

Environmental Policies Dedicated to Confronting Accelerating Climate change - Algeria as a model-



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Abstract :

This article examines the role of environmental policies in Algeria in mitigating the effects of climate change by analyzing the legal and institutional frameworks in place and measuring their practical effectiveness. The importance of this topic stems from the growing climate challenges facing Algeria, particularly in the areas of desertification, degradation of natural resources, and rising temperatures. The article seeks to highlight national efforts in enacting environmental legislation, establishing specialized bodies, and implementing mechanisms such as environmental assessment and supporting renewable energy. It also highlights the obstacles preventing the achievement of stated goals, such as weak coordination, fragmented legal texts, and limited technical and human capabilities. The article focuses on the need to adopt a comprehensive and integrated approach to achieving the effectiveness of environmental policies in the context of sustainable development

KeyWords: Environmental policies, Climate change, Algeria, Legal framework, Sustainable development.

السياسات البيئية المكرسة لمواجهة التغيرات المناخية المتسارعة - الجزائر نموذجاً -

ملخص: يتناول هذا المقال موضوع "دور السياسات البيئية في الجزائر في الحد من آثار تغير المناخ"، من خلال تحليل الأطر القانونية والمؤسسية المعتمدة، وقياس مدى فعاليتها على المستوى العملي. تأتي أهمية الموضوع من التحديات المناخية المتزايدة التي تواجه الجزائر، خصوصاً في مجالات التصحر، وتدهور الموارد الطبيعية، وارتفاع درجات الحرارة. ويسعى المقال إلى إبراز الجهود الوطنية في سنّ التشريعات البيئية، وتأسيس هيئات مختصة، وتطبيق آليات كالتقييم البيئي ودعم الطاقات المتجددة، مع تسليط الضوء على العراقيل التي تحول دون تحقيق الأهداف المعلنة، كضعف التنسيق، وتشتت النصوص القانونية، ومحدودية القدرات الفنية والبشرية. ويركز المقال على ضرورة تبني مقاربة شاملة ومندمجة لتحقيق فعالية السياسات البيئية في سياق التنمية المستدامة

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الكلمات المفتاحية: السياسات البيئية، التغير المناخي، الجزائر، الإطار القانوني، التنمية المستدامة.

Politiques Eenvironnementales pour Faire Face à l'accélération du Changement Climatique - l'Algérie comme modèle-

Résumé: Cet article examine le rôle des politiques environnementales en Algérie dans l'atténuation des effets du changement climatique en analysant les cadres juridiques et institutionnels en place et en mesurant leur efficacité pratique. L'importance de ce sujet découle des défis climatiques croissants auxquels l'Algérie est confrontée, notamment dans les domaines de la désertification, de la dégradation des ressources naturelles et de la hausse des températures. L'article vise à mettre en lumière les efforts nationaux visant à promulguer une législation environnementale, à créer des organismes spécialisés et à mettre en œuvre des mécanismes tels que l'évaluation environnementale et le soutien aux énergies renouvelables. Il met également en évidence les obstacles à la réalisation des objectifs fixés, tels que le manque de coordination, la fragmentation des textes juridiques et les capacités techniques et humaines limitées. L'article met l'accent sur la nécessité d'adopter une approche globale et intégrée pour garantir l'efficacité des politiques environnementales dans le contexte du développement durable.

Mots Clés: Politiques Environnementales, Changement climatique, Algérie, Cadre juridique, Développement durable.



Introduction:

In recent decades, the world has witnessed an unprecedented escalation in extreme climate phenomena, as a result of accelerating climate change, which today represents one of the greatest challenges threatening ecosystems, economies, and human societies alike. Algeria is among the countries clearly affected by this phenomenon, with drought, desertification, floods, and the degradation of natural resources posing serious development and environmental challenges.

In the face of these challenges, Algeria has sought to adopt a set of environmental policies aimed at addressing the effects of climate change, whether through developing environmental legislation, developing national strategies for sustainable development, or engaging in relevant international agreements. However, the fundamental question that arises today is the effectiveness of these policies in mitigating these effects, and the true ability to adapt to accelerating climate change in light of the financial and institutional obstacles that still exist.

Hence, the importance of this topic emerges, as it touches on vital dimensions related to environmental, food, water, and social security in Algeria, and reveals the gap between political orientations and practical implementation.

Accordingly, the following question can be raised:

To what extent are the environmental policies pursued in Algeria effective in mitigating the effects of climate change, and what are the challenges hindering their effective implementation?

To answer the problematic, we divided our plan into two parts:

The first Topic is : The Conceptual Framework for Climate Change and Environmental Policies

The Second Topic is : Evaluating Environmental Policies and the Challenges of Their Implementation in Algeria



THE FIRST TOPIC:

The Conceptual Framework for Climate Change and Environmental Policies

First requirement: The Concept of Climate Change and Its Main Causes

Climate change is a global environmental phenomenon characterized by gradual, long-term shifts in temperature and weather patterns. This is closely linked to rising concentrations of greenhouse gases in the atmosphere, primarily carbon dioxide, methane, and nitrous oxide, resulting primarily from human activity¹.

The most prominent causes of this phenomenon are heavy reliance on fossil fuels for energy generation, industry, and transportation, in addition to deforestation, urban sprawl, and uncontrolled agricultural expansion. Reports by the Intergovernmental Panel on Climate Change (IPCC) have indicated that the world is facing an upward trajectory in greenhouse gas emissions, which portends catastrophic effects in the medium and long term. In Algeria, the causes of climate change are due to internal and external factors, including increasing population pressure on resources, uncontrolled urban expansion, and weak environmental management policies in some previous period².

First section: Manifestations and Impacts of Climate Change in Algeria

The effects of climate change in Algeria are manifested through a range of environmental phenomena that have become increasingly frequent and alarming. Most notable are the droughts that annually strike large areas of the country, directly impacting food security and water resources. Flash floods, which have become more severe in the northern regions³, cause significant human and material losses. Large areas of Algeria are also exposed to encroaching desertification and land degradation, particularly in the high plateaus and southern regions, exacerbating the challenges associated with agricultural production and providing livelihoods for rural populations. The field study relied on confirmed that Algeria is experiencing growing environmental imbalances, both in terms of natural resources and quality of life.

¹ - زليخة بن سوباح ومكي خالدية، "النزوح البيئي بسبب تغير المناخ ومشكلة الاعتراف الدولي"، مجلة القانون الدستوري والمؤسسات السياسية، منشورات جامعة ابن خلدون، تيارت، الجزائر، العدد 2، 2022، ص 447.

² - Marquis, K.B. et al, Summary for Policymakers: Climate Change 2007: The Physical Science Basis, Cambridge University Press, Cambridge, United Kingdom, 2007, P 34.

³ - Nawal Ziani, "International Humanitarian Law and the Challenges of Climate Change," African Journal of Legal and Political Studies, published by Ahmed Draia University, Adrar, Algeria, 2021, p. 147.



This makes the issue of climate change a national priority requiring systematic intervention at all levels¹

Second section : Definition of Environmental Policies and the Relationship Between Environmental Policies and Sustainable Development

A- Definition of Environmental Policies :

Environmental policies are closely linked to sustainable development, as the latter is based on the principle of balancing the environmental, economic, and social dimensions, ensuring the rights of present and future generations².

The effective integration of the environmental dimension into public policies and development programs represents one of the most important pillars of sustainable development, which Algeria is working to achieve by universalizing environmental assessment of projects, stimulating the use of renewable energy, combating industrial pollution, and improving waste management. However, the greatest challenge remains the ability of these policies to transcend the theoretical framework and transition into a tangible practical reality capable of achieving the desired positive impact. The analyses included in the attached study indicate that, despite the strides achieved in this area, Algeria still needs further institutional coordination, financial support, and community engagement to achieve greater effectiveness in addressing the effects of climate change³.

B-The Relationship Between Environmental Policies and Sustainable Development :

In this context, environmental policies represent the primary means adopted by the state to regulate the relationship between development and environmental protection. Environmental policies are defined as the set of measures, laws, and programs that They aim to preserve the environment and reduce the impact of economic activities

¹ - Mona Tawhariya, Climate Change and the Challenges of International Environmental Policy, Journal of North African Economics, Volume 16, Issue 22, 2020, p. 351.

² - Belkacem Mariam, Legislative Enshrinement of Environmental Planning as a Preventive Mechanism for Environmental Protection and Achieving Sustainable Development, Afak Journal of Research and Studies (Algeria), Issue 2 (2022), p. 420.

³ - Boutalbi Sami, The Legal System of Environmental Planning in Algeria and Its Role in Environmental Protection, Unpublished Master's Thesis, University of Mohamed Lamine Debaghine, Setif, 2016/2017, p. 81.



on natural resources, while ensuring sustainable development without disrupting environmental balances¹.

These policies are based on the principles of protection, prevention, participation, and sustainability. Since the 1990s, Algeria has begun developing its environmental system by issuing laws to protect air, water, and biodiversity, establishing specialized administrative structures, and implementing national environmental strategies aimed at rationalizing resource exploitation and addressing increasing environmental risks. However, the effectiveness of these policies still depends on the integration of legislation and executive procedures, as well as the availability of resources and human capabilities to meet emerging environmental challenge².

Second requirement: Environmental Policies in Algeria

First section: The Legal Framework for Environmental Policies in Algeria

The legal framework is one of the fundamental foundations of environmental policies in Algeria. Since the early 1980s, and with greater acceleration since the early 1990s, the state has moved towards codifying environmental action through a legislative system aimed at protecting the environment and ensuring the sustainability of natural resources. Law No. 83-03 of February 5, 1983, is considered the first comprehensive Algerian legislative text addressing environmental protection³.

It established general principles for pollution prevention and the preservation of the natural environment. Although it was not a detailed law, it paved the way for the development of a more comprehensive legal system and established the environment as a priority legal issue in public policy⁴.

With increasing environmental pressures and the multiplicity of pollution sources, Law No. 03-10 of July 19, 2003, on environmental protection within the framework

¹ - Ben Yamina Khadra, Yaqoub Mohamed, Environmental Planning in Algeria, Journal of Economic Studies, Al-Basira Center for Research, Consulting, and Educational Services (Algeria), Dar Al-Khaldouniya for Publishing and Distribution (2012), Issue 20, p. 113.

² - Bouchama Mohamed, Environmental Governance and Sustainable Development in Algeria between 1999-2019 (PhD Thesis), Abu Bakr Belkaid University of Tlemcen, Algeria, 2021-2022, p. 144.

³ - القانون رقم 83-03 المؤرخ 5 فبراير 1983، المتعلق بحماية البيئة، الجريدة الرسمية للجمهورية الجزائرية، العدد 6، السنة 20، الصادرة في 8 فبراير 1983. - بوشامة محمد، المرجع السابق، ص 145.

⁴ - Bouchama Mohamed, op. cit., p. 145.



of sustainable development, was issued, marking a turning point in Algerian environmental legislation¹.

This law not only regulated the relationship between development and the environment, but also established fundamental principles such as the precautionary principle and the polluter pays principle. It also mandated the conduct of environmental impact assessment studies for projects and adopted new institutional mechanisms to monitor environmental policy, such as the National Council for the Environment and Sustainable Development. For the first time, the environmental dimension was integrated into development planning, stipulating the promotion of the use of renewable energy and the promotion of clean production technologies².

To implement these principles on the ground, this law was reinforced by several specialized sectoral legislations. Law No. 01-11 on marine fishing and aquaculture was issued, as was a decision dated 13 Rajab 1429 (July 16, 2008), specifying the equipment used in professional foot fishing, the species that may be caught, the opening and closing dates for professional foot fishing, and the areas where such fishing is practiced³.

The law also stipulates monitoring air quality and reducing sources of marine pollution, particularly those resulting from transportation and industry. Law No. 05-12 on water was also issued, establishing the legal framework for protecting water resources from unsustainable exploitation and pollution, and imposing controls on liquid waste disposal activities. In the area of waste management, Law No. 07-06 was issued, relating to the management, protection, and development of green spaces, including hazardous waste that poses a real threat to health and the environment⁴.

The legal framework also includes laws aimed at protecting biodiversity and fragile areas, such as Law No. 02-02 on protected areas, which established special mechanisms to protect fragile ecosystems and stabilize development in areas with environmental specialization⁵.

¹ - القانون رقم 03-10 المؤرخ في 19 يوليو 2003، المتعلق بحماية البيئة في إطار التنمية المستدامة، الجريدة الرسمية للجمهورية الجزائرية، العدد 43، السنة 40، الصادرة في 20 يوليو 2003.

² - Lakhdar Bouzid, Climatic Changes in the Central Sahara during the Pleistocene Epoch - 2.59 Myr - 8000 BC, Oasis Journal of Research and Studies, Volume 9, Issue 1 02 2016, p. 1028.

³ - Law No. 01-11 of 11 Rabi' al-Thani 1422 (July 3, 2001) concerning marine fishing and aquaculture, as well as a decision of 13 Rajab 1429 (July 16, 2008) specifying the equipment used in professional foot fishing, the species that may be caught, the opening and closing dates of professional foot fishing, and the areas where such fishing may be practiced, Official Gazette No. 25 issued in 05 July 2001.

⁴ - Law No. 07-06 of 25 Rabi' al-Thani 1428 (May 13, 2007) concerning the management, protection, and development of green spaces, Official Gazette No. 40 issued in 15 May 2007.

⁵ - Law No. 02-02, dated February 5, 2002, concerning coastal protection and enhancement, Official Gazette No. 01, dated February 12, 2002.



In the same context, Law No. 01-11 on marine fishing and aquaculture addressed threats to marine biodiversity, while Law No. 05-03 focused on protecting plant varieties and enhancing agricultural genetic resources¹.

Law No. 04-20 on the Prevention of Major Hazards and Disaster Management within the Framework of Sustainable Development was also issued, establishing a proactive approach to dealing with environmental crises².

Despite the abundance and diversity of this legislative framework, it faces a number of challenges on the ground, including weak coordination between implementing agencies, the fragmentation of responsibilities across several sectors, and the limited financial and human resources of regulatory bodies. The environmental legal system also suffers from a delay in aligning some legislation with international developments, not to mention the gap between text and implementation.

Many laws remain without any real impact on the ground due to the absence of effective oversight, weak deterrent penalties, and a lack of training among local stakeholders³.

This review demonstrates that Algeria possesses a relatively broad and advanced legal base in the environmental field and that it embraces, in principle, the principles of global environmental governance. However, the real challenge lies in implementing these laws on the ground and providing the necessary technical and institutional conditions to transform these texts into effective environmental policies that achieve sustainability and address the tangible impacts of climate change⁴.

Second section: The Institutional Framework for Implementing Environmental Policies

The institutional framework represents a fundamental pillar of any effective environmental policy, as the strategic objectives of public environmental policies cannot be achieved without the presence of specialized regulatory and executive bodies with the powers and resources to implement laws and plans. In the Algerian context, the state has sought to build a multi-level environmental institutional apparatus, divided between central authorities, technical bodies, and local

¹ - Law No. 05-03, dated Dhu al-Hijjah 27, 1425 (February 6, 2005), concerning seeds, seedlings, and the protection of plant holdings, Official Gazette No. 20 issued in February 2005.

² - Law No. 04-20, dated December 25, 2004, concerning major risk prevention and disaster management within the framework of sustainable development, Official Gazette No. 84 issued in December 2004.

³ - Abdel Moneim Ben Ahmed, Ben Boularbah El Eid, Sectoral Environmental Planning in Algeria, Journal of Law and Human Sciences (Algeria), Issue 4 (2016), p. 469.

⁴ - Hassouna Abdelghani, Environmental Planning in Algeria, Journal of Scientific Research in Environmental Legislation (Algeria), Issue 8 (2017), p. 211



administrations, with the aim of overseeing environmental protection and addressing the challenges associated with climate change¹.

At the forefront of these institutions is the Ministry of Environment and Renewable Energy, the highest governmental body charged with preparing and directing national environmental protection policy. It oversees the drafting of laws, determines intervention priorities, and coordinates programs with other relevant ministries, such as the Ministry of Agriculture, the Ministry of Energy, and the Ministry of Water Resources. It also prepares periodic reports on the state of the environment in Algeria and assesses the implementation of the state's commitments to international agreements, particularly those related to climate change and biodiversity.

Among the specialized technical bodies is the National Agency for the Protection of Nature and the Environment (ANPE), which monitors the environmental situation, controls pollution sources, and provides technical support to institutions and administrations. Specialized national centers also play important roles, including the National Center for Clean Production Technologies (CNTPP), which works to encourage the adoption of sustainable industrial practices and clean production technologies in economic institutions, and the National Center for the Development of Renewable Energies (CDER), which is a scientific reference for developing research and innovation in the fields of solar, wind, and biomass energy.

At the local level, regional authorities (municipalities and states) have been entrusted with direct executive tasks that affect the daily lives of citizens, such as managing urban waste, monitoring environmental cleanliness, implementing

¹ - kadari Iman, Environmental Planning in Algeria as a Tool for Establishing Environmental Security and Achieving Sustainable Development, Journal of Algerian and Comparative Public Law (Algeria), Issue 5 (2017), p. 167.



afforestation programs, and implementing local environmental protection plans. However, their actual contribution often remains limited due to limited financial and technical capabilities and the lack of qualified personnel in the environmental field. In addition to these bodies, the institutional system includes several coordination and consultation bodies, such as the National Council for the Environment and Sustainable Development, which is an advisory framework comprising experts and representatives from government sectors and civil society, tasked with providing opinions and recommendations on general environmental policy. The National Climate Change Agency was also established by Executive Decree No. 2015-220, as a specialized body responsible for monitoring Algeria's progress in addressing the effects of climate change, collecting data and statistics related to greenhouse gas emissions, and preparing technical reports to be submitted to the Secretariat General of the Paris Agreement¹.

In this capacity, the agency is tasked, under Article 6, with contributing to strengthening the national capacities of various sectors in the field of climate change, establishing a climate change database and ensuring its regular updating, preparing a periodic report on it, and cataloging all related activities. It is also responsible for contributing to every national inventory of greenhouse gases, coordinating sectoral activities in the field of climate change, and ensuring cooperation with other environmental sectors, particularly in the field of biodiversity conservation and combating desertification, as well as promoting all related studies and research².

The National Agency for Nature Conservation, established by Executive Decree No. 91/33, is a public institution of an administrative and technical nature placed at the disposal of the Minister of Agriculture and headquartered in the capital³. Therefore, The implementation of environmental policies in Algeria cannot succeed without restructuring the institutional framework by clarifying tasks, modernizing work patterns, enhancing horizontal and vertical coordination among actors, and providing ongoing training and qualifications for human resources. This ensures the

¹ - Executive Decree No. 05-375 of September 26, 2005, establishing the National Agency for Climate Change, defining its missions, and regulating its organization and operation, Official Gazette No. 67, issued on October 5, 2005.

² - Ahmed Mahmoud El Gamal, Environmental Protection and Pollution in Light of National Legislation, Regional Agreements, and International Treaties, Maaref Establishment, 1st ed., 1999, p. 53.

³ - Executive Decree No. 91/33 of February 10, 1991, amended and supplemented by Executive Decree No. 98/352 of February 10, 1998.



transition from a logic of symbolic bodies to a genuine executive body capable of change and achieving the desired environmental transformation.

Section three : The Impact of Algeria's International Commitments on its Environmental Policies

Algeria's accession to a number of international and regional environmental and climate change agreements has played a pivotal role in directing its domestic policies toward greater attention to environmental issues. Algeria has ratified the United Nations Framework Convention on Climate Change (UNFCCC), the Kyoto Protocol, and the 2015 Paris Agreement, and is also a party to the agreements on biodiversity conservation and combating desertification¹.

These international commitments have necessitated updating the national legal framework to align with global requirements, in addition to preparing periodic emissions reports and participating in international projects to mitigate the effects of climate change.

Algeria also benefits from international cooperation programs and climate finance directed to developing countries, which have contributed to the development of some clean energy projects and the building of national capacities. However, the actual implementation of these commitments on the ground remains contingent on the availability of strong political will and comprehensive structural reforms that ensure greater effectiveness of environmental responses².

THE SECOND TOPIC: Evaluating Environmental Policies and the Challenges of Their Implementation in Algeria

First requirement: The Effectiveness of Environmental Policies in Addressing Climate Change

An evaluation of the environmental policies pursued in Algeria is a fundamental necessity for understanding the state's ability to address the escalating phenomenon of climate change. In recent decades, Algeria has adopted a strategic environmental approach, which began to take shape with the adoption of Law 03-10 on Environmental Protection within the Framework of Sustainable Development. This

¹ - The Framework Convention on Climate Change, concluded on May 9, 1992, entered into force on March 21, 1994.

² - Hassan Shaker Aziz Al-Koufi, The Phenomenon of Global Warming and Its Relationship to Human Activities and Natural Disasters, Master's Thesis, Faculty of Administration and Economics, Arab Open Academy in Denmark, 2009, p. 16.



law established new principles such as precaution, precaution, polluter pays, and mandatory environmental impact assessments.

This vision was also reinforced within the National Plan for Environmental Action and Sustainable Development, stipulated in Executive Decree No. 07-145. This policy aims to reduce environmental degradation and ensure a balance between economic demands and environmental necessities by adopting a preventive and integrative approach¹.

However, field experience shows that results remain below expectations. Numerous reports point to limited implementation of legal instruments and weak institutional coordination, particularly between the Ministry of Environment and other sectors such as agriculture, industry, and energy. The same reference document revealed that Algeria's efforts remain largely a reaction to existing environmental problems, rather than the result of preventive environmental planning based on continuous monitoring and accurate climate data. For example, most meteorological stations still lack advanced equipment, which hinders the analysis of local climate dynamics and the understanding of the extent of climate change impacts across different regions, particularly in the south and the high plateaus, which are prone to drought and desertification.

Algeria's environmental policies are also often not adequately integrated into national development plans, as major economic projects are still evaluated purely based on economic criteria, without truly incorporating long-term environmental costs. The report indicated that haphazard construction and unregulated urban growth contribute to the increased carbon footprint of large cities, in the absence of clean transportation and sustainable environmental drainage networks.

On the other hand, Algeria's experience with renewable energy projects, most notably the solar energy development program, despite its ambition, still faces challenges in financing and implementation, as well as a lack of coordination between the public and private sectors and weak investment attractiveness. Although reforestation and desertification control programs are included within environmental strategies, an evaluation of their results reveals difficulties in sustainability,

¹ - Touat Nasreddine, Zarouki Fatima Zahra, The Orientation Towards the Exploitation of Renewable Energy within the Framework of Achieving Sustainable Development Requirements in Algeria, Journal of Economic and Financial Investigation Strategies (Algeria), Issue 1 (2022), p. 73.



particularly as a result of accelerating climate change and economic and social pressures¹.

From this perspective, it can be said that the effectiveness of Algerian environmental policies in addressing climate change remains dependent on a number of structural factors, most notably building specialized institutional capacities, strengthening the role of environmental scientific research, and achieving coordination between legal frameworks and development programs, ensuring a true transition towards a sustainable development model capable of confronting complex climate challenges².

First section: Legal and Regulatory Obstacles to Implementing Environmental Policies

The legal framework represents the cornerstone of any effective environmental policy. It is supposed to provide a binding legislative reference for regulating human activities with environmental impacts and establishing a balance between development and the protection of natural resources. In the Algerian experience, despite the adoption of several laws since the 1980s, their practical application has been limited.

These texts reveal a number of structural challenges that have limited their effectiveness in confronting environmental degradation and mitigating the effects of climate change.

The legal foundation of environmental policy in Algeria began with Law No. 83-03 of February 5, 1983, which was considered at the time a reference law for environmental protection in all its dimensions. This framework then evolved with Law No. 03-10 of July 19, 2003, on environmental protection within the framework of sustainable development, which introduced modern concepts into the Algerian legal system, such as prevention, the precautionary principle, and environmental responsibility, in addition to the obligation to conduct environmental impact assessments. However, these laws, despite their importance, often suffered from poor

¹ - Wafi Mariam, "Integrating the Climate Change Convention into Algerian Legislation," a dissertation submitted for a doctorate degree, third cycle, MD, specializing in Environmental Law, Faculty of Law, University of Algiers 1, 2017-2018, p. 16.

² - Tassadit Bousbaaine, "The Impact of Climate Change on Sustainable Development in Algeria - A Prospective Study," a thesis submitted for a doctorate degree in the Department of Management Sciences, specializing in Organizational Management, Faculty of Economics, Business, and Management Sciences, University of M'hamed Bouguerra, Boumerdes, 2015, p. 7.



operational implementation due to their lack of detailed regulatory texts or the overlapping powers of the implementing bodies¹.

The experience also revealed a significant gap between the legal and executive levels. Repeated amendments to legal texts, in the absence of clear institutional stability, created a state of legal ambiguity, negatively impacting local actors' ability to adhere to and comply. The reference text clearly indicated that the general wording of some legal provisions and the lack of precision in defining responsibilities contributed to depriving legislation of its binding nature and weakening the associated oversight tools.

Added to this is the problem of the lack of horizontal coordination between environmental laws and other sectoral laws, which has created contradictions in vision and intervention tools. For example, an investment project approved by the Ministry of Industry or Energy may conflict with the environmental protection requirements stipulated by law, without a real mechanism for separation or harmonization. The lack of a link between environmental policy and the annual financial law also leads to a weak allocation of the resources necessary to implement the contents of the legislation, turning it into texts without effective binding force. On the other hand, it is noted that many judicial bodies still lack specialized training in environmental law, making the application of penalties stipulated in legal texts rare or merely formal. Furthermore, environmental legal awareness among citizens and economic actors remains weak, weakening civil society's oversight role and eroding the principle of "environmental transparency" of its substance.

These challenges, taken together, make reforming the environmental legal framework in Algeria a fundamental issue. This requires redrafting texts on a comprehensive basis, unifying legal references, strengthening coordination mechanisms between ministries, and integrating environmental frameworks into all stages of planning and development. This ensures the effectiveness of legislation and achieves practical responses to environmental and climate challenges.

Second section: Economic and Financial Constraints in Implementing Environmental Policy

Implementing environmental policies requires significant financial, human, and technical resources, which represents a major challenge in the Algerian context.

¹ - Sarbah Khaled Faraj Al-Hussein, Sustainable Energy in Algeria: Between the Desire to Protect Security and the Challenge of Energy Transition, Algerian Journal of Law and Political Science (Algeria), Issue 1 (2022), p. 10.



Given the country's reliance on a rentier economy primarily based on hydrocarbons, authorities find it difficult to allocate sufficient budgets for environmental programs, especially given fluctuations in oil prices. Furthermore, environmental projects, such as waste treatment or converting factories to clean production systems, require long-term investments that do not generate immediate profits, making them unattractive to the private sector. In this context, the financing mechanism of the National Environment and Renewable Energy Fund remains insufficient, given the magnitude of the challenges and international commitments to which Algeria is a party, particularly the Paris Climate Agreement¹.

The absence of effective tax incentives also weakens the state's ability to mobilize resources outside the general budget. In addition to the financial aspect, environmental institutions suffer from weak administrative and human capacity, due to a lack of training in critical environmental fields and the absence of a culture of evaluation based on clear performance indicators.

Conclusion:

Algeria's experience in environmental policies demonstrates that it has made significant institutional and legislative strides. However, it still faces a gap between official frameworks and field performance, especially in light of the accelerating challenges associated with climate change.

An analysis of the legal and institutional framework reveals a lack of integration between legal texts, particularly between general and sectoral laws, which has weakened coordination and contributed to the fragmentation of legislative authority. Furthermore, many texts lack practical implementation on the ground due to the absence of regulatory decrees, which has negatively impacted the effectiveness of monitoring and oversight. Furthermore, the institutional framework faces multiple problems, most notably overlapping jurisdictions between agencies and weak horizontal and vertical coordination.

The limited technical and human resources in environmental bodies, particularly at the local level. Environmental practice has also revealed the absence of an accurate information system that enables the development of science-based policies, as well as the weak involvement of civil society in the design and implementation stages.

¹ - Abdo Ali Al-Taher, The Legal Framework and Incentive Measures for Developing the Renewable Energy Sector in Algeria, Journal of International Law and Development (Algeria), Issue 1, p. 6



To improve the performance of environmental policies in Algeria, it is necessary to adopt a comprehensive reform approach based on unifying the legal system and updating it in line with international climate change. Efforts should also be made to build a more flexible and coordinated institutional system, and to direct investments toward digitization and continuous human resource training. Furthermore, strengthening environmental monitoring requires integrating environmental assessment into all major public policies and developing scientific indicators to measure the effectiveness of these policies. Disseminating environmental education among citizens and expanding the participation of local stakeholders are equally important, contributing to achieving environmental justice and truly sustainable development.

In light of the above, the most important points can be summarized as follows:

- The need for a comprehensive review of the environmental legal arsenal and avoiding duplication and fragmentation among texts.
- The need to develop a clear institutional structure and enhance coordination among various stakeholders.
- Investing in technical and human capabilities and strengthening the accurate environmental data base.
- Establishing an environmental culture through awareness and community participation to support the effectiveness of public policies.

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