>Relating to energy management. Aims at defining a national policy of energy management, reducing the impact of the energy system on the environment, managing the production and transformation of energy and its use in all sectors, instituting a system of compulsory and periodic energy audits for large consumers, raising awareness among users, introducing energy efficiency standards.</p>
<p>Law N° 04-09 of 14 August 2004</p>	<p>Relating to the promotion of renewable energies in the context of sustainable development. Aims to encourage the use of non- polluting energy sources, to contribute to the fight against global warming by limiting greenhouse gas emissions, to set out the modalities for the promotion of renewable energies by making their use more widespread, and to conserve and preserve fossil fuels.</p>

Source :synthesized by authors

The PNAE-DD developed the country’s many environmental programs by enforcing these regulations. These are particularly relevant to the fields of drinking water and sanitation, where the construction of 10 water treatment plants and the rehabilitation of 20 others is planned for the period 2001-2010, as is the construction of 50 technical landfills (CET) within the framework of the Integrated Management of Household Waste Programme (PROGDEM). We also notice that a huge number of decrees have been issued in the aftermath of Algeria’s acceptance of the Kyoto Protocol. These decrees were made a reality through the imposition of certain environmental taxes, such as the “sanitation tax,” which applies to the service of household waste removal for the sole benefit of municipalities. Finally, the institutional and regulatory framework for environmental management has been strengthened through the establishment of a number of decentralized bodies tasked with evaluating and implementing State policy. The National Centre for Cleaner Production Technologies is one of them (CNTPP).

- The National Environmental and Sustainable Development Observatory.
- The National Waste Management Agency.
- The National Environmental Training Conservatory.
- The National Centre for the Development of Biological Resources.
- The National Coastal Commission.
- The National Centre for Cleaner Production Technologies.
- The High Council for the Environment and Sustainable Development.
- The wilayas’ environmental departments.

Land Use Planning and Environmental Policy in Algeria, Analysis of the Snat (2030) With Regard to the Environmental Issue

The National Environmental Strategy (NES) entails the development of effective policies for the conservation, improvement, and control of environmental usage at various scales, including national. In this regard, the SNAT is an instrument formed by the MATE with the goal of translating the key strategic orientations and prescriptions of the National policy of territorial planning and sustainable development by 2030. The SNAT, which has been in place for 20 years and is assessed and amended every five years, encompasses the whole national area and tries to distribute wealth evenly between the South and border regions. This instrument, developed through a consultation process involving all actors involved in land use planning, establishes the rules for the distribution of activities and settlement across the national territory, as well as the location of major infrastructures (facilities and services of national interest, industrial zones and business parks, transportation and communications). Table 4 summarizes these qualities.

Table 4. Purpose, Scope and Objectives of SNAT

Purpose	<ul style="list-style-type: none"> - Restore a sustainable balance between the major components of the territory. - Adapting the territory to the requirements of the contemporary economy
Scope	<ul style="list-style-type: none"> - Is at the top of the hierarchy of norms and of the various development and urban planning schemes. - It is enforceable against the actors of urban and regional planning
Objectives	<ul style="list-style-type: none"> - Addressing the imbalance of population and activities in the national territory - Make the various territories attractive - Preserve and enhance the natural and cultural capital of our country.
Issues	<ul style="list-style-type: none"> - Depletion of resources (mainly water) - The rural crisis - The demographic and economic stall - The urban crisis - The opening up of the national economy - The consolidation of the territorial link and territorial governance. - The real issue here is not the observation of problems, but rather the fact of finding sustainable answers, operational in time and bearable by the economy, society and the environment.

Source : Authors

Furthermore, the final formatting of SNAT was only possible following the five steps illustrated in Figure 1 (MATE, 2008).

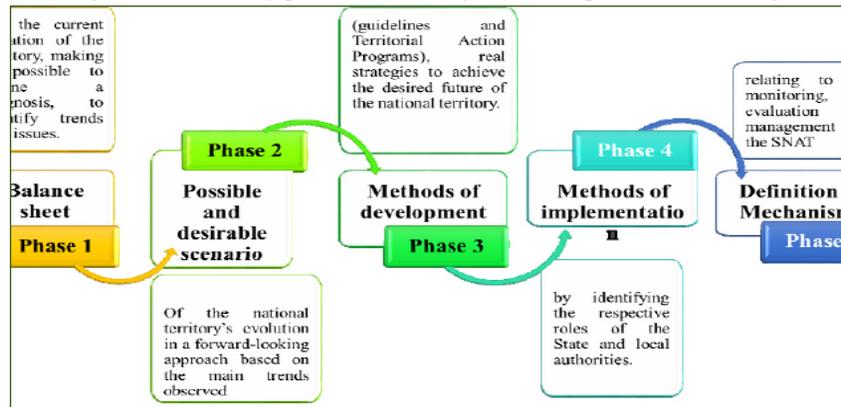


Figure 1. Stages of SNAT development (authors)

The Diagnosis

The diagnosis stressed the following components in terms of the environmental dimension (see also Figure 2):

Water Resources: Even if demand can be fulfilled in the short term, a strict water management strategy must be implemented.

Soil resources are fragile and restricted, and they are continually degrading because of farming methods, pollution, and climate variables.

Natural surroundings: The observation of the natural environment, which is especially sensitive, reveals that the country's rapid population and economic changes threaten biodiversity and ecosystems.

The legacy system: The need to protect and enhance national heritage is critical as a territorial issue and a witness to national identity.

Transportation and infrastructure: The existing transportation and infrastructure network, which is characterized by discontinuity and disparity, necessitates a comprehensive restructuring in order to provide an integral service to the

territory (Chettah, 2021).

The productive system consists of: The majority of the economic potential is concentrated in the north, in keeping with population concentration.

The urban system's functions are underutilized. Other cities, aside from the country's four major cities, are still unable to fulfill their economic and social functions beyond the administrative framework.

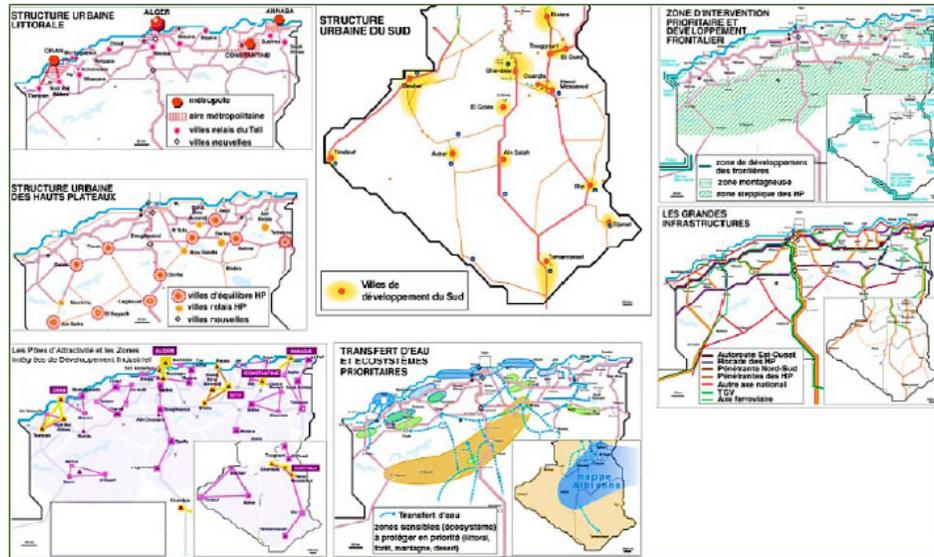


Figure 2. Mapping of the above diagnostic elements (MATE, 2010)

The Feasible Scenario

Following a critical assessment of the situation, a forward-looking document for the national territory defined as the Desirable Scenario for the evolution of the national territory was created, the goal of which is to harmoniously reconcile the two imperatives of regional planning:

- Restore a sustainable balance between the major components of the territory.
- Adapting the land to the needs of the modern economy.

Methods of Development

For the SNAT, four guidelines and twenty territorial action plans (TAP) were created in compliance with the challenges raised above. Table 5 summarizes these findings.

Table 5. SNAT guidelines and territorial action programs (TAP)

Guidelines	Territorial Action Programmes " Tap "
1: Towards a sustainable territory	- TAP 1 : Sustainability of the water resource
	- TAP 2: soil conservation and combating desertification
	- TAP 3: Ecosystems
	-TAP 4: Major risks
	- TAP 5: Cultural heritage
2: Create the dynamics of territorial rebalancing	- TAP 6: curbing coastal development and balancing the coastline
	- TAP 7: The Highlands Option
	- TAP 8: The Southern Development Option
	- TAP 9: Offshoring of activities and administrative devolution
	- TAP 10: a hierarchical and articulated urban system

3: Create the conditions for the attractiveness and competitiveness of the territories	- TAP 11 : modernization and networking of public works, transport, logistics and information and communication technology infrastructures
	- TAP 12: the upgrading and modernization of the 04 major cities: Algiers, Oran, Constantine. Annaba
	- TAP 13: Attractiveness Poles (AP) and Integrated Industrial Development Zones (ZIDI)
	- TAP 14: Territorial programming spaces
	- TAP 15: Local Development
	- TAP 16: opening to 1 international
	- TAP 17: The Maghreb
4: Achieving territorial equity	- TAP 18: urban renewal and urban policy
	- TAP 19: 1 Rural Renewal
	- TAP 20: catching up and upgrading areas with handicaps

(source: MATE, 2010)

Implementation of SNAT

The State must base its spatial planning strategy on the necessity of governance, taking care to guarantee that local players approve it. This necessitates a fresh approach to the territory as well as a new planning idea. Within this framework, a partnership approach is increasingly being implemented among the four primary actors in spatial planning, namely the State, local governments, the business sector, and individuals (MATE, 2008).

Taps Taking Responsibility of the Urban Aspect in its Environmental Dimension

As previously stated, the SNAT is split into 20 Territorial Action Programmes (TAPs) with the goal of restoring national territory balance, making diverse territories more appealing, and preserving the country’s natural and cultural capital. Nonetheless, the following four TAPs expressly address the urban component in its environmental aspect:

Tap No. 6 - Limiting Coastal Growth and Balancing the Shoreline: namely Through

- limiting urban expansion in agricultural regions and preserving arable land.
- The establishment of new towns in the first ring as an organizational tool and a means of lowering city size (figure 3).

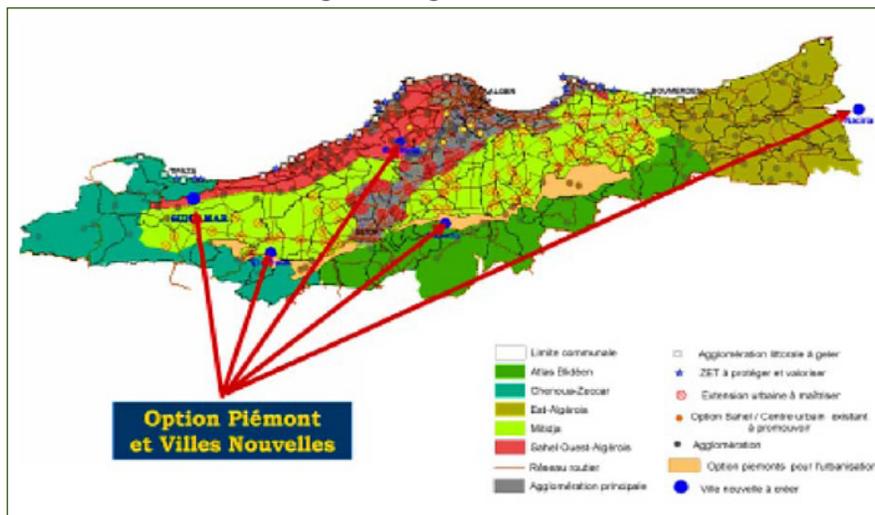


Figure 3. SNAT operation to balance the coastline (MATE, 2010)

TAP n°12- Upgrading and modernizing the country’s four major cities: Algiers, Oran, Constantine, and Annaba, where this program requires:

- The building of a visually appealing and functioning urban environment.
- Creating an image plan: The goal here is to create a territorial marketing strategy that will allow these huge cities to be promoted and “sold” by constructing a positive and improving picture of them.

TAP n°18-Urban renewal and urban policy, namely through an urban renewal strategy based on urban planning documents (SDAAM, PDAU, POS) in order to cure the degradation and dilapidation of the urban fabric. Various operations had been proposed, among them:

- Conservation and enhancement of urban landscapes (natural and manmade) through the formation of urban landscape plans, which are incorporated in urban planning documents (PDAU, POS) and their prescriptions
- Development of urban green spaces through the maintenance or establishment of parks and gardens, as well as the enhancement of non-urbanized environments.

Finally, SNAT emphasizes the importance of implementing a quality urbanization approach that is planned and constructed around a social project in order to respond to detected imbalances, particularly in the urban system.

CONCLUSION

This article concentrated on the regeneration of Algerian environmental policy in response to the development of new sustainability concerns. It centered on the growth of Algeria's legal and administrative framework for environmental preservation and enhancement. It also attempted to emphasize the environmental issue's influence through an examination of the strategic orientations of land use planning. As a result, the topic of sustainable development is a factor that informs all Algerian land use planning standards. The determined territorial sustainability limitations and circumstances influence the potential amount of rebalancing between the various components of the territory, notably the coast and the interior. Considering sustainability allows, in terms of the environment, to strengthen, protect, and improve the resources that serve as a foundation for competitiveness and attractiveness. Thus, this logic of action attempts to integrate the three pillars of sustainable development. Thus, the equity factor is not absent in the development of environmental heritage; and with the enhancement of potentially vulnerable territories, the concern to leave a viable territory to future generations appears to be taken care of by the state.

REFERENCES

1. AbdelatifKerzabi (2009). Enterprises, Development and Sustainable Development: The Case of Algeria Market and Organizations 2009/1 (No. 8). – <https://www.banquemonde.org>
2. Benjaminsen T A and Svarstad H. (2009). What is “political ecology”? In *Natures Sciences Sociétés*. 2009/1 (Vol. 17).
3. Chettah, S (2021). The requalification of the city by the ecomobility, case of the city of El khroub. PhD thesis. University of Salah Boubnider Constantine 3.
4. GAUTIER D. and BENJAMINSEN T.-A (2012). Environment, discourse and power: the political ecology approach, Versailles, Quae.
5. Gautier, D., & Benjaminson, T. A. (2012). Environment, discourse and power: The political ecology approach. Quae. – Karim Tedjani October 2021
6. Larrue, C. (2000). *Analysing public environmental policies*. Harmattan. – Lemieux, V. (2002). *L'étude des politiques publiques*, Québec, Presses de l'Université Laval.
7. Ministry of Land Management and Environment (MATE). The implementation of the national land use planning scheme SNAT 2030, synthesis report, February 2010.
8. National Report to the United Nations Commission on Sustainable Development from Algeria (2011)
9. Turgeon, J. and J.-F. Savard (2012). «Public Policy,» in L. Côté and J.-F. Savard (eds.), *The Encyclopedic Dictionary of Public Administration*.

Citation: BOUCHERIT Sihem, SEGUIA Saoussene. Environmental Policy and Land Use Planning in Algeria, Overview and Perspectives. Int J Innov Stud Sociol Humanities. 2023;8(1): 190-198. DOI: <https://doi.org/10.20431/2456-4931.080120>.

Copyright: © 2023 The Author(s). This open access article is distributed under a Creative Commons Attribution (CC-BY) 4.0 license