


LEVERAGING ENVIRONMENTAL PERFORMANCE IN ALGERIAN ECONOMIC INSTITUTIONS FOR SUSTAINABLE DEVELOPMENT

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ARTICLE INFO	ABSTRACT
<p>Article history: Received: Jul, 28th 2024 Accepted: Oct, 17th 2024</p>	<p>Purpose: The study explored how environmental performance contributes to sustainable development, focusing on its role in achieving key dimensions of sustainability.</p>
<p>Keywords: Environmental Performance; Environment; Sustainable Development.</p>	<p>Theoretical Framework: It emphasized that essential administrative tools for environmental protection are primarily found within the legal and institutional framework, which includes various national bodies established to support sustainable development. These organizations play a significant role in raising awareness, providing training, and emphasizing the importance of adhering to environmental standards through preventive, conservation, and regulatory measures, all backed by legal authority. Additionally, civil society has a crucial role in fostering environmental awareness, particularly within economic institutions.</p>
	<p>Design/Methodology/Approach: The design of the study is descriptive and analytical. Data for this study were collected from official Algerian sources.</p> <p>Findings: Cleaner Production this approach is a practical implementation of sustainable development, enabling greater efficiency in production while minimizing the use of raw materials and resources, all while protecting the environment.</p> <p>Doi: https://doi.org/10.26668/businessreview/2024.v9i11.5085</p>

DESEMPENHO AMBIENTAL NA INSTITUIÇÃO ECONÓMICA ARGELINA COMO FERRAMENTA PARA ALCANÇAR O DESENVOLVIMENTO SUSTENTÁVEL

RESUMO

Objetivo: O estudo explorou como o desempenho ambiental contribui para o desenvolvimento sustentável, com foco em seu papel na obtenção de dimensões-chave da sustentabilidade.

Estrutura Teórica: Enfatizou que as ferramentas administrativas essenciais para a proteção ambiental são encontradas principalmente na estrutura legal e institucional, que inclui vários órgãos nacionais estabelecidos para apoiar o desenvolvimento sustentável. Essas organizações desempenham um papel significativo na conscientização, no fornecimento de treinamento e na ênfase na importância de aderir aos padrões ambientais por meio de medidas preventivas, de conservação e regulatórias, todas apoiadas pela autoridade legal. Além disso, a sociedade civil tem um papel crucial na promoção da conscientização ambiental, principalmente nas instituições econômicas.

Design/Methodologia/Abordagem: O design do estudo é descritivo e analítico. Os dados para este estudo foram coletados de fontes oficiais argelinas.

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Resultados: Produção mais limpa esta abordagem é uma implementação prática do desenvolvimento sustentável, permitindo maior eficiência na produção, minimizando o uso de matérias-primas e recursos, ao mesmo tempo em que protege o meio ambiente.

Palavras-chave: Desempenho Ambiental, Meio Ambiente, Desenvolvimento Sustentável.

EL DESEMPEÑO AMBIENTAL EN LA INSTITUCIÓN ECONÓMICA ARGELINA COMO HERRAMIENTA PARA LOGRAR EL DESARROLLO SOSTENIBLE

RESUMEN

Propósito: El presente estudio analizó cómo el desempeño ambiental contribuye al desarrollo sostenible, centrándose en su papel en la consecución de dimensiones clave de la sostenibilidad.

Marco Teórico: Se subrayó que las herramientas administrativas esenciales para la protección ambiental se encuentran primordialmente dentro del marco legal e institucional, el cual incluye diversos organismos nacionales establecidos para respaldar el desarrollo sostenible. Estas organizaciones desempeñan un papel fundamental en la sensibilización, la capacitación y la promoción de la importancia de adherirse a los estándares ambientales mediante medidas preventivas, de conservación y regulatorias, todas ellas sustentadas por la autoridad legal. Además, se destaca la función crucial de la sociedad civil en el fomento de la conciencia ambiental, particularmente dentro de las instituciones económicas.

Diseño/ Metodología/ Enfoque: El diseño del estudio es descriptivo y analítico. Los datos para este estudio se obtuvieron de fuentes oficiales argelinas.

Resultados: Producción más limpia este enfoque es una implementación práctica del desarrollo sostenible, que permite una mayor eficiencia en la producción y al mismo tiempo minimiza el uso de materias primas y recursos, protegiendo al mismo tiempo el medio ambiente.

Palabras clave: Desempeño Ambiental, Medio Ambiente, Desarrollo Sostenible.

1 INTRODUCTION

Amid shifting global priorities and evolving perspectives of policymakers and managers on driving growth and economic revival, alongside growing public awareness of the need for conditions conducive to a healthy life, environmental conservation has risen to the forefront of attention. This emphasis is due to its critical impact on human health and its role in achieving development goals. Consequently, the focus has shifted toward a new development model that balances environmental preservation with the pursuit of sustainable development objectives.

Economic institutions play a crucial role in sustainable development by fulfilling their social responsibilities toward their employees and customers, as well as the communities and environments in which they operate. These institutions are compelled to embrace the concept of sustainable development to enhance their performance and effectiveness, particularly in terms of environmental performance, amidst growing competition and the demands of international trade. This leads us to the following question: **How significantly can an economic institution contribute to achieving sustainable development through the implementation of an environmental management system?**

To elucidate the different facets of the research, we have chosen to organize it into three main sections.

1.1 THE THEORETICAL FRAMEWORK FOR ENVIRONMENTAL PERFORMANCE

As environmental issues continue to escalate, it has become essential to reevaluate the operations of institutions and enhance their capabilities to address the developments and changes in the global economic environment, which affect the management strategies of less competitive economic institutions. Consequently, efforts should be made to strengthen these institutions and incorporate the various dimensions of sustainable development.

1.2 THE CONCEPT OF ENVIRONMENTAL PERFORMANCE

Environmental performance refers to how management processes are structured to affect the materials and energy emitted during an organization's operations, influencing the ecosystem in either a positive or negative manner (Polgár & Pájer, 2014).

According to Lilly Schehibe, “Environmental performance encompasses all actions taken by an organization regarding its impact on the environment, indicating that it includes both the positive and negative effects the organization has on the environment” (Rahim Hussein & Rashid Manasrieh, 2011).

From these definitions, it can be concluded that environmental performance is a key aspect of social responsibility, emphasizing innovation and the effectiveness of environmental management in minimizing pollution and safeguarding the environment. This involves focusing on sector-specific environmental policies that prioritize production and utilizing tools to measure and evaluate environmental performance throughout the product life cycle.

2 BENEFITS OF THE ENVIRONMENTAL DIMENSION

2.1 INTERNAL BENEFITS

- management tool: for some managers, the environmental dimension or environmental management system is viewed as a new management tool that facilitates the preservation of the natural environment;

- motivating workers: implementing an environmental management system serves as a means to motivate employees within the organization, particularly in the realm of environmental protection;
- reducing costs: incorporating environmental considerations into the organization allows for the reduction of costs associated with environmental impacts, through improved waste management and more efficient use of energy, water, and raw materials;
- technological innovation: the organization's environmental orientation is regarded as a form of technological innovation, utilizing new processes that are less polluting and more effective in the production cycle.

2.2 EXTERNAL BENEFITS

- enhancing relations with public authorities: incorporating an environmental focus helps strengthen the organization's relationship with government authorities by ensuring compliance with environmental laws and regulations;
- improving institutional reputation: an environmentally responsible approach can enhance the organization's reputation in society by demonstrating its commitment to environmental and social responsibilities;
- gaining competitive advantages: in highly competitive industries, implementing an environmental management system can boost the organization's competitive edge by optimizing production monitoring and processes;
- expanding market access: adopting an environmental focus can enable entry into new markets and partnerships with suppliers certified under ISO 14001 standards;
- securing additional funding sources: integrating environmental practices can also open up access to funding from international sources.

2.3 DETERMINANTS OF ENVIRONMENTAL PERFORMANCE

Key determinants of environmental performance include (Salma Ghadir & Salma Aicha, 2011):

- governmental pressures: governmental regulations are significant factors influencing an organization's environmental actions. The state employs various tools, particularly environmental laws and resource-preserving legislation, to encourage institutions to

prioritize environmental considerations. Additionally, economic tools and regulations are crucial in promoting environmental performance, with legislation serving as a powerful and widely used approach to ensure institutions commit to environmental responsibility;

- stakeholder pressures: stakeholders such as consumers, suppliers, shareholders, lenders, government agencies, and environmental advocacy groups also drive environmental performance. Environmental concerns increasingly influence consumer preferences, leading consumers to favor eco-friendly products. Producers are responding by developing products that minimize environmental harm. Additionally, shareholders, investors, and lenders seek information on environmental performance alongside financial metrics, driven by the belief that poor environmental practices can lead to higher liabilities and reduced profits;
- additionally, managerial characteristics—such as the manager’s age, openness to environmentally-driven strategic choices, and professional experience—significantly impact an institution's environmental practices. A manager’s personal traits play a crucial role in shaping the institution’s environmental direction, as they directly influence decision-making in business management. Managers act as key agents in developing organizational culture, addressing both social and political considerations through their leadership;
- situational factors, such as the institution's size, age, international affiliations, and industry sector, also influence environmental integration. Numerous researchers studying the impact of time on environmental practices consider an institution's age to be a primary factor in determining its environmental commitment. Modern institutions tend to adapt more readily to environmental requirements, whereas older institutions often establish enduring practices and management behaviors that become difficult to change over time, unlike newer institutions, which are generally more adaptable and flexible;
- integrating environmental practices within both the organizational and cultural frameworks of institutions is particularly challenging for older organizations. Key determinants that drive economic institutions to prioritize environmental considerations, as identified by various researchers, include the following:

2.3.1 Sociological determinants

- internal and external pressures on the institution;
- management integrity and ethical standards.

2.3.2 Economic determinants

- enhancing the institution's competitive position;
- targeting market segments that prefer responsible organizations;
- building a positive, environmentally responsible image;
- adapting to changes in the institution's external environment;
- reducing operational costs;
- encouraging innovation and creativity;
- developing a strong corporate culture.

3 DIMENSIONS OF ENVIRONMENTAL PERFORMANCE

3.1 ENVIRONMENTAL EFFECTIVENESS

Effectiveness is increasingly tied to meeting objectives amid fluctuating environmental factors, pushing institutions to seek a dynamic balance to ensure their growth and sustainability. The objectives pursued by institutions can be categorized as follows:

- production objectives (outputs): providing goods and services that fulfill market and customer needs;
- community objectives: addressing public needs and serving the general interest;
- systemic objectives: operating the institution in ways that enable it to meet core objectives, such as maintaining stability and monitoring processes;
- derived objectives: pursuing goals beyond production that foster development, including environmental, social, and political aims.

The concept of environmental efficiency, introduced at the 1992 Rio Conference, focuses on delivering goods and services competitively to meet human needs, enhance quality of life, and reduce environmental impacts and resource consumption over their lifecycle. Environmental efficiency, therefore, aims to improve both environmental and economic

outcomes. It is defined as producing quality goods and services with minimal resource use and waste reduction across production stages. In this way, efficiency links environmental performance with financial profitability, as optimizing production processes brings significant financial and environmental benefits.

Adopting environmental effectiveness allows an organization to generate greater added value. Key dimensions of environmental effectiveness include (Mustafa Kafi, 2013):

- reducing material usage in products and services;
- lowering energy consumption;
- minimizing toxic emissions;
- maximizing the recovery of materials used;
- promoting the sustainable use of natural resources;
- enhancing product sustainability by extending the product life cycle;
- increasing the benefits delivered by products and services.

Effectiveness refers to an organization's capability to secure and efficiently use available resources to accomplish defined objectives.

3.2 ENVIRONMENTAL EFFICIENCY

Environmental efficiency can be achieved through four key actions (Zakaria Tahoun, 2005):

- emphasizing customer service;
- prioritizing quality;
- increasing focus on environmental limits, working to achieve more with fewer resources;
- Adopting a life cycle perspective for products and services.

Environmental efficiency serves as a metric for sustainability in organizations, reflecting economic and environmental progress. Efficiency is defined by the relationship between resources used and results obtained, measured by calculating the ratio of outputs to inputs as the organization pursues its objectives. In essence, efficiency means maximizing benefits relative to costs; an efficient institution achieves the maximum possible outcome concerning its goals.

From these definitions, it is evident that effectiveness is a broader concept than efficiency. Effectiveness is evaluated against the organization's established objectives, which

may be material (e.g., increasing production quantity and quality, reducing defects) or financial (e.g., increasing turnover or profit margin).

Efficiency and effectiveness often work toward a unified goal. For instance, an institution's aim to increase turnover (an efficiency indicator) can be achieved by reducing the consumption of intermediate goods (another efficiency indicator). This reduction ultimately lowers production costs and prices, enhancing the institution's market position.

4 SUSTAINABLE DEVELOPMENT

4.1 THE CONCEPT OF SUSTAINABLE DEVELOPMENT

Sustainable development involves the management and protection of natural resources while guiding technological and institutional change to ensure that human needs are met both now and in the future. In the contexts of agriculture, forestry, and fisheries, sustainable development aims to safeguard land, water, and the genetic resources of plants and animals without harming the environment. It emphasizes practices that are technically viable, economically feasible, and socially acceptable (Donato Romano, 2000).

Sustainable development is essentially a cumulative process that builds upon existing resources while acknowledging our obligations to future generations. Its goal is to enhance the quality of human life without compromising environmental integrity. In broader terms, sustainable development is about rationally utilizing natural resources, ensuring that their exploitation does not exceed natural renewal rates, particularly for non-renewable resources. This approach must prevent waste generation at levels that exceed the environment's capacity to absorb and transform (Taheri, 2006).

The future and security of populations worldwide hinge on the health of their environments, highlighting the critical importance of sustainable development for both current and future generations. This requires a careful balance between consumption rates and renewable resource availability, all while protecting the environment.

4.2 SUSTAINABLE DEVELOPMENT GOALS

The Sustainable Development Goals (SDGs), often referred to as the Global Goals, consist of 17 interconnected objectives aimed at providing a "blueprint for achieving a better,

more sustainable future for all." These goals tackle some of the world's most urgent challenges, such as poverty, inequality, climate change, environmental degradation, and peace and justice. Adopted by all United Nations Member States in 2015 as part of the 2030 Agenda for Sustainable Development, the SDGs can be summarized as follows (<https://www.un.org/sustainabledevelopment/>, 2022):

- increasing national income: a primary driver of sustainable development is the need to combat poverty and improve living standards. This involves enhancing real national income by increasing the production of goods and services;
- improving the standard of living: simply increasing national income does not guarantee an improved quality of life. Efforts must be made to meet the basic needs of individuals, both now and in the future. This includes creating job opportunities, providing education, healthcare, social services, and housing, while also respecting individual rights and enabling participation in decision-making processes;
- reducing income and wealth disparities: many countries face significant income inequality, where a small segment of the population controls a disproportionate share of wealth and national income, leaving the majority with limited resources;
- rationalizing the use of natural resources: sustainable development requires the preservation of natural resources through responsible usage and the exploration of alternatives to ensure their continued availability;
- linking modern technology to community goals: raising awareness about the role of technology in development is crucial. Communities must learn to leverage both existing and emerging technologies to enhance quality of life and achieve objectives while minimizing negative environmental impacts. Where risks and adverse effects do arise, effective solutions must be implemented to manage them.

5 DIMENSIONS OF SUSTAINABLE DEVELOPMENT

5.1 THE ECONOMIC DIMENSION IN SUSTAINABLE DEVELOPMENT

The interplay between the economy and the environment is critical both now and in the future, raising important considerations regarding the selection and financing of industrial technologies that utilize natural resources while maintaining environmental balance. This

dimension emphasizes the importance of maximizing societal welfare over the long term through the optimal use of natural resources (Bazazo, 2010).

5.1.1 Personal consumption of natural resources

Countries differ significantly in their economic development levels, which influences the economic well-being of their populations through production and consumption patterns. Notably, individuals in industrialized nations consume several times more natural resources per capita than those in developing countries.

5.1.2 Stopping the waste of natural resources

For developed countries, sustainable development focuses on continuously reducing wasteful consumption of energy and natural resources. This requires improving efficiency and fundamentally changing lifestyles. Sustainable practices also involve altering consumption patterns that threaten biodiversity, such as the use of animal products from endangered species, thereby preserving the genetic diversity of plants and animals.

5.1.3 The responsibility of developed countries for pollution and its treatment

Industrialized nations bear significant responsibility for leading sustainable development due to their historical overconsumption of natural resources, particularly fossil fuels, which has contributed to global pollution issues. These wealthy countries possess the financial, technical, and human resources necessary to adopt cleaner technologies, reduce resource intensity, protect natural systems, and support sustainable development initiatives in less developed countries.

5.1.4 Reducing dependence of developing countries

In the context of globalization, as consumption of natural resources in industrialized countries declines, the growth of exports from developing nations slows, leading to a sharp decrease in commodity prices. This deprives developing countries of essential revenues. Consequently, these nations must critically assess their relationships with others, adopting a

self-reliant development model to build their capabilities, ensure self-sufficiency, enhance regional cooperation, and increase trade among developing countries while investing in human capital and adopting improved technologies.

5.1.5 The necessity of achieving sustainable development in poor countries

Sustainable development in impoverished nations involves dedicating natural resources to continuous improvement in living standards. Rapid enhancement of living conditions is an ethical imperative, particularly for over 20% of the global population living in poverty. Alleviating absolute poverty is crucial for sustainable development, as it is closely linked to environmental degradation, rapid population growth, historical backwardness from colonialism, and dependence on capitalist powers (Bazazo, 2010).

5.1.6 F. equality in the distribution of resources

Inequities in access to education, social services, land, and other natural resources pose significant barriers to development. Ensuring equality in resource distribution can alleviate poverty and enhance living standards. This responsibility lies with both rich and poor countries, as achieving equality is a vital objective that can stimulate necessary economic growth and development.

5.1.7 Reducing military spending

Sustainable development also entails reallocating funds from military expenditures to developmental needs. Even a modest shift of resources currently devoted to military purposes could significantly expedite development efforts. In the face of an arms race, both wealthy and developing nations have allocated substantial portions of their budgets to military spending, exacerbated by recent economic crises in some European Union countries, such as Greece and Portugal in 2011.

5.2 THE SOCIAL DIMENSION IN SUSTAINABLE DEVELOPMENT

The social dimension of sustainable development emphasizes the importance of human beings as both the core of development and its ultimate goal. It focuses on promoting social justice, alleviating poverty, and ensuring access to essential social services for those in need. (Bouzian, 2008).

5.2.1 Stabilizing demographic growth

Sustainable development seeks to make substantial progress in stabilizing population growth. Rapid population increases place immense pressure on natural resources and challenge the government's ability to provide necessary services. High population growth can also hinder development and diminish the natural resource base available to support individuals.

5.2.2 The importance of population distribution

Trends toward urban expansion, particularly the growth of large cities, have significant environmental consequences. Cities tend to concentrate waste and pollutants, often creating hazardous living conditions and damaging surrounding ecosystems. Therefore, sustainable development must promote active rural development to mitigate urban migration. This can be achieved through policies such as agrarian reform and the adoption of technologies that minimize the environmental impacts associated with urbanization (Bazazo, 2010).

5.2.3 Full use of human resources

Sustainable development calls for the comprehensive utilization of human resources by enhancing education and healthcare services and combating hunger. Basic services must reach those living in absolute poverty or in remote areas. This necessitates the reallocation of resources to prioritize meeting fundamental human needs, such as literacy, primary healthcare, and access to clean water.

5.2.4 Health and education

Human development must be integrated with other dimensions of sustainable development. For instance, providing good nutrition, adequate education, and efforts to eradicate illiteracy can significantly enhance economic development. Education empowers individuals, including farmers and those living in rural areas, to better protect forests, soil resources, and biodiversity.

5.2.5 The importance of women's role

Women play a critical role in sustainable development, particularly in developing countries. They are often responsible for farming, herding, gathering firewood, and managing households. Additionally, women typically serve as primary caregivers for children. Empowering women by ensuring their access to education and healthcare can yield numerous benefits for sustainability.

5.2.6 The democratic style of governance

Sustainable development and human development are interconnected across social, economic, political, cultural, and environmental dimensions. For balanced growth that improves citizens' lives, it is essential to ensure justice in distribution and foster political and democratic participation. Achieving sustainable development relies on good governance and democratic approaches, which promote freedom, security, local community involvement, gender equality, freedom of expression, and social justice—all vital components of sustainable human development (Bazazo, 2010).

5.3 THE ENVIRONMENTAL DIMENSION IN SUSTAINABLE DEVELOPMENT

This dimension focuses on the ecosystem and emphasizes the preservation of natural resources while ensuring their optimal and sustainable use. It also involves predicting potential impacts on ecosystems resulting from development initiatives to promote conservation and prevention. Thus, every strategic development plan must consider the constraints of nature and the limits of its resources.

5.3.1 Reducing soil damage and environmental pollution

The environment faces significant pressures from human activities. Soil erosion and loss of productivity reduce agricultural yields, leading to the annual loss of large areas of arable land. Additionally, the excessive use of fertilizers and pesticides pollutes surface and groundwater. Human and animal activities harm vegetation cover and forests, while fisheries in both freshwater and marine environments are often exploited unsustainably (World Bank, 2011).

5.3.2 Protection of natural resources

Sustainable development requires the protection of essential natural resources for food production, including soil, forests, and fisheries, while also expanding production to meet the needs of a growing population. These objectives may conflict; however, failing to conserve the natural resources essential for agriculture could lead to food shortages in the future. Sustainable practices involve using arable land and water more efficiently and adopting improved agricultural technologies that increase yields. This includes minimizing the use of chemical fertilizers and pesticides to prevent the degradation of water bodies, wildlife, and food supplies, as well as careful irrigation practices to avoid salinization and waterlogging of croplands.

5.3.3 Preserving the aquatic environment

Sustainable development necessitates the conservation and rational use of water resources, along with protecting water bodies from pollution. Many regions face declining water supplies, and unsustainable withdrawal from rivers threatens available resources. Groundwater is often extracted at unsustainable rates, while industrial, agricultural, and human waste pollutes surface and groundwater, endangering lakes and estuaries globally. Sustainable practices include reducing wasteful water use, improving water network efficiency, enhancing water quality, and limiting surface and groundwater withdrawals to sustainable levels that do not disrupt dependent ecosystems.

5.3.4 Protection of diminishing ecological species

Sustainable development aims to preserve biodiversity and slow the extinction of species and the destruction of habitats. Ecosystems such as tropical forests, coral reefs, and coastal forests are rapidly deteriorating, leading to a loss of arable land. Forests cover approximately 25% of the Earth's surface, and their degradation negatively impacts overall ecosystem health, affecting both animal and plant diversity (Bazazo, 2010).

5.3.5 Protecting the climate from global warming

Sustainable development involves avoiding significant changes to the global environment, such as rising sea levels, altered rainfall patterns, and increased ultraviolet radiation, which can jeopardize future generations. Efforts must be made to prevent human actions from destabilizing climate systems or depleting the Earth's protective ozone layer. This requires stabilizing greenhouse gas concentrations in the atmosphere to levels that prevent dangerous interference with the climate system, allowing ecosystems to adapt naturally to climate change while ensuring food production and sustainable economic development. Various conferences and forums, including the Kyoto Conference in Japan in 1997 and the recent conference in Dubai, UAE, in December 2023, have been held to address climate change (United Nations, 1992).

In summary, sustainable development encompasses three intertwined dimensions: the economic dimension focuses on equitable wealth distribution, the social dimension aims for equality, cohesion, and social mobility, and the environmental dimension prioritizes the preservation of natural resources. Awareness, education, institutional development, and the involvement of women, youth, media, and non-governmental organizations are crucial for promoting sustainable development across these dimensions.

5.4 ENVIRONMENTAL MANAGEMENT IN ECONOMIC INSTITUTIONS

The administration of environmental protection relies heavily on a comprehensive legal and institutional framework that supports sustainable development initiatives. Here are some of the key aspects and tools involved:

5.4.1 Legal and institutional framework

- **national bodies:** various national institutions have been established to promote environmental protection. These bodies play a crucial role in raising awareness, providing training, and highlighting the risks associated with neglecting environmental standards.
- **types of regulation:** the regulatory framework can be preventive (aiming to avert environmental harm), conservative (maintaining current environmental standards), or repressive (penalizing those who violate regulations). Their authority is derived from existing laws and regulations.

5.4.2 Role of civil society

Civil society organizations are vital in fostering environmental awareness, particularly among businesses. They help educate economic institutions about the importance of complying with environmental standards and regulations.

5.4.3 National programs and plans

A national program was developed to provide financial and technical support to institutions seeking compliance with international environmental standards, such as ISO 14001.

From 2001 to 2010, a National Environmental Program was implemented, supported by the National Environment and Coastal Fund, which incentivized institutions adhering to environmental standards in their production and service delivery.

5.4.4 Partnerships and agreements

In 2019, the Ministry of Environment signed a memorandum of understanding with the United Nations Environment Program (UNEP) to enhance cooperation on environmental issues. Key areas of collaboration include:

- integrated waste management;
- conservation of natural resources and ecosystems;
- promotion of the green economy.

5.4.5 Ecological taxation

Since 2005, an ecological tax has been introduced based on the principle that those who pollute the environment should bear the costs. This initiative emphasizes accountability and encourages businesses to adopt more sustainable practices.

5.4.6 Legislation supporting sustainable development

- Finance Law (2005): introduced environmental taxes to support sustainability efforts;
- Law 04-09: promotes renewable energy, encouraging economic institutions to utilize renewable resources and invest in green technologies. Article 13 of this law specifically supports the use of renewable energy;
- Executive Decree 061-2009: addresses activities that pollute or are harmful to the environment;
- Public Procurement Law: article 50 mandates that environmental protection be a clear requirement in procurement specifications;
- Investment Law: article 10 provides incentives for investments that consider environmental conditions, offering special privileges determined by relevant regulations.

Integrated Management of Environmental Tools Achieving sustainable development requires the coordination of various means and tools. This includes aligning legal frameworks, institutional support, community engagement, and financial incentives to ensure a holistic approach to environmental management.

In conclusion, the combination of legal frameworks, institutional support, civil society involvement, and strategic programs forms a robust administrative structure for environmental protection. This system not only facilitates compliance with international standards but also fosters a culture of sustainability across sectors.

These tools can be envisioned as follows, which would make the environment a real preoccupation with growth and development:

5.4.6.1 Awareness

Enhancing the execution of studies and analyses that emphasize the effects of economic activities on environmental degradation, while fostering awareness of the importance of harmonizing economic growth with environmental sustainability. The government has carried out over 200 studies and established the role of environmental delegates in around 2,100 public and private economic institutions.

5.4.6.2 Accompanying institutions

As part of its strategy to bolster industrial development, the Ministry of Industry and Investment Promotion plays a vital role in advancing environmental protection by assisting economic institutions in implementing environmental management systems that meet ISO 14001 standards. This initiative includes the development of programs designed to help institutions balance competitiveness with environmental sustainability and to integrate environmental protection into their strategic and management frameworks. Additionally, the issuance of Executive Decree No. 516-21 in 2021 has organized the central administration of the Ministry of Industry and delegated the Directorate of Industrial Security and Support to undertake several key responsibilities, including (Industry, 2021):

- participating in the development of environmental specifications pertinent to the industrial sector;
- proposing and supporting initiatives aimed at reducing industrial pollution in collaboration with relevant sectors;
- contributing to the completion of projects related to environmental protection and sustainable development within the industrial sector;
- assisting in the identification of indicators related to environmental protection and sustainable development, facilitating the creation of a sectoral database;
- enhancing the capabilities of industrial professionals through training in sustainable consumption and production to foster a culture of the green economy.

5.4.6.3 Environmental effectiveness

Establishing environmental effectiveness contracts involves the state's role in defining procedures for reducing pollution and managing solid and hazardous waste. These contracts also provide support to institutions in formulating their strategic objectives, particularly those that include environmental considerations. Furthermore, institutions are encouraged to participate in state-organized programs aimed at developing and implementing various environmental legislations.

Within the framework of environmental rehabilitation, institutions can adopt three key types of programs:

- self-commitment: institutions may commit to independently developing their environmental plans and fostering responsible behaviors towards the ecological risks associated with their activities;
- collaborative objectives: institutions can negotiate with public authorities to establish ecological objectives that they are required to meet, such as committing to reducing specific emissions;
- public voluntary systems: this involves the institution's participation in rehabilitation programs and the adoption of proposed environmental systems. Notably, in 2010, the Ministry of Environment and Renewable Energy signed over 120 effective contracts with economic institutions, and as of 2023, more than 200 specialized rehabilitation offices have been established (Ministry of Environment and Renewable Energy, 2023).

5.4.6.4 Bilateral cooperation

Encouraging institutions to establish contracts with specialized international organizations and providing necessary technical assistance has been a priority for Algeria. The country has launched a series of bilateral agreements to leverage the technical expertise of various international bodies, including:

- International Bank for Reconstruction and Development (IBRD): an agreement has been made to implement the Industrial Pollution Control Project;
- United Nations Development Program (UNDP): this agreement focuses on strengthening environmental institutions, establishing laboratories, and developing a system for collecting and disseminating environmental information;

- International Environment Fund: an agreement with this fund includes financing for pollution monitoring equipment at seaports.

Additionally, the INNODEV project is a bilateral cooperation initiative with a German partner, facilitated by the German Agency for International Cooperation (GIZ). Its goal is to enhance the capacities of small and medium-sized enterprises (SMEs) and their sales services, making them more competitive and environmentally sustainable. The INNODEV project aims to foster an ecosystem that supports the development of innovative, competitive, and sustainable SMEs. This initiative is guided by a cooperation agreement signed between the Algerian and German governments on October 20, 2019, along with an implementation agreement dated February 11, 2020, which outlines a three-year implementation period (Ministry of Environment and Renewable Energy, 2019).

Furthermore, the ECOSYS Program conducts studies to identify the economic benefits that industrial sectors can gain by adopting environmental policies. It also proposes privileges and incentives for economic institutions to help control industrial pollution.

5.4.6.5 4.5. Financing

A range of financing mechanisms has been established to encourage economic institutions to invest in environmentally friendly practices and adopt effective environmental management in their operations. Key funding sources include:

- national fund for the environment and combating pollution: this fund supports initiatives aimed at environmental protection and pollution reduction;
- fund for the promotion of industrial competitiveness: associated with the Ministry of Industry, this fund serves as a primary financial resource for activities related to qualifying institutions for environmental standards, specifically the ISO 14001 certification. It provides financial assistance in the form of grants.

The financial assistance provided through these funds includes:

- 80% coverage of costs (approximately 3 million dinars) for establishing an environmental or quality management system;
- 80% coverage of costs (approximately 1 million dinars) for obtaining the ISO certification;
- additionally, the Official Gazette (No. 72) published a joint ministerial decision on October 2, 2020, outlining the revenue and expenditure structure for the "National

Environment and Coastal Fund." Revenue sources for this fund include: (National Environment and Coastal Fund, 2020);

- fees imposed on polluting or environmentally hazardous activities;
- special fees established by finance laws;
- proceeds from fines for violations of environmental protection legislation;
- national and international donations and bequests.

The financing of environmental monitoring and control activities encompasses a range of essential services, including:

- funding for environmental inspection activities;
- expenses related to acquiring environmental equipment;
- costs associated with information dissemination, awareness campaigns, and training focused on environmental and sustainable development topics, particularly in clean technologies and environmental education;
- Subsidies for studies and initiatives aimed at reducing industrial pollution.

As of 2022, approximately 1,200 economic institutions in Algeria have achieved the ISO 14001 standard as set by the International Organization for Standardization. (ISO, 2023)

However, when comparing Algeria to Egypt and Tunisia, the disparity is significant; Tunisia boasts ten times the number of institutions certified under this standard compared to Algeria.

Despite the Algerian government's efforts to encourage the economic sector to prioritize environmental considerations, progress remains sluggish, and the outcomes achieved fall short of expectations.

Economic experts highlight the crucial role that economic institutions play in achieving sustainable development, asserting that this can only be realized through the adoption of quality standards, particularly ISO standards such as ISO 26000 and ISO 14001. These institutions are vital for preserving the natural environment while also contributing to the gross national product and added value. In 2023, they contributed to a 4% increase in exports outside the hydrocarbon sector and played a key role in addressing societal challenges, including unemployment.

It is worth noting that Algerian industrial institutions primarily focus on specifications aimed at improving production performance, with less emphasis on those related to environmental performance. Furthermore, there is a notable lack of interest in international standards concerned with the social performance of these institutions.

6 CONCLUSION

The concept of environmental performance arises from the need for sustainable development and collaboration between the state and the private sector to build a better future for upcoming generations. Its primary goal is to create and support sustainable social, economic, and cultural programs aligned with national priorities. This concept emphasizes investing in human resources, generating job opportunities, and ensuring a healthy and safe work environment, while also addressing environmental challenges and promoting sustainable development.

7 KEY FINDINGS

- cleaner production: this approach is a practical implementation of sustainable development, enabling greater efficiency in production while minimizing the use of raw materials and resources, all while protecting the environment.
- environmental standards: these standards have gained significant importance in GATT agreements and international conventions, becoming crucial requirements for exports to various global markets.
- sustainable development: it represents the most logical and equitable alternative to tackle issues of inequality and disparities in development.
- challenges for algerian institutions: algerian economic institutions encounter various obstacles in implementing effective environmental management, including a lack of local expertise in environmental matters and insufficient subsidies for establishing management systems that meet international standards.

8 RECOMMENDATIONS

- promotion of renewable energy: there is a pressing need to generalize the use of renewable energy sources (such as solar, wind, and hydro) through scientific studies and budget allocation for project establishment. This should include seminars, conferences, and research collaborations with research centers to assess the economic viability and strategic significance of investing in renewable energy sources;

- investment in clean technology: the government should encourage institutions to invest in clean technologies and environmentally friendly production processes while expanding the waste recycling industry for safe disposal, leveraging the associated benefits to reduce production costs;
- environmental performance evaluation: economic institutions should consider their environmental performance as a key aspect of overall performance evaluation, as the quality of environmental practices significantly influences other areas of balanced performance;
- incentives for environmental preservation: government agencies should incentivize institutions to protect the environment by offering tax or customs exemptions;
- green products and clean technology: institutions should be urged to commit to environmental conservation by producing and marketing green, eco-friendly products and utilizing clean technology;
- adoption of green manufacturing strategies: there should be a focus on adopting green manufacturing strategies that improve environmental performance. This includes managing industrial waste through reuse or recycling to minimize environmental damage while also generating revenue and reducing operational costs.

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