

*Ecological taxation in Algeria : A key lever for sustainable environmental governance*

الضرائب البيئية في الجزائر: رافعة أساسية للحكومة البيئية المستدامة

*Meriem SIGUERDJIDJENE*

مریم سيقرجيجن

*Doctoral Student, Option: Environmental law, Sfakes University, TUNISIA*

طالبة دكتوراه، تخصص: قانون البيئة، جامعة صفاقس، تونس

*Email: meriemsiguer@gmail.com*

تاريخ النشر: 2025/12/25

تاريخ القبول: 2025/12/18

تاريخ إرسال المقال: 2025/11/18

ملخص:

يركز هذا المقال على دراسة معمقة للحماية البيئية ودورها الجوهرية في إرساء حوكمة بيئية فعالة في الجزائر. وتتضمن الدراسة تحليلاً مفصلاً للإطار المفاهيمي للحماية البيئية وأسسها القانونية، مع إبراز كيفية توزيع العائدات المتولدة عن هذا النهج في السياق الجزائري على وجه الخصوص.

يتمثل الهدف الرئيس من هذا البحث في تسليط الضوء على الوظيفة الحيوية للحماية البيئية بوصفها آلية اقتصادية. فهي لا تساعد فقط على تحديد معالم الحوكمة البيئية، بل تعمل أيضاً كأداة للحد من الآثار البيئية السلبية في الجزائر.

لقد كشفت الاستنتاجات المتوصل إليها من خلال هذه الدراسة عن جملة من الجوانب المهمة. أولاً، إن إدراج الحماية البيئية ضمن مجال الحوكمة البيئية يؤدي دوراً مزدوجاً، فهو من جهة يثبط السلوكيات المضرة بالبيئة، ومن جهة أخرى يشجع المؤسسات على الابتكار والتحول نحو الاقتصاد الأخضر. علاوة على ذلك، فإن من الضروري أن تحظى هذه السياسات الجبائية البيئية بدعم من برامج وتدابير وقائية موجهة نحو إرشاد المنتجين إلى منع الأضرار البيئية قبل حدوثها بوقت طويل.

كلمات مفتاحية:

الحكومة البيئية، الضرائب البيئية، الرسوم البيئية، التشريعات.

**Abstract:**

*This article focuses on an in-depth examination of ecological taxation and its essential role in establishing effective environmental governance in Algeria. The study undertakes a detailed analysis of the conceptual framework of ecological taxation as well as its legal justification, highlighting how the revenues generated by this approach are distributed in the specific context of Algeria.*

*The overriding aim of this research is to shed light on the crucial function of ecological taxation as an economic mechanism. Not only does it help define the parameters of environmental governance, but it also operates as a tool for mitigating adverse environmental impacts in Algeria.*

*The conclusions drawn from this study revealed several significant aspects. First and foremost, the introduction of ecological taxation in the field of environmental governance serves a dual function. On the one hand, it discourages environmentally harmful behavior, while on the other, it encourages companies to innovate and move towards a green economy. Furthermore, it is imperative that these ecological tax policies are backed by preventive programs and measures designed to guide producers towards the prevention of environmental damage long before it occurs.*

**Keywords:**

*Environmental law, ecological taxation, liability, legislation, regulatory frameworks.*

## **Introduction:**

The adverse effects of unrestricted globalization have given rise to a range of behaviors and impacts detrimental to the ecosystem and climate. These problems have been amplified by the increase in human and economic activities that neglect the longer-term interests of living organisms on planet Earth.

As the number of voices criticizing these behaviors has grown, and as awareness has grown worldwide among various components of civil society, including individuals, organizations and international institutions, a convergence of opinions on the need to curb these actions and cohabit harmoniously with the environment has begun to take shape. Various conferences and innovative concepts, such as sustainable development and environmental governance, have been proposed to address these issues. These international efforts have resulted in a series of objectives summarized in the United Nations' 2030 Agenda. This agenda encourages nations to adapt their legal frameworks and development programs to comply with these objectives, and to identify the mechanisms and resources needed to achieve them.

As a member state of the United Nations and an active participant on the African scene, Algeria is deeply involved in environmental and climate issues. It has incorporated these dimensions into its government policies and plans, making ecological taxation an instrument for meeting the imperatives of environmental governance. This approach has been put into practice through a series of legal provisions adopted by its legislative body. These provisions combine dissuasive and incentive elements to ensure environmental preservation and climate security.

How ecological taxation in Algeria effectively contributes to the establishment of efficient environmental governance, and the impact of established legal frameworks on these efforts, is a complex and important subject. In examining this dynamic, two hypotheses can be advanced:

Hypothesis 1: The gradual alignment of environmental taxes with sustainability objectives promotes a successful ecological transition.

Hypothesis 2: The effectiveness of ecological taxation depends on good governance, rigorous monitoring and dissuasive sanctions.

By examining the relationship between ecological taxation and environmental governance in Algeria, as well as the impact of legal frameworks on the tax revenues generated, this study seeks

to provide an in-depth insight into the dynamics at play and their contribution to protecting the environment. To achieve this objective, we have broken down the elements of our study into The first deals with the conceptual framework of ecological taxation and environmental governance, while the second includes an analytical study of the reality of ecological taxation in Algeria.

### **1-the conceptual framework of ecological taxation and environmental governance : (Benedicte,2022,p53)**

The conceptual framework encompasses the various definitions and terms related to ecological taxation and environmental governance, which we will examine as follows :

**1-1-The nature of ecological taxation :** The nature of ecological taxation is diverse and varies according to the legal and professional aspects used to define its different objectives.

**1.2 Concept of ecological taxation:** Taxation, in its global sense, encompasses all monetary deductions imposed by the State on members of society to cover its public expenditure in the form of taxes, fees and contributions. Based on this concept, the concept of ecological taxation has been derived as follows: Any tax imposed at a rate guaranteeing a significant reduction in the use or consumption of products harmful to the environment, or to redirect production and consumption methods towards products more compatible with the need to preserve the environment and sustainably exploit natural resources.

### **2-International ecological tax systems :(El Djellali & Caché,2022,p.524)**

Different ecological taxes implemented by different countries around the world can be summarized as follows :

**2-1Taxes on carbon emissions :** These taxes are imposed on carbon dioxide (CO<sub>2</sub>) emissions from fossil fuels, and aim to discourage the use of these fuels and encourage low-carbon alternatives.

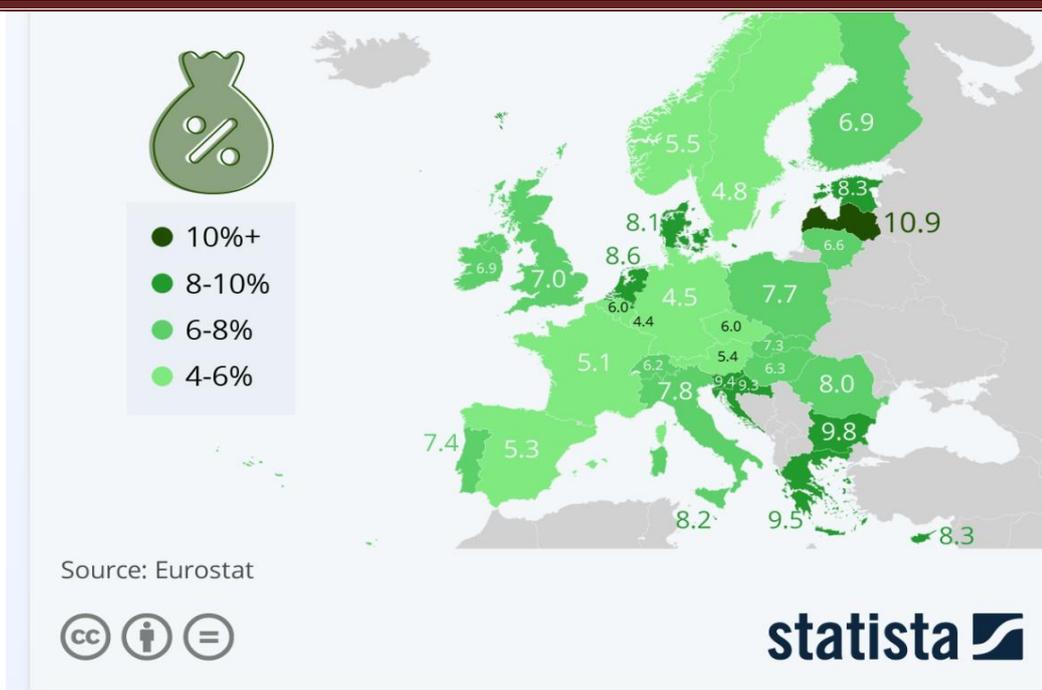
**2-2Taxes on air pollutant emissions :** These target emissions of pollutants such as sulfur dioxide (SO<sub>2</sub>) and nitrogen oxides (NO<sub>x</sub>) from industrial activities and transport, in order to reduce air pollution.

**2-3-Waste taxes :** These are imposed on waste management, including collection, treatment and disposal, to encourage recycling and discourage excessive waste production.

**2-4-Taxes on water use :** These aim to promote responsible water use by imposing progressive tariffs based on consumption.

**2-5-Taxes on hazardous chemicals :** These taxes are imposed on chemicals that are harmful to the environment and health, to discourage their use and encourage safer alternatives.

It should be noted that the various environmental taxes vary from country to country, depending on each country's environmental policies and priorities.



Eurostat has released new data showing that environmental tax revenue across the European Union totalled €324.6 billion in 2018, a 3 percent increase on the previous year. That total is also 49 percent higher than in 2002 and it mainly consists of energy taxes (77.7 percent), followed by transport taxes (19.1 percent) and pollution and resource taxes (3.3 percent).

Environmental taxes as a share of total taxes & social contributions were highest in Latvia in 2018 at 10.9 percent, followed by Bulgaria with 9.8 percent and Greece with 9.5 percent. The lowest shares were seen in Luxembourg at 4.4 percent and Germany at 4.5 percent. The Eurostat data also showed taxes in several non-EU nations. Environmental taxes accounted for 7 percent of the UK's total tax revenue along with 6.2 percent of Switzerland's and 5.5 percent of Norway's.

### 3-Objectives of ecological taxation: (TIERRY,2010.p.132)

#### Taxation traditionally has two objectives :

**3-1-The first objective :** is common sense. It corresponds to what is meant by the word "tax", and can be summed up as financing. Through a compulsory levy, the aim is to find the resources needed to finance public expenditure. From this point of view, the best tax is one with a broad base and a low rate. Such a tax yields a high return and is often painless for the taxpayer.

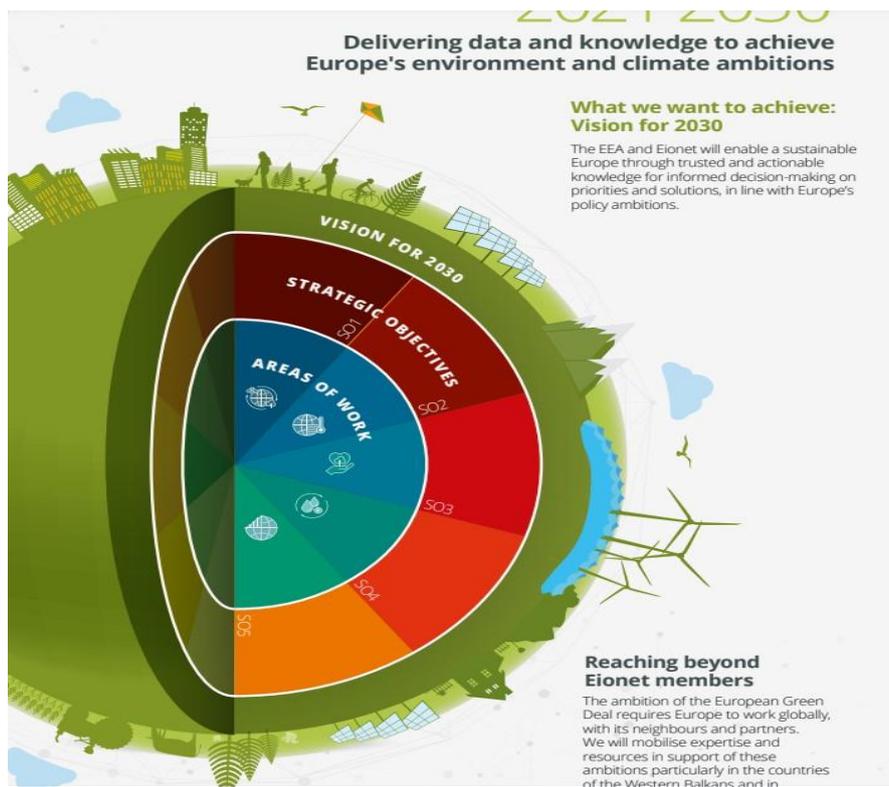
**3-2-The second objective :** is to give taxes the mission of correcting distortions in price systems, particularly when price formation does not take into account the externalities, positive or negative, that arise in the production of a given good or service. In such cases, a tax is effective, whatever its yield (i.e. the revenue it generates), as long as its level is sufficient to send the desired signal to the producer. (This is the "price effect" or price complement provided by taxes, theorized in the mid-

°**Arthur Cecil Pigou (1877-1959)** was an eminent British economist. He is best known for his work on welfare economics and the notion of the "Pigouvian tax", where taxes are used to correct negative externalities. His major work, "Welfare Economics" (1920), influenced public policies aimed at internalizing social costs in economic decisions. Pigou made a significant contribution to twentieth-century economic theory.

*A key lever for sustainable environmental governance*

twentieth century by the British economist Pigou)<sup>o</sup>. This second objective gives taxes an incentive role. More often than not, the effectiveness of a tax depends on its narrow base and high rates. To be effective, this tax must not be painless : as we can see, it has everything to displease, a priori, the tax experts in charge of feeding the State budget.

Ecological taxation is clearly in line with the second objective. Its effectiveness lies in the fact that, by modifying relative prices, it can contribute to changing the behavior of economic agents. Ecological taxation is the ultimate expression of the polluter-pays principle. For more than twenty years, the political debate has cyclically focused on the creation of "carbon" taxes, but beyond carbon alone, it also concerns the need to give a certain number of taxes an incentive role.



Source :European Environment Agency: AEE–EIONET Strategy 2021–2030"

#### 4-Definition of environmental governance:

"Environmental governance refers to the decision-making processes involved in the control and management of the environment and natural resources. Principles such as inclusion, representation, accountability, efficiency and effectiveness, as well as social equity and justice, are the foundations of good governance. ( El-Jisr,2010,p15)

Environmental governance is a relatively new concept, involving governance and the environment at the same time, and is assessed according to six main components (known as the puzzle):(European Environment Agency,2021,p30)

- 1-environmental institutions
- 2-environmental laws and regulations
- 3-environmental research and development,
- 4-access to environmental information and data,
- 5-access to environmental financing,

6-public awareness and participation.

On the basis of the above, we can provide a succinct definition of the term environmental governance as follows : A set of rules, procedures and mechanisms that govern the behavior of individuals, institutions and all stakeholders, and regulate the methods of interaction with the environment in order to preserve it and optimize the use of its resources to achieve environmental sustainability.

### **5-Environmental governance mechanisms in Algeria : (El-Jisr,2010.op.cit,p 28)**

The current environmental protection policies in Algeria focus on a set of mechanisms aimed at preventing damage that compromises environmental integrity. These mechanisms include:

**5-1 Legal mechanisms :** These encompass environmentally protected areas established by Algerian legislation, which aim to safeguard specific ecological characteristics of a given region. These areas also include coastal or maritime public domain zones subject to special regulations defined by law for the protection of wildlife, flora, terrestrial and marine ecosystems.

**5-2- Administrative mechanisms :** There are several official structures responsible for implementing environmental governance in Algeria, including the National Waste Agency, the National Climate Change Agency, the National Centre for Cleaner Production Technologies, the Biological Resources Development Centre, the National Observatory for the Environment and Sustainable Development, and the National Observatory for the Promotion of Renewable Energies. The policies and methods applied by these institutions are unified around the common goal of environmental protection.

**5-3-Political mechanisms :** These include the environmental plans adopted by the State to protect the environment. Algeria has developed several environmental plans, including: national plans (national land use plan, national water plan, national waste management plan) and master plans (water master plan, agricultural development master plan, maritime fishing and aquaculture master plan). All these plans make environmental sustainability their driving force.

### **5-4 Economic mechanisms :**

Among the most important economic mechanisms on which environmental governance is based is ecological taxation, which represents all the taxes and charges imposed by the State through its legal system to compensate for the damage caused to the environment by pollutants. It is a deterrent designed to regulate and punish the behavior of those concerned.

Environmental governance in Algeria relies on a combination of legal, administrative, political and economic mechanisms to protect the environment and promote sustainability. Ecological taxation is seen as an effective means of reducing negative environmental behavior. On the one hand, the revenues generated help to finance environmental protection programs, the acquisition of special equipment to **preserve** ecological balances, and the correction of negative aspects produced by the economic production apparatus.

Secondly, an analytical study of ecological taxation in Algeria aims to identify the reality of ecological taxation in Algeria, addressing its various forms, the levels of collection achieved and their contribution to government revenue.

**6-Algerian experience of ecological taxation: \***

Environmental concerns and the phenomenon of climate change are among the major global challenges of which Algeria is fully aware. This awareness has led to the development of policies, practices and strategies designed to tackle the problems associated with climate change and pollution, with the aim of preserving a sustainable environment.

These policies fall into two main categories: those at local level and those carried out in cooperation with other nations and international organizations. The Algerian state has set up a range of institutions and mechanisms for environmental observation and management, through various structures and legal frameworks. Among these frameworks, the introduction of ecological taxation occupies a central place and is carefully supervised by various bodies in line with a common strategy. This ecological tax approach is integrated into Algeria's overall tax system.

To this end, various laws have been enacted in the legislative and regulatory fields. These laws aim to establish a solid regulatory framework for environmental preservation and the management of environmental issues: **(BENZIDANE)**

- Law no. 01-19 of December 12, 2001 on waste management, control and disposal ;
- Law no. 01-20 of December 12, 2001 on regional planning in the context of sustainable development;
- Law n°02-02 of February 05, 2002 relating to the protection and enhancement of the coastline;
- Law n°03-10 of July 19, 2003 on environmental protection in the context of sustainable development;
- Law n°04-03 of June 23, 2004 on the protection of mountain areas as part of sustainable development;
- The law n°04-09 of August 14, 2004, regarding the promotion of renewable energies within the framework of sustainable development;
- Law n°04-20 of December 25, 2004 on the prevention of major risks and disaster management as part of sustainable development ;
- Ratification by Algeria of the Kyoto Protocol.

**6-1-Institutions responsible for preserving, promoting and protecting the environment:**

These institutions have extensive prerogatives. They play a central role in identifying and fulfilling the State's commitments. The public entity responsible for overseeing this field has been subject to flexible administrative evolution in response to local and international developments. Indeed, the Algerian government has created multiple administrative entities and undertaken initiatives aimed at preventing and protecting the environment, through actions and programs such as:

- The national clean waste management program;
- The national land-use planning program ;
- The policy program for urban planning and development;
- The national environmental affairs program ;
- The integrated municipal waste management program ;

---

\* The Algerian tax system: It consists of taxes. Direct taxes include: - Income tax - Corporate profits tax - Professional activity tax - Value-added tax - Property tax - Sanitation tax - Wealth tax - Domestic consumption tax - Petroleum products tax. Indirect taxes include: - Circulation tax - Registration tax - Stamp duty.

*A key lever for sustainable environmental governance*

-The national sustainable development program ;  
 -National action plan for the environment and sustainable development  
 -The communal environmental protection charter ;  
 -The local environmental program. On the institutional front, several new bodies have been created:

-The regional conference on regional planning and development;  
 -The national office for the environment and sustainable development;  
 -The national fund for the environment and depollution;  
 -Governorate and departmental environmental directorates; Regional environmental inspectorates  
 -The national agency for climate change  
 -The national council for land use planning and sustainable development.

The Algerian government is committed to the following targeted environmental policies:

-Environmental awareness and education: widespread environmental education in schools and through the media and collaborative campaigns for environmental protection.

-Environmental information system: The National Observatory for the Environment and Sustainable Development (ONEDD) has set up an environmental information system based on GIS technology to evaluate public policies, analyze environmental pressures and report on environmental progress.

-Air quality monitoring: The SAMASAFIA network monitors air quality in urban areas in accordance with established standards, detects pollution levels and alerts the authorities and the public when thresholds are exceeded.

-Fuel efficiency and vehicle emission standards: As part of the drive to control energy consumption and combat climate change, financial incentives are offered to promote clean fuels and improve vehicle fuel efficiency.

-Municipal solid waste management: A national solid waste management program (PNGDSM) is being implemented to improve the management of municipal solid waste, integrating different management phases.

The PNGDSM aims to eradicate the practice of illegal dumping, and to organize the collection, transport and disposal of municipal solid waste under conditions that guarantee environmental protection and the preservation of environmental hygiene, in particular by building, fitting out and equipping technical landfill centers (CET) in all the wilayas. The objectives are to :

- improving the quality of life of citizens and protecting their health;
- sound, ecologically rational waste disposal and recycling of recyclable waste;
- create green jobs.

#### **6-2-Ecological taxes: (BENZIDANE)**

These were introduced to better apply the "polluter pays" principle. They mobilize the resources needed to finance the damage caused to the environment by a polluting activity.

. A - The tax on polluting and environmentally hazardous activities: This tax applies to activities listed by regulation. Polluting or environmentally hazardous activities fall into two categories:

-activities subject to prior declaration to the president of the APC8 with territorial jurisdiction, before being put into service; - les activities subject to prior authorization from either the Minister for the Environment, the Governor with territorial jurisdiction, or the president of the Municipal People's Assembly (APC) with territorial jurisdiction. The basic annual rate for this tax is set as follows:

- 9,000 DA for classified installations where at least one activity is subject to declaration;
- 20,000 DA for classified facilities where at least one activity is subject to authorization by the president of the APC;

***A key lever for sustainable environmental governance***

---

-90,000 DA for classified installations where at least one activity is subject to authorization by the territorially competent wali;

-120,000 DA for classified facilities where at least one activity is subject to authorization by the Minister of the Environment. For facilities employing no more than two people, the basic rates are reduced to :

-2,000 DA for classified facilities subject to declaration;

-3,000 DA for classified facilities subject to authorization by the president of the Municipal People's Assembly;

-18,000 DA for classified installations subject to authorization by the governor;

-24,000 DA for classified facilities subject to authorization by the Minister of the Environment. The amount of this tax is determined by multiplying the above-mentioned amounts by a multiplying coefficient of between 1 and 10, depending on the nature and scale of the activity, and the type and quantity of discharges and waste generated. All proceeds from this tax are allocated to the Fonds National pour l'Environnement et la dépollution.

**B- Air pollution taxes:**

-Fuel tax: Fuel tax applies to leaded "super/normal" petrol and diesel. It is collected and paid by Naftal on the basis of quantities delivered, under the same conditions as for the Tax on Petroleum Products (TPP).

-The Tax on Petroleum Products : (TPP) applies to petroleum products or assimilated products, imported or obtained in Algeria, in particular in exercised factory, according to tariffs. The rules of base and liquidation applicable to the VAT are extended to the TPP. All proceeds from this tax are paid into the State budget.

-Specific tax on imported and/or locally-produced plastic bags: The proceeds of this tax are earmarked for financing the public system (ECO-JEM) set up under law no. 01-19 of 12/12/2001, relating to the recycling and recovery of plastic packaging waste of low biodegradability. The tax is calculated at 10.50 DA/kg on imported or locally produced plastic packaging. It is allocated to the National Environment and Pollution Control Fund:

- Tax on new or imported and/or locally produced tires;

-Tax on oils, lubricants and lubricant preparations: The proceeds of this tax are intended to finance actions to promote and encourage investment in the setting up of collection, recovery, disposal and/or regeneration points for used oils.

**C- Industrial, toxic and hazardous waste disposal incentive taxes:**

-Tax to encourage the removal from storage of special and/or hazardous industrial waste: This tax is set at 9 10,500 DA per tonne of industrial waste stored.

-Incentive tax for destocking waste from hospital and clinic care activities: The amount of this tax is set at 24,000 DA per tonne of waste stored.

**D- Additional taxes :**

-Supplementary tax on industrial wastewater : The supplementary tax on industrial wastewater is calculated on the volume discharged and the pollution load generated by the activity exceeding the limit values set by current regulations. Rates for this tax are determined by reference to the annual prime rate and a multiplying coefficient of between 1 and 5, depending on the rate at which limit values are exceeded.

-Complementary tax on industrial air pollution on quantities emitted in excess of limit values: This tax applies to quantities emitted in excess of the limit values set by current regulations. The amount of the tax is set by reference to the rate of the tax on polluting or environmentally hazardous activities. This rate is multiplied by a coefficient of between 1 and 5 on the basic rates, which vary between 2,000 DA and 120,000 DA, depending on the degree of pollution of the activities.

## A key lever for sustainable environmental governance

**E- Taxes on tobacco products:**

-Domestic consumption tax (TIC): The domestic consumption tax (TIC) applies to tobacco and cigarettes, in accordance with set tariffs. The rules governing the basis of assessment, liquidation and collection applicable to VAT are extended to the TIC.

-Additional tax: The additional tax on tobacco products is calculated at 6.00 DA per pack, box or pouch released for consumption in Algeria. This tax is collected, declared and paid by manufacturers according to the same rules and conditions as for Value Added Tax(VAT).

**F household waste removal tax-:**

**The tax is levied annually on built-up properties that benefit from refuse collection services, in the name of the owners or usufructuaries. The amount of this tax is set as follows:**

- Between DA500 and DA1,000 per residential premises;
- Between 1,000 and 10,000 DA per professional, commercial, craft or similar premises;
- between DA 5,000 and DA 20,000 per camping or caravan site;
- Between DA10,000 and DA100,000 per industrial, commercial, craft or similar premises producing quantities of waste greater than those in the above categories. Rates are set by the APC. In communes practicing selective sorting, up to 15% of the amount of the tax will be reimbursed to each household that returns composable and/or recyclable waste to the treatment facility. (Fraunhofer Institute for Systems and Innovation Research ISI Breslauer, 2015)

Tableau 05 : Récapitulatif des Taxes en matière d'environnement

TAXES	Base légale et réglementaire	ASSIETTE
La taxe sur les activités polluantes et dangereuse pour l'environnement	Art 117 de la loi n° 91-25 du 18 décembre 1991, modifié et complété par l'art 54 de LF 2000 et art 202 LF 2002	taux de base annuel fixée ; (voir tableau n°01) et un coefficient multiplicateur compris entre 1 et 10(voir tableau n°02)
La taxe sur les produits pétroliers	Art 28 bis du code des taxes sur le chiffre d'affaires (CTCA)	Taxe spécifique de 1 DA/HL
La taxe sur les carburants	Art 38 de LF 2002, modifié par l'art 55 de LF 2007	Taxe spécifique : * 0.10 DA/Litre : essences avec plomb (normal et super) * 0.30 DA/Litre : gasoil
La taxe sur les pneus neufs importés et/ou produits localement	Art 60 de LF 2006, modifié et complété par l'art 46 de LFC 2008	Taxe spécifique : * 5 DA/ Pneu destiné aux véhicules légers * 10 DA/ Pneu destiné aux véhicules lourds
La taxe sur les huiles lubrifiants et préparations lubrifiantes	Art 61 de LF 2006, modifier et complété par l'art 46 de LFC 2008	Taxe spécifique de 12.500 DA/ Tonne
La taxe d'incitation au déstockage des déchets industriels	Art 203 de LF 2002, modifié et complété par l'art 46 de LFC 2008	Taxe spécifique de 10.500 DA par tonne
La taxe d'incitation au déstockage des déchets liés aux activités de soins des hôpitaux et cliniques	Art 204 de LF 2002, modifié et complété par l'art 46 de LFC 2008	Taxe spécifique de 24.000 DA/T
la taxe complémentaire sur les eaux usées industrielles	Art 94 de LF 2003, modifié et complété par l'art 46 de LFC 2008	taux de base annuel fixée ; (voir tableau n°01) et un coefficient multiplicateur compris entre 1 et 5 en fonction du taux de dépassement des valeurs limites.
la taxe complémentaire Sur la pollution atmosphérique d'origine industrielle	Art 205 de LF 2002, modifié et complété par l'art 46 de LFC 2008	
Taxe d'assainissement	Art 263-263 quinquies du code des impôts directs et taxes assimilées	Voir le titre 8
La taxe spécifique sur les sacs en plastique importé et/ou produits localement	Art 53 de LF 2004.	

Source : Direction Générale des Impôts.

-Tax incentives for environmental protection Reduction in VAT rate from 17% to 7% for LPG/fuel equipment, i.e. containers with control, regulation or measurement devices for LPG/fuel and natural gas/fuel; LPG distribution pumps; LPG/fuel and natural gas/fuel conversion equipment.

-Reduction in VAT rate from 17% to 7% for absorption air conditioners running on natural gas and propane.

-Reduction of the VAT rate from 17% to 7% applicable to equipment and accessories intended for LPG/C and CNG/C. These accessories are :

**Specific LPG/C tankers;**

-LPG/C storage cylinders;

-LPG/C pump meters, LPG/C volumeter, tanks;

-LPG/C, CNG/C conversion equipment. - Reduction of the VAT rate from 17% to 7% applicable to LPG/C liquefied petroleum gas.

The use of taxation in Algeria's environmental policy began in earnest with the introduction of the tax on environmentally hazardous or polluting activities (TAPD). A host of ecological taxes have been introduced through fiscal provisions. These actions are part of a national environmental strategy designed to (GIZ Deutsche Gesellschaft für Internationale Zusammenarbeit , s.d.)

-improve citizens' health and quality of life;

-conserve natural capital and improve its productivity;

-reduce economic losses and improve competitiveness;

-contribute to the global environment;

-promote sustainable growth and reduce poverty ;

-promote a culture of citizenship;

-raise awareness of the need to protect the environment. (Ministry of Environment, 2020)

Algerian legislation is constantly evolving, with new regulations being introduced from time to time. In this context, tax charges are levied on industrial players considered to be potential sources of pollution. However, the fixed amount of these taxes does not seem to act as a significant deterrent, resulting in the continuation of non-compliant practices within the industry. This situation demonstrates that non-compliant companies give a higher priority to financial gain than to environmental protection.

To remedy this problem, the application of environmental taxation, also known as "green taxation", is emerging as a relevant tool to counter environmental degradation and damage. This approach has given rise to the need to initiate various measures and approaches aimed at environmental protection

**6-3-Evolution of ecological revenues in Algeria from 2014 to 2021 :**

Ecological revenues in Algeria are made up of all the taxes and fees introduced by the Algerian legislator, applied to activities that cause damage to the environment. In what follows, we will look in detail at these taxes and fees, their evolution, their distribution and their contribution to public state revenues. Contribution of ecological revenues to public state revenues In this element, we will examine the total evolution of ecological revenues over the study period, as well as their percentage contribution to the general state budget.

Année	Revenus de la Fiscalité Écologique (milliards de DZD)	Pourcentage des Recettes Publiques de l'État (%)
2014	2,900,271	0.07%
2015	33,943,474	N/A
2016	3,329,635	N/A
2017	XXX	XXX
2018	68,666,721	1.25%
2019	XXX	XXX
2020	65,125,613	XXX
2021	33,452,105	XXX

### Produced by the researcher in accordance with Ministry of Finance data

Through this table, which illustrates the evolution of ecological taxation in Algeria over the period 2014-2021, we note that the value of ecological taxation at the start of the study period was DZD 2,900,271 billion, representing 0.07% of public state revenue. This value represents the revenue from ecological taxation instituted by the tax legislation of the time, mainly in the form of the tax on gas emissions, imposed from 1996 onwards, as well as royalties on polluting and/or environmentally hazardous activities, established from 1984 onwards.

As global awareness of the need to preserve the environment increased, the focus shifted to successive international summits following the Third United Nations Conference on Environment and Development in Rio de Janeiro in 1992, considered to be the benchmark convention for protecting the Earth and the climate, through to the Kyoto Protocol in 1997, the outcome of the third summit, and the fifteenth summit in Copenhagen, Denmark, in 2009, which aimed to While many of the world's major summits have generally failed to adopt binding environmental protection provisions, participants at each summit have parted company with a series of non-binding promises.

With the emergence of Summit 21 held in Paris in 2015, Algerian lawmakers had included a rich set of ecological taxes and levies to highlight Algeria's efforts to preserve the environment, leading to substantial ecological tax revenues that reached DZD 33,943,474 billion by the end of 2015.

With the entry into force of binding international provisions concerning environmental protection after this summit from early 2016, Algeria's ecological tax revenues continued to evolve, rising from DZD 3,329,635 billion in 2016 to DZD 65,125,613 billion in 2020, peaking at DZD 68,666,4721 billion in 2018, representing around 1.25% of total state public revenues.

This development is due to the broadening of the tax base through the introduction of new taxes and fees and certain rate changes, as well as to greater rigor in the collection of ecological fees to meet the requirements of international law and the United Nations-mandated reinforcements of environmental governance and sustainability.

At the end of the study period in 2021, we see a clear drop in ecological tax revenues to DZD 33,452,105 billion, which is merely an inevitable consequence of the repercussions of the crises due to the COVID-19 pandemic situation.

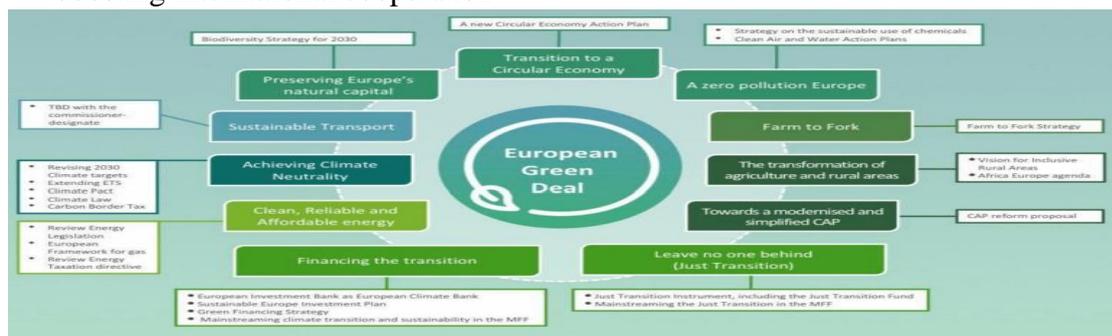
In examining the current tax system, the study revealed certain shortcomings, according to which other amounts should have appeared in the above table, representing the residuals to be collected from ecological taxation. However, this remains impossible, as these amounts are included in global amounts with other restes à collecter from other taxes and fees, which are grouped under a general category of "restes à collecter d'autres".

The contribution of ecological taxation to the State budget is very low, not exceeding 1.25% at best. Moreover, like other taxes, it is prone to tax evasion due to the lack of environmental culture among taxpayers in particular, and citizens in general.

**7-Evaluation of Algeria's fiscal and governance policies and programs:**

From the above, we consider that government action to protect the environment is based on six axes:

- strengthening the legal and institutional framework
- reducing pollution and nuisances
- preserving biological diversity and natural areas
- training, information and awareness-raising
- strengthening organization and operating resources
- boosting international cooperation



**Diagram showing the characteristics and objectives of ecological taxation in Europe and in other countries**

Environmental awareness has led the Algerian government to adopt fiscal measures, including legal and institutional tools, to promote environmental protection. One of these mechanisms is the introduction of green taxation, comprising various forms of tax and economic instruments aimed at preserving the ecosystem.

The origins of ecological taxation can be traced back to the 1992°Finance Act, Article 117 of which introduced a tax on activities that have a negative or dangerous impact on the environment. This initiative was subsequently updated by the Finance Acts of 2000 and 2001. More specifically, the 2001 Finance Act established the Fund for the Environment and the Development of Environmental Protection (FEDEP), with the aim of reinforcing environmental measures.

The Algerian government has introduced green tax mechanisms in response to growing environmental concerns. These mechanisms include taxes and other economic tools designed to protect the environment. The initiative began with the 1992 Finance Act, and further improvements were made by the Finance Acts of 2000 and 2001, notably with the creation of the FEDEP to further strengthen environmental protection efforts. With the objectives defined, the focus was on the development of a green tax system.

Now that these objectives have been defined, sustainability has become a key consideration in local and global development processes, the scope of which is becoming ever denser as social, scientific and technical advances are made. This approach has enabled Algeria to make significant progress in implementing its environmental policy on the ground, and in mastering the major economic and social challenges that this entails:\*

\* Law No. 99-11 of December 23, 1999, concerning the Budget Law for the year 2000: Article 54 introduced an amendment to the provisions of Article 117 of Law No. 91-25 of December 18, 1991, concerning the Budget Law for 1992. This amendment specifically pertains to the annual tax rate, which is modified and set as follows: 3,000 DA for classified installations with at least

***A key lever for sustainable environmental governance***

---

- Objective knowledge of the state of the environment and its uses, enabling analysis of the pressures caused by human activities (biennial report on the state and future of the environment).
- Permanent observation of the environment on a national and regional scale, based on the initiation and development of data banks and sectoral information systems.
- Permanent monitoring and control of sources of pollution and environmental degradation by various state bodies and institutions.
- Increased cooperation, both bilateral and multilateral, which has enabled us to benefit from know-how and technology, within the framework of sustainable development.
- Mobilization of all local, regional, national and even international resources to implement environmental policy.
- Particular attention has been paid to fiscal and financial incentives for actions and projects that protect the environment and ensure sustainable development.

**8-Perspectives and recommendations on the environment and environmental taxation in Algeria :**

Algeria, which is facing up to the damaging effects of climate change, is attaching particular importance to this issue by making it one of the priorities of its investment program. Reinforcing measures to improve energy efficiency, promoting renewable energies as an investment incentive, and developing carbon dioxide storage technology are all part of Algeria's climate change policy (**Ministry of Environment and Territorial Development, 2008**)

The government's environmental preservation objectives include the creation of an environmental research center and the implementation of several environmental projects. Various environmental preservation and waste management operations (special, household and municipal) are also included in the list of actions to be carried out 1. In the context of environmental protection, Algeria has opted for the nationalspatial planning framework (SNAT 2030) project.

Based on a dynamic vision, open to the economic world and to technical and technological developments, the regional planning policy set out in the nationalspatial planning framework (SNAT 2030), is today equipped with the legislative and regulatory, organizational, financial and fiscal means to drive a reorganization of the territory, which must not only correct the serious

---

one activity subject to declaration as provided for by Decree No. 88-19 of July 26, 1988, concerning classified installations and establishing their nomenclature.

3,000 DA for classified installations with at least one activity subject to authorization as provided for by Decree No. 88-19 of July 26, 1988, concerning classified installations and establishing their nomenclature. The implementation details of the specific provisions of this law were established by Executive Decree No. 93- 68, regarding the implementation modalities of the tax on environmentally polluting or hazardous activities.

Law No. 99-11 of December 23, 1999, on the 2000 Finance Law: Article 54 introduced an amendment to the provisions of Article 117 of Law No. 91-25 of December 18, 1991, on the 1992 Finance Law, particularly the annual tax rate, which is modified and set as follows: 120,000 DA for classified installations with at least one activity subject to authorization by the Minister responsible for the environment as provided for by Executive Decree No. 98-339 of November 3, 1998, defining the regulations applicable to classified installations and establishing their nomenclature.

distortions observed, but also enhance its assets and potential, while ensuring the sustainability of the development of all the country's regions, towns and countryside.

Algeria's prospects for environmental protection also include the development, improvement and reform of its ecological tax system. Algeria's ecological tax system seems to be aimed much more at financing environmental management than at encouraging economic agents to change their behavior.

Algeria has made significant progress in implementing its environmental policy. Strengths include in- depth knowledge of the environment, constant environmental monitoring using sectoral information systems, and enhanced international cooperation. However, shortcomings do exist, notably with regard to the lack of consistency in the collection and exchange of environmental information, as well as insufficient collection rates to finance waste management.

### **8-1-Future prospects and ecological taxation : (Second National Report on the Millennium Development Goals, September 2010, p. 113)**

Faced with the challenges of climate change, Algeria is looking to the future by integrating sustainable development perspectives. Measures to improve energy efficiency, encourage renewable energies and develop carbon dioxide storage technology are envisaged. With regard to ecological taxation, Algeria plans to reform tax policies to encourage responsible economic behavior and finance environmental management.

### **8-2-Ecological transition and development of the green economy : (National Economic, Social and Environmental, Council, 2020, pp. 63-64)**

The ecological transition project is a priority in efforts to develop the green economy. Here are the main actions undertaken by this ministerial department in 2020:

- o Launch of training programs leading to qualification certificates in green professions (120 young project leaders were trained and supported in the realization of their innovations) and guidance for startups active in green entrepreneurship;
- o Installation of an intersectoral committee bringing together 16 ministerial departments, with a view to organizing waste recovery channels;
- o Held several meetings with various players in the recycling field (producers), as well as recycling company managers and civil society players;
- o Organization of working sessions with operators specializing in rubber wheels, used industrial oils, electrical waste, paper, cardboard and glass, in addition to the organization of working sessions with the Ministry of Post and Information and Communication Technologies, devoted to the regulation of the electronic waste sector;
- o Drawing up a pilot roadmap for the development of the plastic recycling sector. The specifications governing this sector are currently being finalized;
- o Completion of 15 operations to eliminate illegal landfills, in addition to landfill sites (CET), including 11 for household and similar waste and 5 for inert waste, as well as 19 controlled landfills;
- o Construction of 4 additional landfill trenches in Batna, Tissemsilt, Chlef and Saida;
- o Seven waste-to-energy fertilizer production stations, including one in Sidi Belabbes and two others under construction in the wilayas of Mostaganem and Mascara, plus 4 stations to be built (registered projects) in Médéa, Jijel, Biskra and El Oued;
- o Implementation of support programs for local authorities in four pilot wilayas (Jijel, Oum El Bouaghi, Ouargla and Sétif) to promote the green economy;
- o Ecological wastewater treatment systems in Adrar and Oran;
- o Completion of rehabilitation work on the Oued Smar landfill and clean-up of anarchic landfill sites in the communes of Meftah, Bordj Bou Arreridj and Gué de Constantine;
- o The "environmental citizenship" (Ecocitoyenneté) project was launched, with the involvement of civil society in the various activities, to which a digital platform was dedicated. A total of 883

***A key lever for sustainable environmental governance***

- ecological associations were listed nationwide, 43 of which benefited from guidance and support;
- o Elaboration of a training program for 416 journalists across 35 wilayas and the launch of 731 information and awareness-raising activities on the dangers threatening the environmental ecosystem.
  - o In terms of inspection results: During the first nine months of 2020, 1,333 inspections were carried out, resulting in the issue of 1,404 statements of offence, leading to the provisional closure of 81•

companies and the definitive closure of 19 others, in addition to 483 formal notices, 103 legal proceedings, 11 warnings, 72 summonses and 635 decisions (reservations and recommendations).

As for seawater monitoring, 1,053 samples were taken from the 351 beaches monitored in 2020. Some 594 analyses were carried out between August 15 and September 30, 2020;

o. Algeria has the capacity to convert around 500,000 vehicles a year to run on liquefied petroleum gas (LPG). At present, the percentage of vehicles converted to LPG out of the total national fleet is less than 15%. Establishments specializing in converting vehicles to LPG, of which there are around 650 in the country, have the capacity to convert up to 500,000 vehicles annually. By 2019, a total of 100,000 vehicles had been converted to use this environmentally-friendly fuel. With this in mind, the Union Nationale des Installateurs de Kits GPL plans to present the ministry in charge of renewable energies with a project to convert a further 200,000 vehicles to LPG by 2021 ((UNIAGPL), 2022).

The Ministry of the Environment has set up a support and guidance unit for young people with environmental projects, to help start-ups and small businesses put their ideas into practice. Interested project promoters were invited to fill in and submit a form on the Ministry of the Environment website.

**8-3-A framework agreement to promote green jobs:**

A framework partnership agreement has been signed between the vocational training sector and the environment sector, with the aim of promoting green jobs and supporting young people in carrying out their projects in this field. The training sector will be working to develop modern programs and current environmental programs, broadening the range of specialties and modern trades, and integrating and generalizing green entrepreneurship through the various institutes and centers, such as waste management, recycling and recovery, industrial, hazardous and liquid waste management, as well as environmental surveying and ecological building.

**Conclusion**

Algeria's environmental policy has made significant progress, but challenges remain. Municipal solid waste management and air quality remain major concerns. Successful implementation of environmental policy and ecological taxation will require greater coordination between sectors, harmonization of environmental information systems and targeted tax reforms. Algeria has the opportunity to continue moving towards a more sustainable management of its environment by integrating innovative approaches.

This observation is justified, on the one hand, by the application of very low rates, which leave polluters unmoved, and on the other hand, by the application of a flat-rate tax on polluting and environmentally hazardous activities, which is not as effective an incentive as a proportional-rate tax. Indeed, in order to encourage polluters to modify their behaviour in favour of the environment, we would have to institute taxes at higher rates, which would generate costs higher than the costs of depollution and/or discourage the use of products that damage the environment. Hence the need to reform the tax system to make it more of an incentive for environmentally-friendly behaviour and more of a deterrent for behaviour that harms the environment, thus

meeting the objective of a genuine ecological tax system on a par with that applied in developed countries. It would also be essential to develop pollution-measurement tools that would enable us to assess the results of the various provisions and determine their direct impact on the state of the environment, so as to ensure ongoing monitoring and draw up more relevant studies on the effectiveness of ecological taxation.

### **a) Evaluation of Research Hypotheses**

The study advanced two core hypotheses regarding ecological taxation in Algeria, both of which are assessed against the context of implementation challenges and legal frameworks.

**-Hypothesis 1:** The gradual alignment of environmental taxes with sustainability objectives promotes a successful ecological transition.

The Algerian government has clearly demonstrated commitment to the rational management of natural resources by strengthening the legislative and institutional framework and launching numerous programs concerning environmental education, renewable energy promotion, and reducing economic losses. This active engagement signals an intention to align with sustainability objectives.

However, the current structure of ecological taxation is primarily focused on financing environmental management rather than actively encouraging economic agents to modify their behaviour. The fixed tax amounts on polluting activities are often too low to act as a significant deterrent, indicating that non-compliant companies often prioritize financial gain over environmental protection, thereby hindering a successful ecological transition driven by tax policy alone. Consequently, while alignment efforts exist, the fiscal instrument's design currently limits the full realization of this hypothesis.

***Hypothesis 2: The effectiveness of ecological taxation depends on good governance, rigorous monitoring, and dissuasive sanctions.***

Confirmation with Operational Deficiencies This hypothesis is confirmed, as the legal frameworks established by public authorities have indeed contributed to increasing ecological tax revenues and preserving the environment. The rise in revenues, particularly after the 2015 Paris Summit, was attributed to broadening the tax base and implementing greater rigor in the collection of ecological fees to meet international law requirements for environmental governance and sustainability.

However, the effectiveness of the system is severely undermined by governance issues. Rigorous monitoring and dissuasive sanctions are lacking. The current system suffers from a deficiency in measuring the quantity of polluting substances and shortcomings in field monitoring operations, which turns tax permits into a breeding ground for tax evasion. Furthermore, the application of very low, flat-rate taxes on polluting activities reduces their incentive and deterrent effect, suggesting that the current sanctions regime is insufficient to change polluters' behaviour.

### **b) Statement of Findings (Assessment of the Status Quo)**

Algeria has made significant strides in adopting a comprehensive environmental policy, integrating ecological taxation as a key economic mechanism for environmental governance. The country has enacted numerous laws (e.g., laws on waste management, coastal protection, and sustainable development) and established institutional bodies like the National Waste Agency and the National

*A key lever for sustainable environmental governance*

---

Fund for the Environment and Depollution (FEDEP) to implement its policies. Ecological taxation, which started with a tax on environmentally hazardous activities in the 1992 Finance Act, has expanded to include various levies on fuel, air pollution, plastic bags, and industrial waste.

Despite these legislative and institutional achievements, the study highlights critical operational and structural flaws. The contribution of ecological taxation to the State budget remains low, peaking at only about 1.25% of total public state revenues in 2018. This modest financial yield, coupled with pervasive tax evasion, suggests a fundamental lack of effectiveness in fulfilling the core objective of ecological taxation: modifying the behavior of economic agents. The system is criticized for applying low, fixed rates on polluting activities, which fails to generate costs higher than depollution costs or sufficiently discourage the use of environmentally damaging products. Moreover, the lack of statistical data on uncollected ecological tax residuals ("restes à collecter") makes it impossible to accurately assess overall collection effectiveness. Significant challenges also persist in municipal solid waste management and maintaining air quality.

**c) Recommendations**

The evidence suggests that Algeria has the necessary legal and institutional framework in place for environmental governance, but its ecological taxation system is structurally insufficient to act as a powerful instrument for behavioural change and environmental protection. For ecological taxation to achieve its intended function of deterring harmful behaviour and encouraging a green economy shift, targeted reforms are essential.

1. The government must reform the tax system to shift its focus from mere financing to incentivizing environmentally-friendly behavior and deterring harmful practices. This requires instituting taxes at higher rates to ensure polluters' costs exceed the costs of depollution. Furthermore, a transition from flat-rate taxes to proportional-rate taxes on polluting and environmentally hazardous activities should be implemented to align costs with the degree of environmental damage.
2. It is crucial to develop and utilize pollution-measurement tools to accurately assess the quantities of polluting substances and determine the direct impact of tax provisions on the environment. Rigorous monitoring and field supervision operations must be strengthened to combat tax evasion and ensure compliance.
3. Greater coordination between governmental sectors is needed, alongside the harmonization of environmental information systems. Furthermore, the lack of consistency in collecting and exchanging environmental information must be addressed.
4. Given that tax evasion is partially attributed to the low level of environmental culture among taxpayers and citizens, widespread environmental awareness and education campaigns must be amplified to foster acceptance of ecological taxes as a voluntary obligation necessary for environmental governance.
5. Ecological taxation is an economic mechanism in the hands of public authorities, imposed on polluting activities in the form of taxes, fees and fiscal incentives, with the aim of reducing the various forms of environmental pollution and establishing the foundations for environmental governance. Ecological taxation has a dual effect, deterring environmental damage while supporting and encouraging business.

In conclusion, implementing these interconnected reforms—ranging from progressive tax structures and robust monitoring mechanisms to enhanced intersectoral coordination, public

education, and cultural shifts—will transform Algeria's ecological taxation into a robust catalyst for sustainable environmental governance. By embedding the polluter-pays principle within a cohesive policy architecture, authorities can effectively curb emissions, foster innovation in green technologies, and secure long-term ecological resilience without compromising economic vitality. Such strategic evolution promises not only regulatory efficacy but also broader societal commitment to planetary stewardship.

## Bibliography:

- Benedicte , P. (2022, 10 1). *How to Build Environmental Taxation for the Five-Year Term and Beyond 2022 - BP DB Environmental Taxation*. Retrieved 11 9, 2025, from <https://www.ecologie.gouv.fr/sites/default/files/Comment%20construire%20la%20fiscalit%C3%A9>
- El Djellali, C., & Caché, A. (2022). Study of the Reality of Environmental Taxation and Its Relationship with Sustainable Development in Algeria. *Journal of Economics and Sustainable Development*, 524.
- TIERRY, W. (2010, November ). Encyclopedia of Sustainable Development - Ecological Taxation: One of the Most Powerful Instruments in Market Economics to Change Behaviors, n132.
- El-Jisr, K. (2010). *Environmental Governance : State of the Environment and its Trends in Lebanon*. Beirut.
- European Environment Agency. (2021). *EEA–EIONET Strategy 2021–2030*. European Environment Agency.
- BENZIDANE, H. (n.d.). *Ecological Taxation in Algeria: An Alternative for Environmental Protection*, . Mostaganem: Faculty of Law and Commercial Sciences, University of Mostaganem.
- Ministry of Environment. (2020). *report on the state of waste management in Algeria, for the year .* Alger: Ministry of Environment.
- Ministry of Environment and Territorial Development. (2008). *Evaluation Report on the Implementation Conditions of Environmental Policy*. Algiers: Court of Auditors.
- Second National Report on the Millennium Development Goals. (September 2010). *the Millennium Development Goals*. Alger: Ministry of environnement.
- National Economic, Social and Environmental, Council. ( 2020). *Key Political, Economic, Social, and Environmental Highlights Preliminary Analysis*. Alger: Preliminary Report CNESE.
- (UNIAGPL), S. f. (2022). *a unit to support project holders, economy*. Alger: Algerian Radio.
- Fraunhofer Institute for Systems and Innovation Research ISI Breslauer. (2015). *Development of Regulatory and Incentive Framework for Energy Efficiency in Algeria*. Germany: GIZ Deutsche Gesellschaft für Internationale Zusammenarbeit - GmbH German International Cooperation.
- GIZ Deutsche Gesellschaft für Internationale Zusammenarbeit . (n.d.). *Fraunhofer Institute for Systems and Innovation Research ISI Breslauer, Development of Regulatory and Incentive Framework for Energy Efficiency in Algeria*. Retrieved from GmbH German International Cooperation, : <http://www.energypartnership-algeria.org>