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Adopting environmental responsibility among Algerian SMEs in light of the challenges of sustainable development

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Abstract---In the modern era, numerous global challenges have emerged, impacting nations worldwide. The rapid advancements in technology and industry have led to significant environmental degradation, particularly affecting the oceans—a critical component of sustainable development. In response to these developments, small and medium-sized enterprises (SMEs) have assumed a pivotal role in environmental preservation by mitigating pollution across various sectors. Consequently, our research endeavors to examine the status of Algerian SMEs concerning their environmental commitments and their pursuit of the ISO 14001 certification. This certification has seen substantial growth, buoyed by support from the Algerian government through the establishment of various entities, support structures, and rehabilitation programs in collaboration with international organizations. Despite concerted efforts and the allocation of considerable resources, Algerian SMEs encounter numerous challenges that impede their effectiveness in fostering sustainable economic development.

Keywords---Algerian SMEs, sustainable development, environmental responsibility, ISO 14001.

Introduction

Given the evolving global landscape, alongside shifting perspectives among policymakers and managers regarding economic revitalization and growth, and the heightened recognition of the importance of fostering conducive environments for well-being, environmental preservation has emerged as a paramount issue (Hyatt & Berente, 2017) e, particularly within corporate circles (Mio et al., 2020). Due to the impact of sustainability on human well-being and economic growth, several nations adhere to the SDGs and encourage the collaboration between government and business to attain performance outcomes (Niesten et al., 2017).

It is worth to mention that small and medium enterprises (SMEs) have the capacity to contribute to sustainability by practicing responsible manufacturing and fostering green organization (Al-Hakimi et al., 2022). Because energy saving and environmental protection are the major concerns of sustainability development (Wang et al., 2024), Algerian small and medium enterprises (SMEs), akin to counterparts worldwide, are recognized as contributors to environmental pollution. This stems from production waste disposed of in natural surroundings or products that exert adverse effects post-use. Consequently, it is imperative for these enterprises to acknowledge their responsibility in environmental preservation within their operational context. Implementing protective policies is essential to foster sustainable development.

While numerous studies have investigated sustainability concerns across various countries (Carlsen & Bruggemann, 2022), there has not been a study specifically focused on this aspect in Algeria (Laradi et al., 2024), particularly regarding SMEs context. To delve into this topic, the focal problem of the investigation is to accentuate on the responsibilities of Algerian SMEs in protection the environment within the complexities of sustainable development. Derived from the primary question and intended to elucidate the subject matter, the subsequent sub-questions arise:

RQ1: What defines the current status and position of SMEs in Algeria?

RQ2: How are sustainable development and environmental concerns interconnected?

RQ3: What environmental responsibilities are borne by Algerian SMEs?

This study aims to address the responsibility of Algerian SMEs organizations in preserving the environment in light of the challenges of sustainable development. Hence, the research objectives of this study are as follow. First, to identify the various concepts related to SMEs companies and highlighting their position in the Algerian

economy. Second, explore the concept, goals and dimensions of sustainable development and the motivations for companies adopting this perspective. Third, examine the experience of Algerian SMEs companies in the field of adopting sustainable environmental responsibility.

To do so, this study relied on the descriptive and analytical approach, by addressing a set of concepts related to SMEs companies, environmental responsibility, development and sustainability, in order to identify the extent to which Algerian SMEs companies adopt the concept of social responsibility in light of the challenges of sustainable development.

This study makes several important contributions. Business companies in general and SMEs in particular in the world face many challenges, such as those related to environmental protection. Therefore, they must make appropriate changes that contribute to increasing and maximizing the goals of protecting the environment in which they operate from pollution and the necessity of integrating the environmental dimension into their activities and products. Here the importance of the study is highlighted by trying to study the extent to which Algerian SMEs adopt the concept of environmental responsibility by encouraging environmental protection and producing environmentally friendly products. The findings have an important practical implication for managers and business to leverage green activities supporting the adoption of environmental orientation.

1. SEMs in Algeria

SEMs in Algeria occupy an important position, through their effective contribution to alleviating severe economic and social crises and achieving continuous economic growth, and also in view of their main characteristic, which is alleviating the severity of widespread unemployment among young people and in view of due to its ease of adaptation and flexibility, which makes it characterized by its tremendous ability to combine economic development, providing occupation, and creating economic wealth by encouraging investment and the spirit of risk among capital owners, it represents the best means available for economic recovery. Furthermore, SEMs play a major role in protecting the environment as small companies operating in the field of recycling; this is what we will discuss in the third section.

1.1. The Algerian definition of SMEs

Algeria, similar to various countries in the world, recorded a clear absence of the SEMs sector, as several attempts were made in this regard unofficially and on the sidelines of public authorities' interest in them until 2001, when the Algerian legislator gave a concept of SEMs based on the definition of the federation. European law, where Law No. 01-18 of December 12, 2001 was issued, which included the directive

law for the promotion of SEMs. This law was amended by another directive law No. 17-02 of January 11, 2017, where SEMs were defined as “every company Producing goods or services, regardless of their legal nature, employing from 1 to 250 people and whose total annual revenue does not exceed 1 billion DZD or its turnover does not exceed 4 billion DZ. It is independent such that 25% or more of its capital is not owned by a company or group. Other companies that do not meet the definition of small and medium companies" (Al Gazette, Official 2017).

Table 1. SEMs Algerian profile

Annual turnover (DZD)	Turnover (DZD)	Number of employees	Types of compagnie
1 - Millions 200 bilions	≥ 4 bilions	250 -50	Medium
200- Millions 20 Millions	≥ 400 Millions	49- 10	Small
Millions 20 ≥	≥ 40 Millions	9 - 1	Micro

Source: Algerian official journal, 2017

1.2. Development number of SEMs in Algeria

The table 2. illustrates the distribution of companies in Algeria based on their size classification. Micro companies constitute the vast majority, accounting for a staggering 98.47% of the total, comprising 72,318 entities. Small companies follow, representing 1.34% of the total, with 982 establishments. Medium-sized companies form the smallest fraction, constituting only 0.19% of the total, consisting of 138 companies. Altogether, the data highlights the dominance of micro enterprises within the Algerian business landscape, underscoring the prevalence of small-scale economic activities in the country.

Table 2. Number SMEs in Algeria

Percentage	Number	Type of companies
%98.47	72.318	Micro
%1,34	982	Small
%0,19	138	Medium
%100	73.438	Total

Source: ministère de l'industrie ; avril 2023

Table 3. SMEs evolution between the 2021 and 2022

Development		Number 2022-2022	Number 2022-2021	Nature of SMEs
Percentage%	Number			
Private SMEs				
5.86	42.274	762.769	720.495	legal persons
4.07	10.686	272.726	262.040	Natural persons
6.74	20.480	324.085	303.605	Free activities
5.71	73.440	1.359.580	1.286.140	Partial Total1
Public SMEs				
0.88-	02-	223	225	legal persons
0.88-	02-	223	225	Partial Total2
5.70	73.438	1.359.803	1.286.365	Total

Source: ministry of the industry and the pharmaceutical production, April 2023 and ministry of the industry and the pharmaceutical production, 2022

From the table 3. we notice the development of the number of private small and medium enterprises, which represent the overwhelming majority compared to their public counterparts, with 73,440 enterprises from 2021 to 2022, that is, a rate of 5.710%. The majority of growth was for free activities at a rate of 6.74%, followed by legal entities at a rate of 5.86% and individuals. Natural businesses are 4.073%, where (self-employment represents health, justice, and agricultural sector activities) as shown in the table. As for small and medium-sized public enterprises, 02 enterprises were written off in the year 2022 compared to 2021, i.e., -0.88%. As for the rate of development, between the years 2021 and 2022, it was 5.70%, meaning a total of 73,438 small and medium enterprises, between public and private, which is a very satisfactory percentage. While the total number of micros, small and medium enterprises for the year 2022 reached 1,359,803, which is also considered an acceptable number. As for the development of small and medium enterprises by sector of activity.

Table 4. Development of SMEs private and public enterprises by activity 2022

Percentage	Total	Public SMEs	Private SMEs	Activity
1.10	8.393	71	8.322	Agriculture
0.45	3.423	54	3.369	Fuel, energy, mines
26.80	204.520	82	204.438	Construction
15.19	115.935	14	115.921	Manufacturing industry
56.45	430.721	2	430.719	Services
100	762.992	223	762.769	Total

Source: ministry of industry and pharmaceutical production, April 2023

The table 4. revealed that SMEs, whether private or public, operate to a large extent in the field of services with an estimated rate of 56.45%, followed by the construction and public works sector with a rate of 26.80%. This is due to the state's policy of in building social housing, especially in the last decade, and in its various forms (ADDL, Participative, social, etc.), and therefore the national economy is a service economy, as for the other sectors, it can be said that they are stagnant and do not know any development, especially the agricultural sector, which is supposed to We want to see annual developments, considering that Algeria is an agricultural land par excellence, but the percentage was estimated at the end of the year 2022 at 1.1% of the total companies, and as a result of the Corona pandemic that affected the entire world, the Algerian government will be forced to reconsider the agricultural sector more seriously.

1.3. The contribution of SMEs to the total labor force in Algeria

SMEs in Algeria contribute to reducing unemployment and attracting unemployed workers, whether for graduates or institutes, or even workers who do not have qualifications, and this is what distinguishes them from large companies because SMEs sometimes do not prerequisite high technical qualifications.

Table 5. Percentage of the labor force in SMEs 2021-2022

Year 2022		Year 2021			
%	N	%	N		
31,58	1.928.633	58,33	1.828.720	Workers	Private SMEs
41,10	1.359.580	41,03	1.286.140	Business owners	
99,41	3.288.213	99,36	3.114.860	Partial total	
0,59	19.608	0,064	20.108	Public SMEs	
100	3.307.821	100	3.134.968	Total	

Source: ministry of industry and pharmaceutical production, April 2023

The total labor force in SMEs reached 3,307,821 workers at the end of 2022 (See table 5), including 19,608 workers active in the public sector, and thus the labor force witnessed an increase of 5.46% compared to the year 2021. As for the decrease in the workforce in public companies is due to the decrease in their number from 225 companies to 223, but this decrease was by a very small and imperceptible percentage due to the decrease in only two companies.

1.4. The role of SMEs in increasing added value

Added value is everything that an economic activity adds to a specific production (increasing the value of a specific product) during a specific period of time. Given the huge number of SMEs active in Algeria and in various fields, they contribute a large percentage and directly to raising the added value more than large companies, as shown in table 6.

Table 6. Evolution of value added from 2017 to 2021, Unit: billion DZA

	2017		2018		2019		2020		2021	
	The value	%	The value	%	The value	%	The value	%	The value	%
% Public sector in value added	1.291,14	12,77	1.362,21	12,51	1449,22	12,66	1299,91	12,33	1426,61	12,13
% Private sector in value added	8.815,61	87,22	9.524,41	87,49	10001,3	87,34	9326,55	87,76	10334,3	87,87
Total	10106,7	100	10886,6	100	11450,6	100	10626,4	100	11760,7	100

Source: ministry of industry and pharmaceutical production, April 2023

From the table above, we notice that SMEs in Algeria, especially private ones, contribute to the added value, as we recorded in 2021 the value of 11,760.7 billion dinars, an increase rate estimated at 18.27% compared to the year 2017 (within five years). It can be said that the percentage is over a period of 5 years. As for the public sector, despite the increase from year to year, its percentage remains weak compared to the private sector, and this is always due to the decrease in the number of these companies from year to year (the percentage has almost remained constant for five years). It is also noticeable that the value added decreased in the year 2020 compared to the year 2019. This is due to the Corona pandemic that affected various sectors, which witnessed fluctuations in economic activities. They gradually recovered in 2021, and this is according to statistics from the National Organization for Statistics.

1.5. The contribution of SMEs to foreign trade outside the fuel sector

According to the ministry of industry and pharmaceutical production (April 2023), Algerian foreign trade recorded the following:

- An increase in the value of imports by 6.61%, as it moved from \$37.68 billion to \$40.17 billion. This value is not necessarily due to the contribution of small and medium companies in increasing imports, despite the new measures applied by the Algerian state, namely in limiting the import of some materials, on the one hand (Algeria also seeks to reduce imports to a value of \$30 billion), on the other hand, small and medium-sized companies have a service nature, not a production one. Therefore, the establishment of productive and manufacturing companies must be encouraged.
- The value of exports increased by 53.72%, moving from \$39.28 billion to \$60.38 billion. This is due to the rise in oil prices and their recovery after the Corona pandemic, where prices fell terribly, which affected the national economy, given that it is dominated by the

rentier sector by 95 percent. % of the latter, i.e. exports.

- Finally, we find that the difference in Algerian trade exchanges for the year 2022 is a surplus worth 20.21 billion dinars, and the establishment of more small and medium companies, especially productive ones, remains among the solutions to get out of rentier dependency, so to speak.

2. The goals and dimensions of sustainable development and the motivations for companies adopting its principles

The term sustainable development appeared at the end of the last century, where it occupied a very important position among researchers in this field. This interest is due to the limited capabilities available in the world and the increase in human needs that individuals want to satisfy.

2.1. The concept of sustainable development

One of the most famous and prevalent definitions of sustainable development is that presented by the Brundtland Commission, the International Commission on Environment and Development in 1987, where it defined sustainable development as “development that allows meeting the needs and requirements of the present generation without compromising the ability of future generations to meet their needs” (Michel et al. 2009) This brief definition includes two points:

- The required development does not seek temporary human progress in limited places and for limited years, but rather for all of humanity and throughout the distant future (rational exploitation of available resources over time).
- Meeting the basic needs of the world's poor and achieving social justice, which should be given absolute priority. For reference, the Brandtland Report included an entire chapter on sustainable development, and emphasized the relationship between the environment and development, as we find that some patterns of development lead to environmental degradation on the one hand, and on the other hand, environmental degradation represents an obstacle to development. (Dominique, 2006)

Ruckelshaus, the director of American environmental protection, defined it as “that process that recognizes the necessity of achieving economic growth that is compatible with the capabilities of the environment, on the basis that economic development and environmental preservation are complementary and not contradictory processes.” (Othman and Abu Zant Ahmed Magda 2007)

Therefore, it can be said that sustainable development, through this definition, seeks to improve the quality of human life, but not at the expense of the environment, and in its general meaning it does not deviate from the process of using natural resources in a rational manner.

The Algerian legislator similarly defined sustainable development when issuing Law No. 03/10, dated 20 Jumada al-Awwal 1424, corresponding to July 19, 2003, which includes environmental protection within the framework of sustainable development, as Article 4 states that “sustainable development is a concept that means reconciliation.” Between stable social and economic development and environmental protection, that is, including the environmental dimension in the development framework to ensure that the needs of present and future generations are met” (Algerian official newspaper, 2003).

In this definition, the Algerian legislator expressed the necessity of compatibility between the three dimensions of sustainable development, in addition to the importance of introducing or taking into account the environmental aspect, which ensures the continuity of development, whether for present generations or for future generations, and with the same importance.

2.2. Sustainable development goals

On September 25, 2015, the United Nations Summit on Sustainable Development adopted a resolution entitled “Transforming the Worlds of the 2030 Agenda for Sustainable Development” (Domingo-Posada et al., 2024) and 169 goals to eradicate poverty and inequality, improve health and education, and achieve economic growth by creating decent job opportunities and providing clean energy and water. Infrastructure, creating sustainable cities, protecting nature and biodiversity, and combating climate change in an atmosphere characterized by peace and justice. 70 years after the founding of the United Nations, this resolution was passed by 190 world leaders in New York as a global, comprehensive and transformative vision for a better world. These goals are: (Martiza 2016): Poverty eradication, Complete elimination of hunger, good health and well-being, Good education, gender equality; Clean water and hygiene; Clean and affordable energy; Decent work and economic growth; Industry, innovation and infrastructure; Reducing inequalities; Sustainable cities and local communities; Responsible consumption and production; Climate action; Life under water; Life in the wilderness; Peace, justice and strong institutions; Contracting companies to achieve goals.

The seventeen sustainable development goals came as a continuation of the work that was developed in this way seventeen years ago, which was represented in the agenda of the United Nations Sustainable Development Summit (Carlsen & Bruggemann, 2022).

2.3. Dimensions of sustainable development

Understanding the mutual relationships between economic, social, and natural processes is essential to understanding sustainable

development (Laradi et al., 2024) because one of the most important characteristics of the concept of sustainable development is the complete organic middle between the economy, the environment, and society, so that none of these components can be looked at separately (Fan et al., 2023). The analytical view of them is integrated together, and from here we conclude that sustainable development is based on three main dimensions: an economic dimension that aims at economic development, a social dimension that aims at social justice, and an environmental dimension that is embodied through protecting the environment while carrying out the development process, and there are those who add another dimension, which is the technological dimension, and in this requirement we will discuss these various dimensions, which are as follows (Adeeb 2002).

Economic dimension

Continuous development requires rationalization of economic approaches, as recent decades have shown a development impasse that is clearly represented by the division of the world into a rich North and a poor South, which we explain as follows:

1) Share of individual consumption of natural resource:

Regarding the economic dimensions of sustainable development, we note that the population of industrialized countries, as indicated by the level of per capita in the world, exploits many times more than the population of developing countries. For example, the consumption of energy resulting from oil, gas, and coal is higher in the United States of America than in India. 33 times, which in OECD countries is ten times higher on average than in developing countries combined.

Furthermore, developed countries control about 90% of the world's industrial output and own 84% of the total global commercial activity, while their population is about 25% of the Earth's population and they consume twelve times what is consumed around the South. (Boucha 2008).

2) Stopping the waste of natural resources

Sustainable development for rich countries is summed up in making continuous reductions in the levels of wasteful consumption of energy and natural resources by improving the level of efficiency and bringing about a radical change in the way of life. In this process, it is necessary to ensure that environmental pressures are not exported to developing countries, and this means sustainable development. Also changing consumption patterns that threaten biodiversity in other countries without the necessity of developed countries consuming endangered animal products.

3) The responsibility of developed countries for pollution and its treatment:

Industrialized countries have a special responsibility to lead sustainable development because their accumulated consumption in

the past of natural resources such as fuels, and thus their contribution to global pollution problems, was disproportionately large. In addition to this, rich countries have the financial, technical and human resources sufficient to They are taking the lead in using cleaner, less resource-intensive technologies, and in shifting their economies toward protecting and working with natural systems.

4) Reducing the dependency of developing countries

Sustainable development works to develop self-reliance, develop self-capabilities, and ensure self-sufficiency, thus providing an atmosphere of cooperation and integration among developing countries.

5) Reducing income disparity

By redistributing land to the poor and the unemployed, providing loans to economic sectors, and supporting small projects.

6) Reducing military spending

Sustainable development also works to transfer funds from spending on military purposes and state security to spending on development needs, and this would significantly reallocate even part of the resources devoted to military purposes for development.

Social dimension

In this field, the idea of sustainable development emerges as a fundamental pillar in rejecting poverty, unemployment, and the discrimination that oppresses women, and the large gap between the poor and the rich. The social dimension is evident here as the basis of sustainability through social justice, and this is what we will explain in the following points:

1) Regulating demographic growth

This is done by working to achieve positive steps towards regulating population growth, which is becoming a matter of great importance, because the rapid growth of population creates great pressures on natural resources and the ability of countries to provide social services to their populations, limits development efforts and reduces the base. Natural Resources. (Mounir 2006).

2) The importance of population distribution

The element of population distribution plays an important role in sustainable development. Current trends towards the expansion of urban areas, especially the development of large cities, have huge environmental consequences. Cities concentrate waste and polluted materials, which often cause dangerous conditions for people and destroy the natural systems surrounding them.

3) Health and education

Human development interacts strongly with other dimensions of sustainable development. For example, there is a great connection between health and development, and sustainable development. Access to clean drinking water, healthy food, and health care is considered one

of the most important principles of sustainable development. Agenda 21 has set some special goals. In health, the most important of which is meeting the needs of primary health care, especially rural areas, infectious diseases, protecting vulnerable groups such as (children and the elderly), and reducing health risks resulting from environmental pollution. (Boucha ,2008).

Education is also considered one of the most important requirements for sustainable development. Therefore, all necessary capabilities must be provided to achieve sustainable education. Education for sustainable development lies in the following elements: (UNESCO 2006).

- Education that enables learners to acquire the necessary techniques, skills, values and knowledge.
- Education that is accessible to all at all levels, regardless of the social context (family and school environment, workplace environment, and community environment).
- Education prepares citizens to bear their responsibilities, encourages democracy and enables all individuals and groups to enjoy all their rights as well as carry out all their duties.
- Education that includes lifelong learning.

4) Social justice:

It includes justice between individuals and justice between generations in order to establish the idea that the natural resources in our hands belong to our children and grandchildren.

5) The social democratic style of governance

Development at the political level requires the participation of those affected by decisions in planning and implementing these decisions, for a practical reason that development efforts that do not involve local groups often fail, so adopting the social democratic style (popular participation) constitutes the basic rule. For sustainable human (social) development in the future.

Environmental dimension

The environmental dimension in sustainable development is considered the fundamental dimension, due to its urgent importance in ensuring a safe and secure environment for future generations. The essence of the environmental dimension lies in the interest in the optimal and rational use of energy, the economy of non-renewable resources, and forecasting what may happen to ecosystems, as all activities. Mainly, the economic situation must take into account the quantity and quality of natural resources available on Earth and how to rationalize their use because the factor of environmental depletion is one of the factors that conflict with sustainable development, and the elements of the environmental dimension can be summarized as follows:

1) Lands

Regarding the environmental dimensions, we note that soil erosion and the loss of its productivity lead to a reduction in its production, and annually take large areas of agricultural land out of production. This is a complex and very important issue in its relationship to sustainable development, and therefore the ways and means of land use are what determine. Mainly the extent of countries' commitment to sustainable development and their application of its principles, and the agenda 21 document relies on the necessity of using an integrated approach to manage environmental systems and lands and protect them from pollution, degradation, desertification, and other forms of impact on resources.

2) Protecting the climate from global warming

Sustainable development also means not risking major changes in the global environment, such as increasing sea level, changing patterns of rainfall and vegetation, or increasing ultraviolet radiation, which would cause a change in the opportunities available to future generations, and this means preventing its destabilization. Stabilization of the climate, geographic and biological systems, or destruction of the ozone layer, which protects the Earth, as a result of human actions.

3) Water maintenance

Sustainable development works to preserve water by putting an end to wasteful uses, and improving the efficiency of water networks in light of population growth and the proliferation of development requirements for water, which is mostly a non-renewable resource and is subject to depletion and pollution. This is an issue that is becoming increasingly complex and difficult and will remain one of the most serious obstacles. Sustainable development in the world in the coming years.

4) Protection of seas, oceans and coastal areas

As is known, the seas and oceans occupy 70% of the Earth's surface area, and this makes managing these areas a difficult task. This is due to the complexity of the ocean ecosystems, in addition to the fact that they are the least explored by scientists, and the marine ecosystem usually constitutes many Environmental problems include pollution from the coast and the decline in marine productivity of fisheries. (Hamida 2011).

5) Preserving biodiversity shelters:

The goal of sustainable development in this field means preserving the earth's biological richness for future generations, by slowing down the processes of extinction (animal and plant wealth) and the destruction of shelters and ecosystems to a large extent, quickly, and if possible, stopping them.

2.4. Motivations for companies adopting the principles of sustainable development

There are many factors and variables driving this, some of which we mention (Asrir and Budhrih Saliha 2012) are the following:

A- Responding and adapting to external pressures stemming from:

- Independent bodies represented by non-governmental organizations.
- Consumers who have become more aware and organized.

•Investors who have become more sensitive to the actions of companies.

•Authorities that have begun to impose controls to protect the environment.

B- Future expectations regarding risks resulting from technological innovation.

C- Reducing costs through tight management of energy and primary resources.

D- Obtaining competitive advantage by creating new products with environmental specifications.

E- Improving the product image and gaining customer loyalty.

F- Improving internal relations by recruiting and motivating workers, which will have a positive impact on the organization's performance.

G- Adapting to current and future laws and legislation to ensure non-violation.

In addition to many incentives that give companies opportunities for distinction and advantage in competition, as well as challenges that the institution must adapt to in order to avoid the risks resulting from them. Thus, we notice that the environment of global and local economic activity has changed radically, and the concepts and foundations have changed with it, and the company must interact with these developments. And interact with it.

3. Environmental responsibility in Algerian SMEs

The Algerian manufacturer's commitment to the environment is evident through its handling characteristic, which allows it to exploit the outputs of large companies that include it among the waste and waste. It is also considered an opportunity for both types to contribute to protecting the ocean and the environment. In the language of numbers, the amount of waste is estimated. The resulting output from large companies for ferrous metals is 1,500,000 tons per year, and 90,000 tons/year for non-ferrous metals, about 20% of which is recovered and recycled. As for paper, the quantity is estimated at 150,000 tons, of which 40,000 tons are recovered annually and used in remanufacturing. Paper, at a rate of 26.66%. As for textiles, we find that the quantity is estimated at 60,000 tons/year, and the recovered and recycled quantity is estimated at 55,000 tons/year. As for plastic, the quantity is estimated at 100,000 tons/year, and the recycled quantity is 12,000. tons/year. (Mishri 2011)

Therefore, the company's exploitation of the waste of large companies makes it contribute, even if by a certain percentage, to achieving environmental protection requirements. However, retrieving, recycling and recycling a larger amount of this waste to protect the ocean from pollution requires the Algerian state to create a larger fabric of this. Companies and directing them towards sectors of exploitation built on the waste of major companies.

In addition to this, the increase in the number of factories active in the service sector, which reached 56.45% (at the end of 2022) of the total number of companies, as well as craft activities, is considered an essential factor in reducing urban waste, because it is considered the actual stimulant. Tourism contributes to creating awareness among members of society and thus realizing the importance of the ocean and the necessity of preserving it.

3.1. Rehabilitation programs for Algerian SMEs to contribute to preserving the natural environment

There are also several programs launched by the Algerian Ministry of Industry to support micro, small and medium companies in order to adopt environmental responsibility and contribute to protecting the ocean, which we will discuss in the next point .A program to support Algeria's transition to a green and circular economy:

On Tuesday, May 17, 2022, the Ministry of Industry signed an agreement with the United Nations Industrial Development Organization (ONUDI) and the French Development Agency (AFD), which includes the embodiment of a cooperation project entitled "The Program to Support Algeria's Transition to a Green and Circular Economy".

This program, funded by the European Union Commission with a financial envelope of 20 million euros, aims to stimulate supply and demand related to sustainable consumption and production patterns (MCPD) as well as clean production and resource efficiency (PPER), by strengthening the institutional framework and gaining national experience to create the appropriate conditions. To generalize these patterns.

The duration of the completion of this program extends for four years through the implementation of four basic axes:

- Strengthening the institutional framework and tools to promote sustainable consumption and production as well as clean production and resource efficiency (MCPD/PPER).
- Stimulate demand for sustainable consumption and production, clean production and resource efficiency (MCPD/PPER) tools by SMEs.
- Develop an offering of services and tools related to sustainable consumption and production, clean production and resource efficiency (MCPD/PPER) tools.
- Preparing financing plans that allow financing investments made by companies benefiting from the program.

3.2. Innovation and Development Program for SMEs

The “Innovation and Development of Small and Medium Enterprises” project (INNODEV) is a bilateral cooperation program with the German partner, through the German International Cooperation Agency (GIZ), which aims to enhance the capabilities of SMEs and the sales services directed to them in order to become more competitive and environmentally friendly. The INNODEV project provides support to improve the ecosystem for the emergence of innovative, competitive and sustainable SMEs.

The terms of reference for the program consist of a cooperation agreement between the Algerian government and the German government, signed on 10-20-2019, and the program implementation agreement dated 02-11-2020, setting the scope of its implementation at three years.

From the above, we touched on the industries that contribute to protecting the environment through their specificity, whether it comes to companies that recover and recycle waste or those companies that are active in sectors that do not include waste or waste, while other companies that are mostly, they have a productive nature and are active in the field of fuel and manufacturing industries. They bear a large proportion of responsibility towards the environment with regard to ocean pollution resulting from the waste of their production and processing operations, just like large enterprises, as we find few of them working to integrate environmental considerations into their business strategies and objectives. This is done by seeking to develop environmental management systems that comply with international standards for the environment, the most important of which is the ISO 14001 certificate.

In order to make a careful reading of the reality of Algerian economic companies, including the company, through its interest in environmental management, we start from official figures issued by the International Organization for Standardization (ISO) regarding the development of the number of Algerian economic companies that obtained the ISO 14001 certificate for the period 2001-2015. As the latest recent statistics from the ISO organization are shown in Figure No. (01), in addition to comparing the latter's numbers with the companies of some Arab countries that have obtained the same certificate, which are shown in Table 7

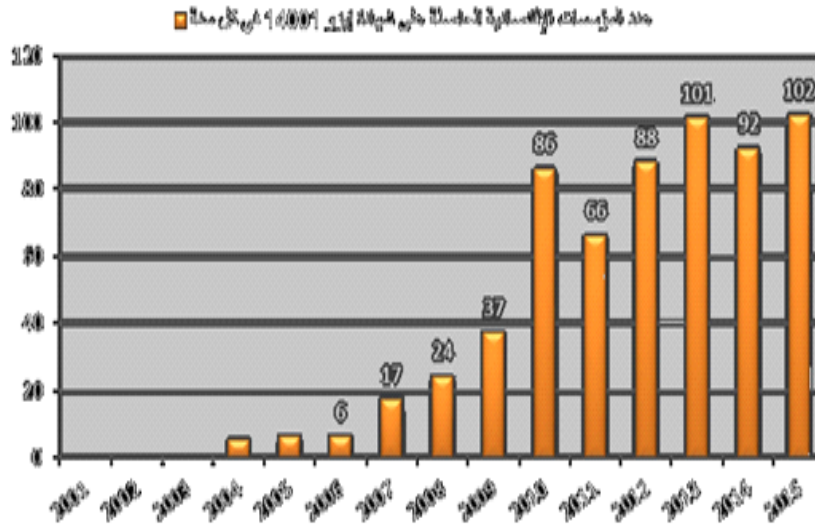


Figure 1. The development of Algerian companies (including MSE) that obtained the ISO 14001

Source: org, iso, 2019

Through this figure, we notice that since the issuance of the first environmental standard in 1996 until 2004, no Algerian institution has obtained the ISO 14001 certificate. This is evidence of the lack of interest of institutional managers in practices of an environmental nature and its inclusion in their management plans, in addition to the absence of a clear national strategy that encourages to protect the environment and preserve its resources, and in the year 2004, the first Algerian companies obtained the ISO 14001 certificate, while their number did not exceed five (5) companies. This number increased steadily until the year 2015, when the largest number of certificates granted was recorded, which reached the number of certificates is 102, and this indicates a growing awareness among some enterprise managers of the importance of obtaining such certificates, especially those enterprises that seek to export and market their products in foreign markets. However, this number remains weak when compared to the large number of companies.

Table 7. Distribution of companies (including M&M) that obtained the “ISO 14001” certificate in some Arab countries from 2010 to 2015. Unit: Number of ISO 14001 certificates

2015	2014	2013	2012	2011	2010	Countries
102	92	101	88	66	86	Algeria
170	133	92	45	38	63	Morocco
230	143	198	80	68	88	Tunisia
850	814	833	593	526	495	Egypt
314	213	232	154	84	87	Qatar
352	269	288	185	164	134	Saudi Arab
1891	1397	1119	882	783	658	The UAE

Source: org, iso, 2019

From the table above, we notice a significant weakness in the demand of Algerian companies for environmental management systems, compared to other Arab countries, in particular the Emirates and Egypt, where the number of the first companies in adopting environmental systems reached 1,891 institutions in 2015, after their number was 658. Company in the year 2010. As for the second, the number of its companies reached 850 companies, i.e., 8 times the Algerian companies, followed by, to a lesser extent, Saudi Arabia and Qatar, where the number of companies holding the ISO 14001 certificate reached 352 and 314, respectively. As for the neighboring countries, which we mean all... From Tunisia and Morocco, after it was lagging behind Algeria in the period between 2010 and 2012, and as a result of motivating its companies to adopt this type of administrative system, their number increased to 230 and 170 companies in 2015, meaning that Algeria has come to the last ranks, and these numbers reflect that Algeria lives on the margins of the movement imposed by economic transformations in the world, which also impose requirements and conditions that must be taken into account, including the application of international standards and specifications. The last table was a comparison of the extent to which Algerian companies adopted environmental responsibility with their Arab counterparts in the period from 2010 to 2015. As for the latest statistics issued by the International Organization of ISO, which represent the number of Algerian companies that obtained the ISO 14001 certificate in the year 2022, their number was estimated at 99 comparative companies. With 88 institutions in 2021 (iso-survey 2022 comparison with 2021 n.d.) This is further evidence that Algerian companies are still far from adopting environmental responsibility, which raises several questions, as after 7 full years (from 2015 to 2022) the number of companies that have This certificate (from 102 institutions in 2015 to 99 companies in 2022) given the number of SMEs estimated at more than 1.3 million.

Therefore, it can be said that Algerian economic companies, including SMEs, still have a very low level of interest in the environment

compared to their counterparts in Arab countries, not to mention industrialized countries. They are also not interested in establishing environmental management systems that would allow them to obtain the "ISO" 14001 certificate. This is despite the passage of nearly 22 years since its issuance, as the total number of companies that obtained this certificate according to the International Organization for Standardization (ISO) reached 434 companies until 2015 and approximately 1,100 companies until 2022, while the total number of economic companies is estimated at more than 1.3 million. Companies of various types. Perhaps the reason for the weak environmental commitment of small and medium-sized companies is due to the lack of necessary support in this field. Most of these companies are small and service companies, and the strong focus on the economic aspect by the directors and managers of these companies, in addition to directing their efforts towards... Finding solutions to the various problems and challenges in which their institutions are floundering at the expense of environmental performance and the absence of application of laws and legislation that force companies to improve their environmental performance, especially those that punish companies that do not respect the environment. For example, within the framework of investment promotion laws in Algeria, it is not required in the feasibility study to incorporate The environmental dimension, and therefore, in order to keep pace with sustainable development indicators, the Algerian state, in cooperation with companies, is required to take a set of measures that would include environmental concerns within the strategic planning process of the organization in such a way that the environment becomes an important variable among the variables on which strategies are built.

Finally, and through the various indicators that we have discussed, it can be said that the responsibilities of small and medium companies are no longer limited to producing and distributing goods and services with the aim of satisfying the needs and desires of individuals and society on the one hand, and achieving profits and developing the wealth of their owners on the one hand. Others, but developed with the development of various economic, social and environmental concepts, as these companies now include economic responsibilities related to the use of resources and wealth in rational and rational ways, and social responsibilities represented in providing jobs, reducing unemployment, and achieving justice in terms of the distribution of wealth, As well as the responsibilities towards the environment by not polluting it and preserving it, and then all of these responsibilities lead to achieving sustainable development.

Conclusion

We conclude from the above that SMEs occupy an important position in the national economy, and this is due to the development of the number of these companies and their distribution among various economic sectors in varying proportions, especially in the field of

services and public works, and their contribution also to driving growth and achieving sustainable development in all its dimensions. From an economic standpoint, these companies work to contribute to increasing the domestic product, increasing added value, and supporting foreign trade through exports outside of hydrocarbons. From a social standpoint, they work to provide jobs (more than two and a half million workers) and create balanced economic development through... Various regions and regions of the country. As for the environmental aspect, it protects the ocean and reduces pollution, and this is in accordance with what is stipulated in the environmental management systems (ISO 14001) and embraces environmental responsibility, in addition to the presence of companies working in the field of waste recycling, but the latter is still... At its beginning, the evidence of this is Algeria's lag and it's occupying the last ranks compared to other Arab and neighboring countries, so we recommend the following:

- Assisting SMEs and accompanying them in applying international standards (ISO) related to social and especially environmental performance, to activate their role in keeping pace with sustainable development and improving their image in the environment in which they operate.
- Sensitizing and educating SMEs to adopt responsible behavior towards the environment and establishing a culture of commitment to the principles of environmental responsibility and placing them among the goals that the company seeks to achieve, in addition to participating in various rehabilitation programs carried out by the Ministry of Industry and Pharmaceutical Production and also contributing to helping companies. SMEs sized companies to preserve their environmental surroundings.
- Using cleaner production technology, in addition to strengthening the environmental legislative system and activating its application, while granting distinctive tax treatment to companies that preserve the environment.
- Conducting periodic seminars and meetings in order to raise awareness of the seriousness of companies' violation of the environmental aspect.
- In order for SMEs to overcome the difficulties and problems they face, this must not be limited to the role of the Algerian state only, but rather it is a collective role in which all bodies and structures participate, especially the Ministry of Industry and Mines, the Ministry of the Environment, various associations concerned with the environment, and even individuals.
- Establishing a modern media system aimed at providing information and data and publishing environmental reports for the benefit of SMEs and companies in general.
- Taking advantages from the expertise of major international companies in the field of activating environmental responsibility.

References

- Al-Hakimi, M. A., Al-Swidi, A. K., Gelaidan, H. M., & Mohammed, A. (2022). The influence of green manufacturing practices on the corporate sustainable performance of SMEs under the effect of green organizational culture: A moderated mediation analysis. *Journal of Cleaner Production*, 376, 134346. <https://doi.org/https://doi.org/10.1016/j.jclepro.2022.134346>
- Carlsen, L., & Bruggemann, R. (2022). The 17 United Nations' sustainable development goals: a status by 2020. *International Journal of Sustainable Development & World Ecology*, 29(3), 219–229. <https://doi.org/10.1080/13504509.2021.1948456>
- Domingo-Posada, E., González-Torre, P. L., & Vidal-Suárez, M. M. (2024). Sustainable development goals and corporate strategy: A map of the field. *Corporate Social Responsibility and Environmental Management*. <https://doi.org/10.1002/csr.2717>
- Fan, Q., Abbas, J., Zhong, Y., Pawar, P. S., Adam, N. A., & Alarif, G. Bin. (2023). Role of organizational and environmental factors in firm green innovation and sustainable development: Moderating role of knowledge absorptive capacity. *Journal of Cleaner Production*, 411, 137262. <https://doi.org/https://doi.org/10.1016/j.jclepro.2023.137262>
- Hyatt, D. G., & Berente, N. (2017). Substantive or Symbolic Environmental Strategies? Effects of External and Internal Normative Stakeholder Pressures. *Business Strategy and the Environment*, 26(8), 1212–1234. <https://doi.org/10.1002/bse.1979>
- Laradi, S., Elfekair, A., & Shneikat, B. (2024). Understanding sustainable outcomes in the digital age: The vital role of digital leadership in leveraging the impact of green innovation. *Uncertain Supply Chain Management*, 12(4), 2413–2428. <https://doi.org/10.5267/j.uscm.2024.5.026>
- Mio, C., Panfilo, S., & Blundo, B. (2020). Sustainable development goals and the strategic role of business: A systematic literature review. *Business Strategy and the Environment*, 29(8), 3220–3245. <https://doi.org/10.1002/bse.2568>
- Nielsen, E., Jolink, A., Lopes de Sousa Jabbour, A. B., Chappin, M., & Lozano, R. (2017). Sustainable collaboration: The impact of governance and institutions on sustainable performance. *Journal of Cleaner Production*, 155, 1–6. <https://doi.org/https://doi.org/10.1016/j.jclepro.2016.12.085>
- Wang, X., Sun, X., Ahmad, M., & Chen, J. (2024). Energy transition, ecological governance, globalization, and environmental sustainability: Insights from the top ten emitting countries. *Energy*, 292, 130551. <https://doi.org/https://doi.org/10.1016/j.energy.2024.130551>

Arabic bibliography:

- Official newspaper. “Directive Law No. 02-17 on the Promotion of Small and Medium Enterprises.” Issue 02. Algeria, 11 January 2017.
- Official newspaper. “Law No. 03-10 Environmental Protection within the Framework of Sustainable Development.” Issue No. 43. Algeria, 20 July 2003.
- Rabeh Hamida. “Strategies and experiences for enhancing the role of small and medium enterprises in supporting growth and achieving sustainable development, a comparative study between the Algerian

- experience and the Chinese experience.” Unpublished master’s thesis, Setif University, 2011.
- Abdul Salam Adeeb. “Dimensions of sustainable development.” Annual meeting of the Syndicate of Agricultural Engineers of the Moroccan Federation. 01 11, 2002. <http://www.ahewar.org/debat/show.art.asp?aid=4305>. (Accessed January 18, 2014).
- Ghoneim Muhammad Othman, and Abu Zant Ahmed Majda. Sustainable development: its philosophy, planning methods, and tools for its implementation. Amman, Jordan: Al Safaa Publishing House, 2007.
- Farex Martiza. “Sustainable Development Goals: ‘Transforming the world through innovation’.” Electronic Cities Environment Magazine, 2016: Issue 13.
- Mubarak Bouasha. “Sustainable development is an economic approach to the problem of concepts and dimensions.” International Conference on Sustainable Development and Efficiency in the Use of Available Resources, Setif University, April 7, 8, 2008.
- Muhammad Nasser Mishri. “The role of medium, small and micro enterprises in achieving sustainable local development, a study of the national strategy for the promotion of small and medium enterprises, the case of the state of Tebessa.” A magister message that is not published . Setif, 2011.
- UNESCO information publications. “Education for sustainable development.” UNESCO. June 11, 2006. [http://: www.unesco.org/Education/désd](http://www.unesco.org/Education/désd) (accessed 10/01/2018.)
- Munawwar Asrir, and Buddhrih Saliha. “Social responsibility and its role in achieving the competitive position of institutions within the framework of the environmental dimension of sustainable development.” The Third International Forum on Business Organization and Social Responsibility. Bashar University, February 14, 15, 2012.
- Nouri Mounir. “Analysis of the human dimensions of sustainable development.” National Forum on Environment, Development and Sustainability, Medea University, June 6, 7, 2006.

French bibliography :

- ministère de l'industrie et de la production pharmaceutique. «bulletin d'information statistique.» n42, algerie, 2023, 14.
- dominique, catherine aubertin et frank. le développement durable-enjeux politique economique et sociaux. france: la documentation française, 2006.
- Michel, Xavier, et et autre. management des risques pour un developpement durable. paris: dunod, 2009.
- ministere de l'industrie et de la production pharmaceutique. «bulletin d'information statistique.» n40, algerie, 2022.
- <https://www.industrie.gov.dz/la-signature-dune-convention-portant-la-realisation-dun-projet-de-cooperation-baptise-programme-dappui-a-la-transition-de-lalgerie-vers-une-economie-verte/> (accès le 2023).

English bibliography:

org, iso. the iso survey of management system standard certification. 2015. <http://www.iso.org>. (accessed 08 15, 2019).
<https://www.iso.org/fr/iso-14001-environmental-management.html>

Footnotes

Local authorities: It is that type of administrative organizational unit sub-organizational to the general system of the state. It works directly with and through the citizen and for his benefit and for the benefit of the state and society as a whole, drawing on all of its human and material capabilities. It is also characterized by administrative decentralization and independence, subject to a certain amount of oversight and its main goal is to achieve local development within the framework of achieving sustainable development.

Global warming: It is an increase in the level of temperature on the surface of the Earth between 0.4 to 0.8 degrees Celsius during every 150 years due to the high level of emission of gases harmful to the environment.

The ozone layer: It is the layer that protects terrestrial ecosystems from the harmful effects of ultraviolet rays. The erosion of the ozone layer leads to more of these rays reaching the surface of the Earth, resulting in various harmful effects on humans and the environment.