# The national strategy for achieving environmental security in Algeria between environmental protection and development requirements

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**Abstract:**

With the increasing population growth and the expansion of human activities, accompanied by rising levels of environmental consumption, especially in light of technological and industrial development, clear negative impacts on the environment have emerged, Therefore, various countries, including Algeria, have sought to adopt policies aimed at protecting and restoring the environment within a legal framework that keeps pace with ongoing changes, through restructuring the legislative system, establishing national bodies, and creating an institutional context in which the roles of different formal and informal actors are reflected at the local, national, and international levels ،Despite the development of the legislative framework and the diversity of legal texts in this field, procedural efforts are still ongoing in pursuit of achieving effective environmental protection.

**key words:** Environmental security, environmental protection, environmental policy, pollution, sustainable development.

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**Introduction**:

The second half of the last century produced a number of complex environmental issues, foremost among them pollution in its various forms, environmental degradation, climate change, ozone layer depletion, lack of green spaces, acid rain, loss of biodiversity, and the expansion of desertification. These problems did not remain confined to the narrow environmental sphere, but extended to affect various aspects of human life, and imposed themselves as a real threat to economic and social stability. This led to a reconsideration of the nature of the relationship between the economy and the environment, and between the requirements of economic development and considerations of environmental conservation, in light of the increasing awareness of the need to integrate the environmental dimension into public policies, and to make environmental protection a fundamental condition for achieving sustainable and balanced development.

The concept of environmental security has emerged as a comprehensive framework linking environmental protection, ensuring the sustainability of natural resources, and achieving development. This has prompted countries, including Algeria, to adopt national approaches based on building a legal and institutional system aimed at reducing environmental risks and addressing their repercussions. This is achieved through the adoption of a national strategy to achieve environmental security within an integrated framework that combines constitutional and legislative texts, public policies, and the regulatory and executive mechanisms adopted in the field of environmental protection. This is considered a legislative and regulatory path that reflects the state's will to achieve a balance between environmental protection and development requirements, and to enshrine environmental security as a strategic necessity to confront contemporary environmental challenges.

The nature of current environmental challenges also requires the state to adopt comprehensive policies based on advance planning, coordination between different sectors, and enhancing the effectiveness of public authorities' intervention in the field of prevention, treatment, and control, in order to ensure the rational exploitation of natural resources, reduce sources of pollution, strengthen national capacities in the field of environmental monitoring and rapid intervention when risks occur, as well as enshrining the principle of environmental responsibility at the level of individuals and institutions, linking economic activities to respecting approved technical and legal standards, strengthening the role of local communities in implementing environmental policies, and developing environmental assessment mechanisms for projects, in order to anticipate their future impacts and ensure their consistency with national development goals, within a strategic vision based on prevention rather than treatment, sustainability rather than depletion, and balance rather than harm to the natural environment, in order to make environmental security a fundamental pillar for long-term stability and development.

Based on the foregoing, the following question arises:

**What efforts has the Algerian legislator dedicated, within legal texts and procedural mechanisms, to protecting the environment?**

To attempt to address this question, this topic has been divided into two sections as follows:

- Section One: The Legal Status of Environmental Security in Algerian Legislation
- Section Two: Procedural Mechanisms for Achieving Environmental Security in Algeria

## Section One: The Legal Status of Environmental Security in Algerian Legislation

The environment forms the basis of life on Earth, providing the natural resources necessary for its continuation, such as water, soil, and the atmosphere. This necessitates protecting the environment from threats such as pollution and degradation resulting from industrial or agricultural activities. Environmental protection is linked to the state's obligations to ensure ecological balance through legislation. This includes prevention and monitoring mechanisms to avoid long-term damage, as this concept is based on the principles of sustainable development to preserve resources for future generations.

Algeria has given attention to environmental security by including it in the Constitution, as Articles 21 and 64 stipulate the citizen's right to a healthy environment. Law 03-10 of 2003 relating to environmental protection within the framework of sustainable development was issued, which regulates the control of harmful activities and penalizes environmental violations. Law 01-19 of 2001 relating to waste management was also issued, amended by Law 01-25, to regulate the treatment of hazardous waste. The legislation included mechanisms for administrative control and criminal liability to promote compliance with it. These texts aim to achieve a balance between economic development and the promotion of environmental security.

### a- The concept of environmental security

Environmental security has gained increasing attention, and there is a growing consensus that this type of security is no less important than food, health, water, or military security. Various forms of security are now seen as interconnected and integrated within a single system that governs contemporary international relations. However, these relations often witness a degree of turmoil and tension, not because of direct military threats between states (Belmadi and Dehegani, 2023, p. 68), but as a result of a fundamental factor that is the decline in the level of environmental security or its direct or indirect infringement **(Hamed, 2012, p. 287).**

### 1- Defining the Environment:

The word "environment" originates from the root meaning "to settle" or "to reside." Thus, the environment is a place of settlement, a home, or a milieu. The meanings of "environment" vary depending on its importance or role; for example, a city is an environment, nature is an environment, and society is an environment. The technical definition of the environment stems from its linguistic meaning without deviating from it. The environment refers to the sphere in which humans live and within which they carry out their various activities and relationships. It also represents the framework from which they derive their basic needs and through which they strive to satisfy their requirements. Furthermore, the environment reflects the atmosphere surrounding the Earth, encompassing its soil, air, water, and plant elements **(Boudour, 2022, p. 540).**

The 1972 Stockholm Conference on the Environment also resulted in a definition of the environment, considering it a set of natural, social, and cultural systems within which humans and all living organisms live, from which they derive the necessities of their existence, and within which they carry out their various activities.

The environment refers to the living space that encompasses all natural elements—air, water, and soil—including living organisms and human-made structures. These components interact to form the medium that determines the paths of growth. Its concept extends beyond the natural realm to include the physical and biological surroundings in which living organisms live, making the maintenance of its balance a primary requirement for ensuring sustainable development and protecting resources from depletion **(Abdel-Mawla, 2003, p. 23).**

Pollution is defined as the introduction of physical, chemical, biological, or energy pollutants into the natural environment at rates that exceed the capacity of the ecosystem to absorb, break them down, or convert them into harmless substances. These pollutants take many forms, some resulting from human activities such as industrial waste and refuse, emissions from transportation, and intensive agricultural practices, and others resulting from natural phenomena. This imbalance in the ecosystem leads to the deterioration of air, water, and soil quality, causing direct harm to human health and living organisms. As these pollutants continue to accumulate, ecosystems are forced to deplete their resources to cope with the damage, which hinders economic growth due to increased environmental costs and decreased productivity in sectors such as agriculture and industry. Furthermore, countries are forced to allocate huge budgets to address environmental consequences instead of directing them towards development projects, which makes pollution an obstacle to achieving long-term development goals **(Ibrahim Suleiman, 2003, p. 22).**

- Air pollution: Algeria has witnessed a rise in air pollution levels in recent years due to several factors, most notably emissions from the transportation sector and industrial activity.

The Algerian legislature has established a specific definition of air pollution, considering it the introduction of any substance into the atmosphere, whether gases, vapors, fumes, or liquid and solid particles, that by their nature causes harm or poses risks affecting the quality of the living environment and the health of living organisms **(Algerian Official Gazette, 2003).**

- Water pollution: Water pollution has resulted from increased population density in cities and the expansion of urban activities, along with the accompanying overexploitation of groundwater resources, which has exposed them to pollution risks. The significant increase in the volume of wastewater and its discharge without adequate treatment has also contributed to the deterioration of the quality and quantity of available water sources.

- Soil pollution: Soil is the primary source of food production and the physical foundation for urban development projects, necessitating its protection from all forms of degradation. However, the excessive use of chemical compounds and pesticides to increase agricultural productivity, along with the accumulation of solid and liquid industrial waste, disrupts its biological properties. This pollution negatively impacts the long-term productivity of agricultural land, which in turn affects the food chain and the health of the organisms that depend on it **(Carmona and Simpson, 2017, p. 60)**.

- Desertification: Desertification is defined as the degradation of land in arid, semi-arid, and dry sub-humid areas due to various factors, including climate change and human activities. This degradation manifests as a loss of soil fertility and a decline in vegetation cover, leading to a decrease or complete loss of its biological and economic productivity, ultimately transforming these areas into desert-like regions.

## 2. Defining Environmental Security;

In its general sense, security means that a person can live their life and carry out their usual daily activities in the absence of risks that may threaten them in the present or future. Security takes many forms depending on its scope. Food security, for example, is achieved by the availability of food in sufficient quantity and quality, at the right time and place, and at an affordable price, ensuring that food does not become a source of threat to human life and society, whether due to current or potential future shortages **(Kafi, 2024, p. 31).**

Environmental security refers to the set of positive behaviors adopted by humans that do not result in negative impacts on the environment, whether related to pollution, degradation, or damage to any of its components. This could lead to an imbalance within the ecosystem at local, regional, or global levels, ultimately threatening environmental security in a specific area or in several overlapping areas. Therefore, environmental security remains a concept linked to time and place, encompassing multiple geographical areas and varying time periods, whether short, medium, or long-term **(Belmadi, 2023, p. 322).**

Environmental security expresses the sum of direct and indirect effects and processes practiced by humans and human society, which do not involve causing immediate or future damage to the environment or its components, nor do they pose a potential threat to it in the near or distant future. This understanding requires expanding the traditional meaning of security, which has long been limited to political and military risks that threaten national sovereignty, to also include the increasing effects of environmental stress at the local, national and global levels.

Environmental security entails ensuring the availability of essential environmental resources necessary for human life and survival, without these resources posing a current or future threat. Environmental security operates on several levels, including local, national, and global. It is also categorized according to the type of environmental resource, such as water security, air security, and food security. In addition, it encompasses health security and security related to the risks of cosmic or nuclear radiation.

Another definition links the concept of security to the state, defining it as the absence of unconventional threats affecting the fundamental environmental foundation, thereby achieving the well-being of the people and ensuring its functional integrity. This definition allows us to envision the transformations that compel the state to act upon the emergence of threats, in order to preserve ecosystems as an imperative and a strategic investment for safeguarding the lives of people, especially given the transformations occurring in certain life cycles that may affect food production and health **(Houchat, 2018, p. 375).**

## 3. Legislative texts related to environmental security:

Legal protection of the environment has witnessed remarkable development at the international level. International treaties and agreements have established a framework for cooperation among states to preserve natural resources and maintain ecosystems. This legislation has focused on reducing environmental pollution, combating desertification, protecting biodiversity, and regulating the use of water and air resources. It also addresses the harmful effects of climate change and industrial waste. Furthermore, international documents have emphasized the importance of developing sustainable environmental policies that guarantee a healthy environment for future generations, while stressing the

responsibility of states and the international community to implement these principles and protect the Earth from environmental degradation.

Countries have sought to translate these international principles into legislative texts that guarantee the protection of the environment at the national level and in its local context. They have adopted many laws and regulations that regulate the exploitation of natural resources, set controls to prevent environmental pollution and waste treatment, and impose penalties on violators. These legislations also included the establishment of specialized bodies and departments to monitor compliance with environmental rules and promote a culture of environmental responsibility among individuals and society, which contributes to preserving environmental security and ensuring the sustainability of the country's vital resources **(Belmadi, 2019, p. 208).**

## Section two: Environmental Protection Laws

Following the ratification of the Rio de Janeiro Conference, the legislature enacted Law 03-10 on June 19, 2003, concerning environmental protection within the framework of sustainable development. This law incorporated techniques and mechanisms for addressing environmental threats and eliminating them in order to build a sound environmental system (Official Gazette No 43, 2003). Algeria adopted the National Spatial Planning Scheme. According to Article 63 of Law No. 68-26, the National Spatial Planning Scheme is a tool for spatial planning that covers the entire national territory and translates and develops the fundamental strategic arrangements concerning the national policy for spatial planning and sustainable development.

Among the laws in the field of environmental protection is Law No. 07-06, dated May 13, 2007, concerning the management, protection, and development of green spaces. This law establishes a regulatory framework for managing green spaces within a sustainable development policy. It mandates improving the urban living environment by maintaining existing spaces and creating new ones, increasing their proportion relative to built-up areas. It also requires the inclusion of these spaces in urban planning and development studies and in all public and private architectural designs. Furthermore, it classifies spaces into urban parks, peri-city parks, specialized gardens, and urban forests. This classification is considered an administrative contract that cannot be altered or reclassified except with the approval of the relevant committees. Management relies on management plans that define the content and technical and administrative procedures for each category, with penalties for violations including imprisonment, fines, and the obligation to restore the space to its original condition (Official Gazette No 31, 2003).

Law No. 11-02, dated February 17, 2011, concerning protected areas within the framework of sustainable development, establishes a system for classifying, managing, and protecting protected areas to ensure the conservation of biodiversity and ecosystems. It defines protected areas as lands or marine zones subject to special measures for the conservation of biodiversity, natural resources, landscapes, and cultural heritage. The law classifies them into main categories, including integrated nature reserves, national parks, marine reserves, protected wetlands, genetic resource reserves, landscape areas, and managed reserves for landscapes and wildlife. It also specifies classification procedures based on an environmental study that assesses the ecological, cultural, and scientific value of the area, with the participation of local authorities and civil society.

Furthermore, it mandates a management system based on a management plan that defines permitted and prohibited objectives and activities, as well as different levels of protection, while prohibiting harmful activities such as unlicensed fishing, unsustainable exploitation, and unregulated urban expansion within classified areas. It stipulates the establishment of specialized administrative bodies for each protected area and imposes criminal and administrative penalties for violations, including fines, imprisonment, removal of encroachments and environmental rehabilitation (Official Gazette No 13, 2011).

The higher education and scientific research sector is entrusted with research related to steppe and agricultural areas and experiments related to the study of soil, water and atmosphere. Also among its tasks is protecting the marine environment from pollution and protecting coastal areas, and other research and studies that take care of biological and legal protection from pollution.

**A. The Licensing System**

To enable the administration to monitor hazardous activities and control those engaged in them, the Algerian legislator introduced a means of administrative control in the form of a unilateral administrative system. This system takes the form of an administrative decision issued under legislative authorization by an administrative body, whether an administrative authority or one of its directly subordinate bodies. The granting and issuance of this decision is contingent upon the practice of any activity or the establishment of any organization or body, and no entity or authority, regardless of its nature, can engage in the activity without it **(Söderholm & Pettersson, 2025, p. 3).**

Some of the most important examples of the licensing system are:

- Executive Decree No. 15-19 of January 25, 2015, concerning the procedures for preparing and issuing urban planning contracts.
- Executive Decree No. 07-144 of May 19, 2007, establishing the list of establishments classified for environmental protection.
- Executive Decree No. 06-198 of May 31, 2006, establishing the regulations applicable to establishments classified for environmental protection.
- Executive Decree No. 04-409 of December 14, 2004, concerning the procedures for transporting hazardous special waste.
- Law No. 01-19 dated December 12, 2001, relating to the management, control and removal of waste.

Administrative control authorities may resort to prohibiting the activity as one of the legal means applied through administrative decisions, as the legislator prohibits carrying out some actions that would cause serious harm to the environment, and activities are subject, as the case may be, to studying the extent of their impact on the environment, with the aim of determining the suitability of the activity within the framework of environmental protection.

As part of the obligation to preserve biodiversity, the legislator, in the field of environmental protection, seeks to implement regulatory measures to protect and maintain the natural environment, including its soil, water, animals, plants, and air (Official Gazette No 60, 2005). In cases of violations of environmental protection laws, administrative authorities take measures that include warning the

concerned party to take the necessary precautions, and resorting to halting the activity if a danger arises.

Although the environmental licensing process is important as a tool to protect air and water quality and to reduce negative impacts on protected species and ecosystems, it is widely recognized as inefficient and time-consuming. Complex projects or those using modern technologies, a fragmented and bureaucratic administrative system, numerous licensing applications and reviews, and the knowledge and resources of both the applicant and the licensing authority all contribute to the inefficiency of licensing when uncertainty is involved, increase transaction costs, and allow for multiple conflicting interests without resolution **(Nicola & Bruce E ،Cain, 2017, p. 180)**.

## Section three: Procedural Mechanisms for Achieving Environmental Security in Algeria

The Algerian legislator has given increasing attention to environmental issues by issuing a set of legal texts that define the regulations to be respected to ensure the protection of natural resources and ecosystems. These texts cover various aspects of the environment, thus imposing the obligation of individuals and institutions to adhere to environmental rules and limiting practices that may harm the ecological balance. However, the legislative framework alone is not sufficient; it requires the effective implementation of these laws on the ground, along with deterrent measures against violations and transgressions that negatively affect the environment.

The legislator also contributed to strengthening this protection by establishing specialized national bodies and institutions, which were assigned specific powers to monitor compliance with environmental laws and develop the policies and procedures necessary to preserve the environment. These bodies work to monitor activities that threaten ecosystems, take preventive measures, and coordinate between the various concerned parties, in order to ensure the achievement of environmental security and the sustainability of resources at the national level.

### A. National Bodies in the Field of Environmental Security

Specialized national bodies and institutions have been established to enhance environmental security, ensure the preservation of natural resources, and protect ecosystems. These bodies monitor the environmental situation, assess risks, and develop policies and plans aimed at preventing environmental degradation and pollution, and addressing challenges that may threaten environmental sustainability. These institutions also participate in collecting and analyzing environmental data and information, enabling scientifically based decisions and strengthening the state's ability to respond to environmental emergencies and sudden climate changes.

The tasks of these bodies are numerous, including coordination between various ministries, departments, and public and private institutions, as well as involving civil society and the private sector in environmental protection efforts. They also play an awareness and educational role to promote environmental culture among citizens and encourage sustainable behaviors. Through these activities, these bodies become the main pillar in maintaining national environmental security, as they ensure a balance between economic development and the preservation of natural resources, and work to prevent any potential threats that may affect human health or the continuity of life in the long term.

## B. Environmental Security at the Central Government Level

Legislation and regulations grant the Minister of the Environment the authority to enforce environmental protection laws. The central environmental administration, along with the General Inspectorate of the Environment, falls under the Minister's authority. The Minister has powers in various areas, including: preparing and proposing the national strategy for environmental protection and sustainable development; and preparing, proposing, and monitoring the national plan for environmental action. According to Article 5 of Executive Decree No. 01-08: The Minister of the Environment initiates, conceives, and proposes rules and measures for the protection and prevention of all forms of pollution, environmental degradation, and harm to public health and living conditions, in consultation with the relevant sectors, and takes appropriate precautionary measures **(Official Gazette No 04, 2001)**.

### 1. Independent Bodies:

The legislator established independent bodies to alleviate the burden on the supervisory authority and local bodies in the field of environmental protection. Among the most important of these bodies are:

### 2- The Supreme Council for the Environment and Sustainable Development:

Established by Decree No. 94/465, it is concerned with studying aspects related to the environment and sustainable development. It is an advisory body that relies on consultation and coordination among sectors to determine major strategic options for environmental protection and development promotion. The Council works to periodically assess environmental developments, along with the periodic evaluation of legislative and legal texts related to environmental protection. It also provides its opinion on files related to major environmental problems (Official Gazette No 01, 1995).

### 3- The National Observatory for the Environment and Sustainable Development:

This observatory is a public institution of an industrial and commercial nature, under the supervision of the Ministry of the Environment, and enjoys legal personality and financial independence.

The observatory's responsibilities include establishing pollution monitoring and measurement networks, protecting natural environments, and collecting information and data related to the environment and sustainable development. It also processes environmental data and information to develop information tools and disseminates environmental information. Furthermore, it initiates and participates in studies aimed at improving environmental knowledge of environments and the pressures exerted on them.

### 4- The National Waste Agency:

The legislator established the National Waste Agency, which is considered a central body that outlines the general approach that shows how to treat waste based on new scientific technologies that would give waste an economic and environmental dimension without harming the environment and nature. This waste is subject to the recycling process by converting it from a raw material into a material that can be manufactured. The agency is considered a necessity and an imperative imposed by the international reality that has become insistent on finding rational solutions to the waste problem. This is evident through Algeria’s accession to the Basel Convention on the Control of Transboundary

Movements of Hazardous Wastes and their Disposal, as well as the OPRC International Convention on Oil Pollution Preparedness, Response and Cooperation **(Official Gazette No 37, 2002).**

**5- The National Observatory for the Promotion of Renewable Energies**

The Observatory is a national body responsible for promoting and developing the use of renewable energies. It was established under Article 17 of Law No. 04/09, dated August 14, 2004, under the supervision of the Ministry of Energy and Mines. Renewable energies are defined in the law as the set of methods that allow for significant energy savings through the use of biogeochemical technologies. The Observatory aims to define how to promote renewable energies within the framework of sustainable development. This is achieved by protecting the environment through encouraging the use of non-polluting energy sources, and by contributing to sustainable development through the preservation and conservation of traditional energies.

**6- The National Agency for Geology and Mining Control:**

As a result of technological development and progress, which has had negative impacts on the environment and the lives of individuals, Algeria has been prompted to strengthen its legal and institutional framework by subjecting this environmental sector to a legal system that ensures its proper functioning and preservation. This agency works to: optimize the management of geological and mining resources on the one hand, and protect the environment from the exploitation of these raw natural resources on the other; and monitor the extent to which institutions adhere to best mining practices in order to achieve optimal extraction of mineral resources (Official Gazette No 56, 2002).

**7. The National Observatory for the City:**

Pursuant to Law No. 06/06 relating to the city, and in its Article 26, the National Observatory for the City was established, which monitors the implementation of the city policy and prepares studies on the development of cities within the framework of the national policy for regional planning, in addition to preparing and regulating the city code, and proposes measures that would promote the national city policy, as well as monitoring the procedures decided by the government within the framework of promoting a national city policy.

**C. The Role of Local Authorities**

Local authorities work to protect the environment at the regional and municipal levels. They represent the first line of defense in ensuring the implementation of environmental laws and national policies on the ground. Their tasks include monitoring the local environmental situation, combating pollution, managing natural resources, and organizing community awareness and education campaigns to promote sustainable behaviors among citizens. These authorities also coordinate with national institutions and civil society to ensure a rapid and effective response to any potential environmental threats, thus contributing to the preservation of ecosystems, the protection of human health, and the continuity of life at the local level.

**1. The municipality's role in environmental protection:**

According to Article 81 of Law 07-12, an information bank is established at the state level containing information and statistics related to the environment. According to Article 84, in the field of irrigation and agriculture, the state council takes all measures aimed at carrying out development works and cleaning and purifying waterways, in addition to encouraging work to prevent disasters and natural pests, not to mention its role in promoting agricultural areas, protecting forests, protecting against disasters, protecting public health, and combating epidemics.

The municipality is considered the foundation at the local level and an example of administrative decentralization. It plays a fundamental role in environmental protection, representing the executive authority and implementing laws related to environmental protection. According to Article 107, the municipal council has numerous powers. In the area of local planning and development, the municipality prepares, approves, and oversees the implementation of its annual or multi-year development plan. The municipal council also participates in procedures related to regional planning and sustainable development. Furthermore, according to Articles 110-112, the council contributes to the protection of agricultural land and green spaces, particularly when projects are established within the municipality's territory. In addition, it plays a role in protecting soil and water resources and ensuring their optimal use.

**D. The Role of Civil Society in Environmental Protection**

The Algerian legislator defined civil society as an association of natural and/or legal persons established on a contractual basis for a period that may be limited or unlimited (Official Gazette No 02, 2012). These individuals voluntarily and for non-profit purposes contribute their knowledge and resources to promote and encourage activities in various fields, particularly professional, social, scientific, religious, educational, cultural, environmental, charitable, and humanitarian ones.

Associations are considered an active and essential partner of local communities in implementing environmental protection policies, through their contribution to spreading environmental culture, promoting community awareness of the dangers of pollution and the importance of preserving natural resources. They also play a monitoring and awareness-raising role aimed at following up on the extent of respect for environmental laws and regulations, participating in preventive programs, initiatives and field campaigns, as well as supporting the state’s efforts in consolidating the principles of sustainable development, and promoting community participation in protecting the natural environment and ensuring its continuity for future generations.

**Section three: Monitoring and deterrent mechanisms in the field of environmental protection:**

Monitoring and deterrent mechanisms work to implement environmental laws and monitor compliance with them. They complement the legislative framework by monitoring compliance with environmental laws and regulations at various levels. These mechanisms include environmental monitoring and inspection processes, damage assessment, and imposing penalties on violators in a way that deters violations that threaten ecosystems. These measures also contribute to strengthening individual and collective responsibility towards the environment and support the state’s ability to preserve natural resources and achieve sustainable environmental security, thus protecting human health and the continuity of life for current and future generations.

## A. Environmental Taxation:

Energy consumption in various sectors, such as transportation, and the use of large quantities of resources are also significant factors in environmental degradation. To combat climate change and achieve climate-related Sustainable Development Goals, countries have implemented environmental taxes in diverse areas. The green dividend hypothesis suggests that environmental tax practices may negatively impact producers' costs due to their contribution to pollution **(Kartal, 2024, p. 356)**.

Therefore, producers strive to be non-polluting by minimizing their negative impacts. The lack of effective market regulation and the difficulty in setting appropriate prices for natural resource rights hinder the implementation of policies that promote the optimal use of environmental resources. According to traditional economic theory, taxing products and services leads to price increases, which in turn reduces demand. The goal of taxation is not to completely eliminate environmental degradation, but rather to reduce it to an optimal level. Revenues from environmental taxes can be used to reduce other tax burdens while regulating environmental degradation. Pollutants must bear the costs of the resulting damage, promoting optimal resource allocation and incentivizing companies and individuals to adopt more environmentally friendly practices. Environmental taxation is used effectively as a policy tool to mitigate the negative impacts and consequences of environmental degradation. Industrial activities, and to bear the social costs of environmental damage, within a framework that ensures consideration of environmental, economic and social factors **(Assidi and others, 2025, p. 6).**

Environmental taxation is a legal mechanism for imposing fees and financial deductions on economic agents in order to finance environmental costs, by finding an effective way to integrate the costs of services and environmental damages directly into the prices of goods and services. It also defines the basic principles and rules for managing the environment and promoting sustainable national development, and increasing tax revenues used to cover environmental expenses (Adjlan, 2006, p. 15).

## B. Penalties for Combating Environmental Crimes:

In cases of environmental damage, compensation is the responsibility of the person causing the damage. Anyone whose activity causes, or could cause, environmental damage is liable for the costs of all measures taken to prevent and reduce pollution and to restore the affected areas and their environment to their original state. The Algerian legislator has prescribed penalties for all environmental crimes commensurate with their severity in the Penal Code. Article 87 bis criminalizes the introduction, leakage into the air or underground of toxic substances, or their dumping into water, which poses a danger to human health. This act is punishable by death.

Article 396 stipulates imprisonment from 10 to 20 years for anyone who intentionally sets fire to forests, cultivated fields, trees, or timber. Anyone who operates a facility without obtaining a license from the competent administrative authority is punishable by one year of imprisonment. Besides the fact that most environmental crimes stem from industrial activities aimed at achieving economic gain, the environmental damage would not have occurred were it not for the negligence in pursuit of this gain. According to Law 03-10, the fine for environmental crimes ranges from 5,000 to 1,000,000 Algerian dinars, and may be followed by accessory and supplementary penalties such as confiscation and dissolution **(Abdellaoui, 2005, p. 88).**

## Conclusion:

The adoption of an environmental approach in Algeria represents a shift in public policy towards activating proactive protection tools and integrating them into the management system to ensure the achievement of sustainable development. This approach only emerged under the pressure of the deteriorating environmental situation and the severe depletion of natural resources, which prompted the state to formulate strategies to address the risks arising from various activities within the legal framework and procedural mechanisms for environmental protection and sustainable development. Specialized administrative bodies are responsible for implementing these mechanisms at both the central and local levels, within a specific regulatory framework that defines the powers of the administration and regulates its practices according to clear legal conditions and procedures.

These measures are divided into preventive mechanisms, applied as a prerequisite before any activity commences, and deterrent mechanisms implemented during the activity to ensure compliance with environmental standards. A system of liability has also been established, requiring those responsible for damages to provide in-kind or monetary compensation as determined by the judiciary. Furthermore, the criminal justice system has been strengthened with strict penalties for violations affecting the environment to ensure the effectiveness of legal protection for environmental security while also considering the achievement of development goals.

Despite the national efforts exerted to protect the environment at all legislative and procedural levels, both official and unofficial, a number of challenges and difficulties remain, which can be summarized as follows:

- The advisory nature of independent bodies: Their consultations are not binding, which allows the executive branch and central administrations to exert significant control over whether or not to act upon their advice, not to mention the associated costs.
- The administrative nature of advisory bodies: These bodies consist of committees from various departments, elected according to specific criteria. Competence and educational level are not taken into account, and membership may be based on personal reasons rather than loyalty to the organization.
- - A shortage of qualified personnel, particularly at the local level, coupled with generational differences, has negatively impacted performance, especially given the increasing focus on e-government.
- - The abundance of studies submitted by consulting firms, which often present positive figures but fail to offer effective solutions to environmental problems.
- - Deep-rooted administrative and financial corruption within local communities.
- - Ignorance among associations regarding the legal means available to achieve environmental protection goals, coupled with a lack of administrative training among association leaders.

To overcome these difficulties, a set of solutions has been proposed, including:

- Funding, encouraging, and developing academic and university studies to conduct rigorous research.
- Standardizing comparative studies to align with the Algerian environmental context.
- Implementing e-governance at the national and local levels, particularly concerning environmental training, information dissemination, and legislation.

- Establishing an e-governance system to facilitate environmental communication, support decision-making, and monitor and evaluate environmental activities, especially given the prominent role of technology in the 2030 Agenda.
- Promoting e-governance to activate participatory policies in consultation with environmental professional organizations at the local and national levels, thereby fostering the engagement of all stakeholders.
- Coordinating among various national bodies, centers, and observatories by activating e-governance for communication, information exchange, and dissemination, within the framework of achieving the Millennium Development Goals under the 2030 Agenda for Sustainable Development.
- Strengthening environmental awareness and social responsibility in the use of clean technology and increasing public awareness of environmental cleanliness. - Granting accreditations, licenses, and certificates in accordance with applicable legislation and regulations.
- Implementing a program to digitize environmental sectors.
- Holding institutions responsible for treating or recycling their waste.
- Reviewing the criteria for membership in advisory boards and bodies, and the extent to which their consultations are binding.

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