



THE ROLE OF TAXATION IN PREVENTING ENVIRONMENTAL POLLUTION IN ALGERIAN LEGISLATION

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Abstract:

Environmental taxation stands as one of the most effective tools to mitigate or reduce pollution—whether air, water, or land pollution. It imposes fees, duties, or taxes on polluters' activities while incorporating incentives such as exemptions and rewards.

The environmental taxation system aims to hold polluters accountable by ensuring they contribute to covering the costs of their polluting activities, thereby reducing associated harm. It also guarantees a healthy environment for all members of society. In addition to raising awareness by fostering environmental literacy and a sense of collective duty to preserve ecosystems, highlighting the severe consequences of seemingly minor harmful behaviors. Plus, Encouraging cleaner production by steering taxpayers toward pollution reduction through sustainable practices. It also aims to diversify funding sources for pollution remediation efforts.

Keywords: Environment, Environmental tax Atin, pollution.

INTRODUCTION

From the international recognition granted to developing nations regarding the principle of equality in the right to development—as affirmed by the **Organization for Economic Co-operation and Development (OECD)**—less developed countries are entitled to utilize their natural resources to achieve economic growth on par with advanced nations. They also retain the right to exercise sovereignty over their territories and exploit the wealth of their environments for their benefit.

Algeria, too, has pursued rapid economic growth without initially subjecting its projects to environmental standards, capitalizing on the aforementioned international principles. However, the scale of environmental degradation has far outweighed developmental gains. Notably, Algerian legislators were slow to acknowledge this crisis. The first law addressing environmental protection, Law No. 03, was not enacted until **1983**, with implementing decrees delayed until **1990**. This delay underscores the difficult choice Algeria faced between economic development and environmental preservation.¹

Over time, Algerian policymakers grew increasingly influenced by global environmental concerns, especially as ecological issues gained international prominence. This shift is evident in Algeria's ratification of key conventions, such as:

- The United Nations Framework Convention on Climate Change (approved by the UN General Assembly on May 9, 1992, and adopted via Presidential Decree No. 93-99 dated April 10, 1993).
- The Agreement on the Conservation of Cetaceans in the Black Sea, Mediterranean Sea, and Contiguous Atlantic Area (ratified under Presidential Decree No. 07-95).

¹ Kerraji, M. (2003). Environmental Protection: Perspectives on Obligations and Rights in Algerian Legislation .National School of Administration, 7(97), 48.



Consequently, Algeria's legal framework began integrating environmental principles, most notably the "**Polluter-Pays Principle**" (Article 3/5 of Law 03-10 on Environment and Sustainable Development), marking a formal commitment to balancing growth with ecological responsibility.²

Based on legal and regulatory texts, the Algerian legislature has established several mechanisms aimed at imposing binding rules to protect the environment in all its forms and elements. These mechanisms rely on a dual approach of incentives and deterrents.

- **Incentives** include benefits such as tax reductions or exemptions for factories that comply with environmental regulations or those that produce renewable materials.
- **Deterrents** involve penalties for non-compliance, ensuring adherence to environmental standards.

This raises the following research question:

Has environmental taxation effectively achieved its intended outcomes as a preventive mechanism for environmental protection?

To address this question, the study will adopt an **analytical methodology** and will be divided into two main sections:

1. **Section One:** Examines the various taxes and fees established by Algerian legislators through a range of legal and regulatory frameworks, assessing their role in environmental preservation.
2. **Section Two:** Evaluates the adequacy of the legal system implemented by Algerian lawmakers in achieving these environmental objectives.

I. Environmental Taxation: The Algerian Legislator's Adoption of the Preventive Approach to Combat Pollution

Environmental taxation is defined as monetary levies imposed by the state on any activity that alters the environment and constitutes pollution.³ The **Polluter-Pays Principle (PPP)** serves as the foundational framework for this system. First introduced by the **Organisation for Economic Co-operation and Development (OECD)** in 1972 and later reaffirmed in the **1992 Rio Declaration**⁴, this principle integrates the cost of environmental resources into the market price of goods and services. Alternatively, it mandates that any party causing pollution must bear all costs associated with prevention, control, or mitigation of its effects. The **Organization for Security and Co-operation in Europe (OSCE)** defines a polluter as:

"Any entity that directly or indirectly causes environmental harm or creates conditions leading to such harm."

The Algerian legislature enshrined the **PPP** in Article 03/7 of its environmental protection laws, stipulating:

"The Polluter-Pays Principle obligates any person whose activities cause—or could cause—environmental damage to cover the costs of preventive measures, pollution reduction, and restoration of affected areas to their original state."

² Article 3/5 of Law No. 03-10 dated 19 Jumada I 1424 AH (corresponding to July 19, 2003) concerning Environmental Protection within the Framework of Sustainable Development. Official Journal of the Algerian Republic, No. 43, issued July 20, 2003, p. 9.

³ Ketchoua, A. & Azzouzi, A. (Year). The effectiveness of fiscal instruments in reducing environmental pollution problems: The case of Algeria . Paper presented at the International Conference: Environmental Economics and its Impact on Sustainable Development, Ouargla, p. 5.

⁴Rezzoug, K. (2007). The role of the state in environmental protection . Al-Baheth Journal, (5), 101.

The financial burden on polluters under the PPP is not a legal penalty but an objective fiscal obligation, independent of civil or criminal liability.⁵ Unlike fines (imposed for legal violations and paid coercively), environmental levies are service-based fees tied to voluntary acceptance or rejection of a service.

Accordingly, environmental taxation instruments consist of taxes and fees (1), as well as environmental exemptions and incentives (2).

1- Environmental Taxes and Fees in Algerian Environmental Protection Legislation

Environmental Taxes (Green Protection Levies) referred to as "green protection" measures, environmental taxes are compulsory financial charges imposed by the state on polluting economic activities⁶. These taxes are calculated based on the quantity of pollutants emitted and the degree of hazard posed by the emissions. Whereas, Environmental Fees represent payments made by individuals or entities in exchange for specific environmental services, such as: Water purification technologies or waste treatment infrastructure⁷. Through these fees, the state ensures shared responsibility for covering the costs of environmental remediation and creates economic disincentives for pollution through progressive taxation which encourages preventive function supersedes the redistributive purpose, as the primary objective is behavioral modification rather than mere fiscal redistribution.⁸

It is widely recognized that Algeria's economy remains predominantly reliant on the petroleum and hydrocarbons sector. This dependence carries significant environmental costs, notably Atmospheric Pollution that is Caused by emissions from oil well flaring and extraction activities, Marine Contamination Resulting from coastal industrial facilities discharging toxic waste into maritime zones, particularly acute as most processing plants are concentrated along the coastline. Therefore, the Algerian legislature has implemented specific regulatory mechanisms through Finance Laws (1992, 2000, 2002, 2003) ⁹as well as its implementing Decrees.

A. Penalty Fee for Failure to Store Special and Hazardous Industrial Waste:

The Algerian legislator has established a fee of **10,500 DZD per ton** for improper storage of such waste. The revenue allocation from this fee is structured as follows:

- **10%** to municipalities
- **15%** to the public treasury
- **75%** to the National Fund for Environmental Protection and Pollution Control¹⁰

B. Medical Waste Storage Fee

It aims to Encourage hospitals and clinics to acquire waste treatment equipment
Fee: 24,000 DZD per unit, calculated based on:

⁵ Article 3/7, Law No. 03-10 (2003). Environmental Protection within the Framework of Sustainable Development. Official Journal of the Algerian Republic, (43), 9.

⁶ Messdoud, F. (2009-2010). The importance of government intervention in environmental protection through ecological taxation. Al-Baheth Journal, (7), 34.

⁷ Messaoud, F. (2009-2010). Ibid., 349.

⁸ Kombo, M. (2008). The precautionary principle and environmental impact assessment in development projects: Case of mining exploitation in DR Congo [Master's thesis, International and Comparative Environmental Law]. Retrieved from : <http://www.memoireonline.com/11/08/1624/Le-principe-de-prevention-et-letude-dimpact-sur-lenvironnement-dans-le-projet-dexploitation-mini-html> (Original work published August 2008).

⁹ Ketchoua, A., & Azzouzi, A. (Year). Op. cit., 13.

¹⁰ Article 203, Law No. 01-21 dated 7 Shawwal 1422 AH (corresponding to December 22, 2001), containing the Finance Law for 2002. Published in the Official Journal of the Algerian Republic No. 78, dated December 23, 2001, page 56.



- Treatment capacity of each facility
- Direct measurement of waste volume

Revenue Allocation :

- 10% → Municipalities
- 15% → Public Treasury
- 75% → National Fund for Environmental Protection and Pollution Control¹¹

C. Plastic Bag Tax

Legal Basis: Introduced in the 2004 Finance Law

Scope: Covers all plastic bags, with proceeds directed to the National Environment Fund.¹²

D. Hazardous/Polluting Activities Fee

Fee Structure (2000 Finance Law):

- Varies by license type and issuing authority
- Replaced the 1992 system (under **Article 117 of Law 91-25**) which based fees on:
 - ✓ Number of employees.
 - ✓ Activity types.

Key Amendment (2000 Finance Law, Article 202):

- Modified **Article 117(4)** to introduce progressive multipliers (1-10x) based on:
 - ✓ Activity risk level.
 - ✓ Waste type and quantity generated.¹³

Annual Pollution Fees for Polluting Facilities¹⁴

Classification	Quantity ↓	→	Facilities Employing >2 Persons	Facilities Employing ≤2 Persons
Facilities Licensed by the Minister of Environment			120,000 DZD	24,000 DZD
Facilities Licensed by Regional Governors (Walis)			90,000 DZD	18,000 DZD
Facilities Licensed by Local Environmental Authorities (R.M.S.H.B.)			20,000 DZD	3,000 DZD

¹¹ Article 204, Law No. 01-21 (Ibid), p. 57

Official Journal of the Algerian Republic No. 78, dated December 23, 2001

¹² Article 202, Law No. 01-21 (Ibid.), p. 56

¹³ Article 202, Law No. 01-21 (Op. cit.), p. 56

¹⁴ Ketchoua, A. & Azzouzi, A. (Op. cit.), p. 14

Classification	Quantity ↓	→	Facilities Employing >2 Persons	Facilities Employing ≤2 Persons
Facilities Operating Under Declaration System			9,000 DZD	2,000 DZD

F. Industrial Air Pollution Fees

1. Base Fee Calculation:

- Applied to emissions exceeding limits specified in Decree 06-138¹⁵
- Base rate determined by Article 54 of Law 99-11

2. Progressive Multiplier System:

Emission Excess Beyond Limits	Multiplier
10-20% above permitted levels	1× base fee
21-40% above permitted levels	2× base fee
41-60% above permitted levels	3× base fee
61-80% above permitted levels	4× base fee
81-100% above permitted levels	5× base fee

The determination of emitted pollution quantities is critically important as it establishes the applicable multiplier coefficient, based on industrial emission analyses conducted by the National Observatory for Environment and Sustainable Development.¹⁶

G. Supplementary Tax on Industrial Wastewater

1. Tax Basis Calculated according to:
- ✓ Volume of wastewater discharged
 - ✓ Pollution load exceeding thresholds in Decree 06-141 dated April ,19th 2006.¹⁷

2. Key Parameters

Factor	Measurement Standard
Quantity	Cubic meters/year
Pollution Load	BOD/COD/TSS levels vs. regulatory limits

¹⁵ Executive Decree No. 06-138 regulating the emission of gases, smoke, vapors, and liquid/solid particles into the atmosphere, including monitoring conditions. Official Journal of the Algerian Republic, No. 24, issued April 16, 2006, p. 13.

¹⁶ Executive Decree No. 07-229 Dated 15 Ramadan 1428 AH (corresponding to September 27, 2007) Specifying Implementation Modalities for the Supplementary Tax on Industrial Air Pollution. Published in: Official Gazette of the Algerian Republic, No. 63, issued October 7, 2007, p. 13.

¹⁷ Executive Decree No. 06-141. Dated 20 Rabi' al-Awwal 1427 AH (corresponding to 19 April 2006) Establishing Maximum Threshold Values for Industrial Liquid Discharges. Official Journal of the Algerian Republic, No. 26, issued 23 April 2006, p. 4.



H- Fuel Tax

Established under the 2002 Finance Law.

1. Tax Specifications

Rate: 1 DZD per liter of leaded/premium gasoline.

Revenue Allocation:

50% → National Fund for Environmental Protection and Pollution Control.

50% → National Road and Highway Maintenance Fund.¹⁸

2. Collection Authority

Administered by: Provincial Tax Directorate.

2. Environmental Incentives & Exemptions

Recognizing human tendencies to avoid imposed obligations, Algerian legislation complements regulatory measures with positive incentives through:

A. Permanent Exemptions

- **Applicability:** For entities adopting certified eco-friendly technologies.¹⁹

B. Temporary Exemptions

- **Duration:** Typically 3 years (e.g., for new industrial facilities).
- **Purpose:** Enable transition to environmentally compliant equipment.
- **Legal**

Basis:

✓ Finance Law Article 203: 3-year grace period for waste management compliance.²⁰

✓ Executive Decree 06-138, Article 3: Technology adoption timelines.²¹

C. Environmental Taxation Incentives

Under Law 03-10 and Executive Decree 05-444.

1. Customs Exemptions

- **Applicability:** For importers of certified eco-friendly technologies.
- **Legal Basis:** Article 78 of *Law 03-10 on Environmental Protection*.²²

2. National Environmental Prize

- **Purpose:** Recognize natural/legal persons contributing to environmental protection.
- **Award Timing:** Annual presentation on National Environment Day (June 5, coinciding with World Environment Day).
- **Implementation:** Governed by *Executive Decree No. 05-444*.²³

¹⁸ Ketchoua, A. & Azzouzi, A. (Op. cit.), p. 16.

¹⁹ Messdoud, F. (Op. cit.), p. 349.

²⁰ Messdoud, F. (Ibid.).

²¹ Article 203, Law No. 01-21 (Op. cit.), p. 16.

²² Article 78, Law No. 03-10 (Op. cit.), p. 18.

²³ Executive Decree No. 05-444. Dated 12 Shawwal 1426 AH (corresponding to 14 November 2005) Specifying Procedures for Granting the National Environmental Protection Prize. Published in: Official Journal of the Algerian Republic, No. 75, issued 20 November 2005, p. 13.



II. The Effectiveness of Environmental Taxation in Pollution Prevention

Environmental taxation plays a pivotal role in:

1. Raising Ecological Awareness through :

- Shifting polluters' incentives from cheap, polluting technologies to environmentally compliant alternatives.
- Creating market demand for sustainable production inputs.

2. Behavioral Change Mechanisms :

- **Cost Factor:** Green technologies often require high initial investment.
- **Policy Solution:** Customs exemptions (e.g., under Law 03-10) mitigate cost barriers.
- **Outcome:** Enterprises internalize preventive environmental considerations.

From an Expert Perspective, Professor Fares Messdoud suggesting that Maximum effectiveness requires state intervention across four project phases.

Phased Implementation Model for Environmental Taxation Effectiveness According Professor Fares Messdoud's Framework:

Phase 1: Transition Period

Objective: Prepare economic actors for eco-industrial transition.

Measures:

- ✓ Targeted awareness campaigns for polluting industries.
- ✓ Capacity-building workshops on clean production norms.

Example: ANDE's 2020-2025 Industrial Pollution Reduction Program.

Phase 2: Pilot Demonstration Projects

State Role: Fully funds model projects to:

- ✓ Showcase cost-benefit viability.
- ✓ Establish technical benchmarks.

Outcome: Creates tangible references for private sector adoption.

Phase 3: Joint Public-Private Projects

❖ **Partnership Models:**

Type	Algerian Investor Share	Foreign Partner Share
A	51%	49%
B	30%	70% (tech transfer required)

Strategic Aim: Scale proven eco-projects through shared risk.


Phase 4: Private Sector Autonomy

Exit Strategy: State withdraws after-market maturation.

New Norms: Mandatory pollution-free operations (per Law 03-10 Art. 45).

Enforcement: Environmental audits + tax penalties for non-compliance.²⁴

²⁴ Messdoud, F.(Op. cit.), p. 350.



Following this rationale, Dr. Fares Messdoud challenges the efficacy of environmental levies and taxes as preventive instruments for ecological protection. He contends they function merely as punitive measures, failing to achieve the proactive objectives of environmental preservation. Consequently, he advocates for a singular policy focus: leveraging tax exemptions as the primary fiscal tool to incentivize adoption of eco-friendly technologies that facilitate clean, pollution-free production systems.

While Dr. Messdoud's perspective is highly logical and operationally effective, we must acknowledge the inherent limitations in completely eliminating pollution. Certain contaminants—particularly non-industrial pollutants like municipal waste from daily consumption—require maintained taxation systems. In these cases, fiscal instruments remain indispensable to ensure polluters contribute to waste management costs, treatment expenses, and impact mitigation efforts.

Environmental taxation serves as a critical revenue stream for states to offset pollution remediation costs²⁵. Given the impracticality of complete pollution elimination, ecological levies and taxes remain essential to mitigate escalating contamination risks, and finance the management of industrial pollution externalities.

However, the imposition of environmental fees and taxes on the prices of products makes the consumer turn to less expensive products, which affects the production of factories that are required to pay these fees, resulting in evasion, on the one hand, and on the other hand, the imposition of these fees and taxes affects the wheel of economic growth, which affects the nature of the legislative system and the conviction of the owners of polluting enterprises either in favor of applying clean production conditions or neglecting them. All of this affects the nature of the legislative system and the conviction of the owners of polluting enterprises, either in favor of applying clean production requirements or neglecting them.²⁶

Moreover, the lack of transparent policies for collecting and allocating ecological levy revenues undermines their designated purpose. This is particularly evident in the current distribution framework: while 75% of these levies are earmarked for the National Environment and Pollution Control Fund, the remaining 25% is divided between municipal governments and the public treasury - creating potential misalignment with environmental objectives.²⁷

This accountability gap equally affects levies imposed for:

1. Improper storage of specialized industrial/medical waste.
2. Supplementary air pollution taxes.
3. Fuel surcharges.

The public treasury shows no evidence of allocating its 25% share to pollution control, while 50% of gasoline levy revenues are diverted to the National Road and Highway Fund - directly contradicting environmental earmarking principles.

Conclusion:

This study demonstrates that environmental protection mechanisms in Algeria—irrespective of their design—continue to suffer from significant implementation delays and systemic inertia. Such shortcomings create an iron curtain between ecological sustainability and the nation's socioeconomic aspirations, particularly in technological advancement and economic development. This implementation gap may be partially attributed to the relative novelty of environmental governance as a policy priority.

²⁵ Rezzoug, K. (Op. cit.), p. 6.

²⁶ Ounnas, Y. (2007, July). Legal mechanisms for environmental protection in Algeria [Doctoral dissertation, Abou Bakr Belkaid University of Tlemcen]. (p. 87).

²⁷ Ounnas, Y. (Op. cit.), p89.

Therefore, environmental taxes as a preventive mechanism in Algeria still have a weak and limited role on the ground, as evidenced by special reports that indicate the increase in pollution in many sectors, in addition to the lack of full utilization of the resource of these revenues in what is related to the environment and its surroundings, and therefore, considering environmental levies as a prevention and deterrence mechanism against environmental pollution must be before it is polluted and even after that the meaning of activating the legal texts in this field in order to achieve both private and public deterrence against the phenomenon of environmental pollution, whether by natural or legal persons, and in cases of its occurrence. In cases of environmental pollution, it is necessary to compulsorily collect environmental taxes and use them to clean it from the remnants of pollution, as the state's exclusive use of environmental taxes for what serves the environment will inevitably contribute in one way or another to protecting the environment from pollution and thus preserving the lives of individuals.

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