

Environment and development in Algeria's economy: multidimensional and overlapping issues

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Received: 22/12/2022

Accepted: 03/03/2023

Abstract:

The issue of environmental pollution is not a new phenomenon, but it is outdated mainly because of the developed world's excessive consumption of various natural resources, whether renewable or non-renewable. The expansion of the production of energy sources, the exploitation of agricultural land and logging from forests, are all causes of increased air, water and soil pollution. Hence the Algerian perception. Legal and financial mechanisms have been put in place. Many important actions have been carried out within the framework of development efforts in recent years, which are part of the implementation of the 21st century's agenda. This has produced interesting results in many areas, including the fight against poverty, the improvement of both health protection and human settlements as well as the integration of environmental decision-making.

Keywords: sustainable development, economic development, environment.

Jel Classification Codes: Q56, O11

I-Introduction :

The importance of examining the relationship between environment and development is due to the deficiency of recognizable economic indicators in achieving sustainable development in the countries around the world because of the lack of such indicators of environmental data and of data on the identification of natural resource balances. The lack of such data will undoubtedly have negative effects on the economy of these states. It was therefore necessary to take both the environment and the development dimension into account when formulating the State's economic development policies. UN Environment Programme has defined it as "the set of natural and social resources available at a given time to satisfy humanitarian needs". Or it is " the framework within which man lives with other living organisms with their physical, chemical, biological, social, cultural, economic and political components, and in which he gets the elements of his life. ".

Development is primarily aimed at satisfying people's needs and aspirations, so there are two levels on which development can be seen as a goal, the first being the eradication of poverty, and the second being a higher quality of life than just living in conditions that respond to human rights in a decent life.

Achieving the goals set out by the concept of sustainable development poses one of the most important challenges facing various countries in the world, including Algeria, particularly with regard to addressing poverty and unemployment and improving the individual's standard of living. To implement these dimensions and objectives, Algeria has pursued a number of economic and financial policies related to improving the level of economic growth outside the hydrocarbon sector and improving the individual's living framework with importance given to the environmental dimension. Through this study, we are trying to highlight the realities of sustainable development in Algeria through exposure to the realities of the Algerian economy, as well as the available and the possible for Algeria, so that it can implement a sustainable development strategy with a qualitative leap that will enable it to gain a prestigious place among nations that will preserve the right of future generations to a better life.

To what extent do Algeria's economic plans take in consideration the dimensions of sustainable development to preserve the environment and human being?

The study's hypotheses: to address the problematic and sub-questions we assume the following:

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- Algeria has the potential to be a leader in economic development in its three dimensions.
 - Algeria's economic plans do not include the environmental concept in their priorities.

1- The need for change in development thinking:

There is no goal that is more elusive than the goal of development, and there are no means and approaches to achieve the goals and objectives of human activity than development. This is due to the fact that it is an effort associated with people's development and their characteristics, actions and goals that are so complex in a changing world that it has become like a small village because of the communications revolution, its global technologies and its achievements. The number of environmentalists has been increasing since the early 1970s in what is known as the doomsday school that emerged from the famous Rome Club with its study in 1972 entitled "The Limits of Growth", on the impasse ahead for humanity owing to the shortage of economic resources and the faster growth of the population in a near future, much nearer than many expect. However, the world's awareness of environmental problems and the pollution of the ecosystem has evolved prominently only since the First Environment Conference, held in Stockholm in 1972, despite the emergence of these problems resulting from diseased human interventions in the balanced and susceptible environment that sustained him and the human species relatives earlier since late antiquity. That is why nature has begun to restless with man's wasteful and rebel against his interventions in the ecosystem as well as his depletion of the Earth's resources on which he lives.

Human beings have also moved from open to enclosed environments. economic slogan that more production increases consumption, But as many of the planet's natural resources come into operation, scientists have found that the planet is not an enclosed environment that can be eternally exploited and that such exploitation must have limitations as well as the economic activity must be subject to physical restrictions in parallel with adopting new approaches and methods of evaluating in order to evaluate such restrictions and the implications of such activity, On the other hand, the concept of economic equilibrium is no longer effective, because there has always been a belief that man takes energy and different resources from nature and returns them to it in an eternal process that ensures the balance of economic activity that always returns to its state after

shifts in energy and resources. However, human beings now realize that energy and resources are undergoing transformations that cannot be overturned and restored. (mostafa, 2006, p. 460)

While the environmental movement's opponents portray the situation as the dilemma of economy against the environment, its supporters believe that the economy and the environment can be combined in harmony if man can understand the fragile ecosystem that sustains him and the human species, relies on him and deals with it smartly so as not to turn against him. From this point of view, **Lester Brown** says that economists see the environment as a vacuum for the economy and ecologists on the other side see the economy as a vacuum for the environment.

The problem of environment and pollution has become a complex socio-economic problem for most developing and developed countries alike, because human consumption patterns have resulted in more pollution, over-exploitation of systems and increased damage to the Earth's ability to feed and support people.

It should be noted that global updates have affected Algeria's economy, making the inclusion of environmental thinking a necessity of economic plans. These updates can be summarized in the following elements: (Report of the World Summit on Sustainable Development, 2002, pp. 10-15)

1-1- Global oil demand: oil has a significant environmental and social impact, due to routine accidents and activities that accompany its production and operation, such as seismic explosions during its production and drilling, as well as contaminated waste. Furthermore, petroleum extraction is costly and sometimes harmful to the environment, although John Hunt indicated in 1986 that more than 70% of the world's reserves did not require damage to the environment for its extraction, and many oilfields were found as a result of natural leakage. At the same time, oil extraction near beaches disturbs living marine organisms and affects their environment. Oil extraction may also involve scavenging, which moves the seabed, killing marine plants that marine organisms need for life. At the same time, crude oil waste and distilled fuel spread from oil tanker accidents have a catastrophic impact on the endangered species in Alaska, the Galapagos Islands and Spain, and many other places (Business Dictionary, 2017, p. 102) .

1-2- The growing role of civil society and the private sector: humanitarian action is a societal responsibility of all members and

components of society, especially civil society organizations and the private sector. Responsibility is greater during emergency circumstances, especially during armed conflicts, since non-governmental institutions are the only hope for humanitarian action to achieve positive neutrality in their work because of the State's preoccupation for armed conflict as well as for the freedom of movement of civil society organizations and the private sector in humanitarian action away from the official routine. (Daly, 1985, p. 201)

1-3- The trend towards decentralization: The term decentralization is directly linked to centralization, and both concepts illustrate the degree of delegation. These terms can be conceived as opposite ends to the delegation axis. Decentralization indicates the maximum delegation of functional activities and the decision-making power of subordinates, while centralization indicates the lack of delegation. The importance of the decentralization of powers is not about the type of authority delegated, but about the power delegated because decentralization is determined on the amount of power. (Al-Sharif, 2017, p. 201)

1-4- Liberalization of foreign trade: as a modern approach that contemporary economies have strongly embraced according to the traditional view prevailing in the eighteenth and nineteenth centuries on foreign trade. The latter is the bridge that connects countries to market their product surpluses, through export and import operations, so the modern view of foreign trade is often seen as playing a key role in economic development. (Jaoude, 2017, p. 63)

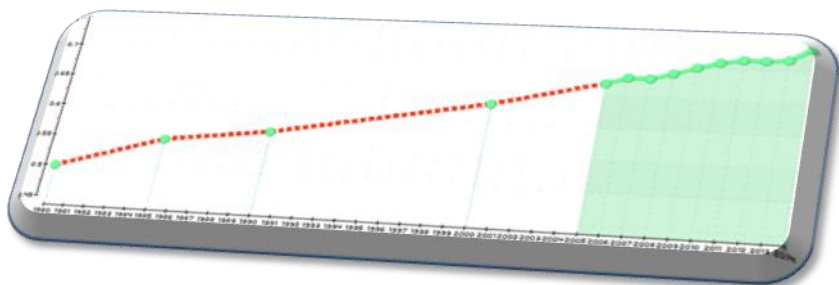
1-5 Globalization: The phenomenon of economic globalization is one of the most significant economic developments in the world economy at the end of the twentieth century. Economic globalization is a stage in the evolution of the capitalist organization characterized by a gradual transition from an international economy whose baseline cells consist of global productive economies, an information dominance of the planet's resources, a highly centralized economic management of global economic relations, the events and temptation of the world economy and the widespread logic of sustained economic decision-making as well the basics of global economic sovereignty rather than the basics of national economic sovereignty and globalization's controlover the industrialization and technology movement. (Yassin, 1999, p. 125)

2- Sustainable development in Algeria: dimensions and indicators:

After independence, Algeria followed the socialist economic system within an ideological planning approach in order to build itself up, especially after the war, where the country's economic development was considered contingent on planning; However, this system, which had lasted for more than 20 years, had been inadequate and hampered economic activities, and existing investments had proved ineffective. This is why the State decided to break with it, especially after the country's economic and social crisis, due to the Petroleum crisis of 1986, which in turn led to weak national institutions dependent on State support. The State adopted many economic reforms in the late 1980s to adapt its working systems and mechanisms to the free market economy. Thus, Algeria's economy began its journey towards economic liberalization with a view to integrating into the world economy. The beginning of the third millennium saw a range of development programmes such as the Economic Recovery Support Programme, the complementary Growth Support Programme and the Economic Growth Consolidation Programme. (Moinet, 1985, p. 86)

2-1-Human development and expansion of choices: the State's efforts in the family planning campaign have been effective, and the Family Commission was established during the 1980s, whose principle is to balance economic resources and society. Three years later, the International Family Support Fund supported the organization to increase maternal and child care as well as awareness-raising about contraceptives. The Fund was responsible for rationalizing the State's policy in this area. 35% women used a contraceptive method in the late 1980s. (bank, 2014)

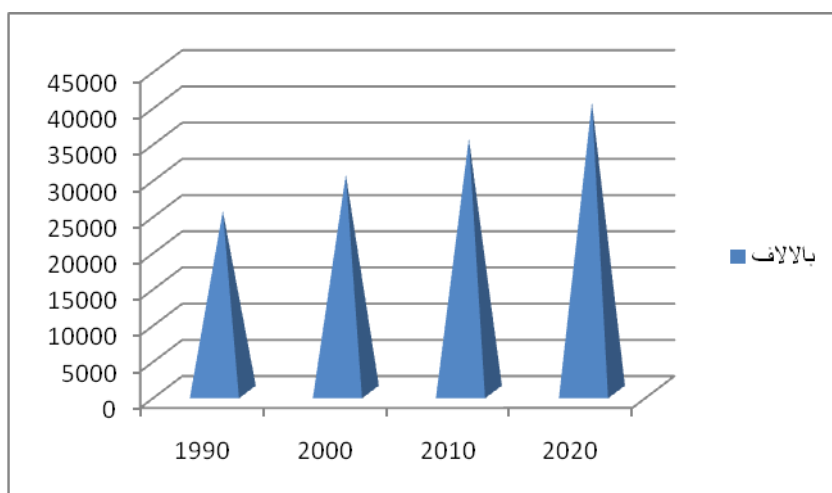
Figure No. 01: Development of Algeria's Human Development Index



Source: United Nations development program

Algeria's resident population is 44.62 million until 2022, compared to 40.4 million in 2016, according to the National Statistical Office. Based on to the office's figures, the number of live births between the 2021 and the 2022 was 900 thousand, i.e an increase of 2.2%.

Figure No. 02: Evolution of Algeria's population



Source: National Statistical Office<http://www.ons.dz>

Algeria's population is spared very unequally on national territory, with 91 per cent of the population living along the Mediterranean coast accounting for 12 per cent of the country's overall land area. The 12 Province with a density of less than 20 inhabitants per square kilometre (Djelfa , Laghouat, El Oued, Naâma, El Bayadh, Ouargla, Ghardaia, Adrar, Béchar, Tamanrasset, Illizi and Tindouf) represent 89% of the country's area to about 13% of the population. The other 36 province, which comprise more than 20 inhabitants per square kilometre, all located in the north of the country, represent 11% of the area (about 240 thousand square kilometre) and it represents 87% of the population.

2-2- Economic dimension in Algeria's economy: After the International Monetary Fund (IMF) predicted that Algeria would approach fiscal balance by the beginning of 2021, the World Bank also confirmed these projections. Noting that Algeria's economic growth was "heading in the right direction" in 2017 despite the decline in global oil prices thanks to the high production of hydrocarbon. (elmassa, 2018) Thus, "the growth of gross domestic product is expected to stabilize at 2.2% in 2017 and it will be difficult to exceed the threshold of 2% during 2018-2019 ", according to the same forecast (bank, 2014)

Figure No. 03: Development of Algeria's growth rates.



Source: <https://tradingeconomics.com/images/analytics/analytics-chart-0.png>

The reports add that some of the accompaniment procedures have been prepared for implementation in the medium term. The World Bank concluded that "support-related reforms require prudent action in order to sustain poverty reduction achievements".

It is noteworthy that the International Monetary Fund (IMF) has previously expected Algeria's overall financial deficit to stabilize after widening to 3.15 per cent in 2015 to the range of 2.3-percent in gross domestic product (GDP) in 2017 and. 11-% in 2018 before continuing its decline to 5.0-% in GDP in 2019 and 0.1% in 2020, according to IMF projections in its report "Public Finance Guide", which examines the functioning of the world's budgetary policies. Algeria's revenues are set to account for 3.32 per cent of gross domestic product in 2017, compared with 29 per cent in 2016, a rise that could be due to improved petroleum prices this year (bank, 2014).

2-3-Agricultural inputs and production: The follower of the agricultural sector's income notes that its contribution to economic growth rates has weakened. Since 1990, it has not exceeded 9 per cent by 2011, but achieved a

qualitative jump in 2015 to 35 per cent thanks to the rural and agricultural renewal policy. However, the contribution rate is generally only 9 percent if we exclude recent years, which is very low ratio. Thinking about sustainable economic development may begin with making agriculture a priority, as it is the main engine for other sectors; because the growth of the agriculture sector is the cornerstone of Europe's mid-eighteenth century industrial wealth. However, the Algerian agricultural sector is unable to mobilize the various economic sectors as well as achieve self-sufficiency. It suffers from a 30% deficit in agricultural production, especially milk, red meat and cereals, from which Algeria imports more than 50% of its needs annually, although the area of arable land is estimated at 8.5 million hectares. Algeria owns about 20 million hectares of plains, nine million hectares of fishing spaces and 4.2 million hectares of forests. Algeria's total arable land area is estimated at 3.1%, while the percentage of irrigated agricultural land is estimated at 2.6%, which is a poor indicator and an evidence that most of the land depends on rainwater. That is, the irregularity of their precipitation during one season exposes natural pasturage and livestock to productive shocks in terms of fluctuating animal populations, as well as rain fed agriculture to instability, in terms of area, or in terms of revenue. The contribution of agriculture to the Algerian economy's total value added declined from 13% in 1989 to 9.3% in 2013, and less than that in 2015. The reason for this is the futility of the economic reforms undertaken as part of the transformation of the market economy. Algeria's agricultural exports amounted to \$170 million in 2012, for example, while food imports for the same year were estimated at \$7.53 billion; this reflects the scale of the food gap and the hard currency value that is used annually to cover the bill for the expensive food imports. (bank, 2014)

Agriculture's average contribution to productive activities for the period 1980-2015 is 11 percent, ranked third after the hydrocarbons and service sectors. This situation is due to the rapid growth achieved by the non-agricultural sectors. This ratio is almost constant despite efforts to support the sector within different development programmes during this period. This indicates the disadvantaged position of agricultural sector compared to other sectors, especially the hydrocarbons sector, public works and services. (Halim, 2018, p. 52)

Other factors contributed to the declining performance of the agricultural sector, most notably the relative slowdown in agricultural land rehabilitation and the continued decline in production, as well as the degradation of agricultural

land due to erosion factors, soil depletion, urbanization and poor research in agriculture. Although the agricultural sector employs 250 thousand peasants, the scarcity of employment is one of the sector's biggest problems, with a near total absence of social protection for them. We also record that many products have been damaged by the absence of transformation factories, as evidenced by the large quantities of tomatoes that are thrown away in the OuedSouf region.

2-4-Value added from industry: Algeria has recently initiated a new industrial recovery strategy aimed at developing, modernizing and increasingly integrating Algerian industry. In this perspective, the Government seeks to improve Algeria's attractiveness as an investment destination in order to stimulate industrial activity, create business opportunities and encourage the creation of new investments. The initiative also aims to upgrade the digital economy, develop new flexible and innovative mechanisms for financing projects and encourage industrialists to modernize their production equipment (Halim, 2018, p. 55).

Algeria's industry is one of the pillars of the Algerian economy, especially the hydrocarbon industry belonging to the mining industry. Despite its diversified productivity, it is modest in yields. The country's Helium industry accounts for 13% of gross domestic product. The hydrocarbons produced accounted for about 2.9% of the world's total natural gas production, and about 2.2% of the world's total crude oil production during 2006. Algeria produced about 38,914 tons of gold ore in 2006, averaging 9.57 tons of pure gold per ton. The country's mining industry began to emerge from 1970, and at that time, the industry relied on many minerals such as iron, phosphate, mercury and zinc, all through the International Mining and Exploration Company in cooperation with the National Company for Mineral Research and Exploration. In early 2000, the Government proposed a resolution allowing foreign investors to develop mineral deposits held by national mining companies in cooperation with the National Geology and Minerals Research Office, although mineral deposits are found in remote areas that lack the infrastructure for their development. The economic impact is due to the higher percentage of revenues in the natural gas, petroleum and manufacturing sectors, where these industrial sectors reached an estimated 78% of the Government's income, owing to the continued increase in the world price of crude oil and natural gas. The mining sector contributed to the employment of more than 28 thousand people (bank, 2014) .

Figure No. (04): Industrial production in Algeria



Source:<https://ar.wikipedia.org/wiki/118>

3-Features of Algeria's sustainable development strategy:

Algeria has several possibilities in terms of geographical location. It is considered Africa's gateway to the European market and a 1,200-km coastal strip overlooking the European market, as well as the hydraulic, human and financial resources that enable it to occupy an advanced position in terms of self-sufficiency and even a surplus through which it can achieve sustainable development in all its dimensions.

3-1 obstacles to environmental protection in Algeria: Algeria, like the rest of the world, has had to strike a balance between environmental protection and development requirements through rational management of the resources used in the development process. However, these measures have been hampered (Development, 2012, p. 120), with agricultural land per capita falling from 1.1 hectares in 1962 to 0.35 hectares in 1980, and are expected to be less than 0.15 hectares at present, with enormous areas being converted into buildings. In addition, the population growth is so increasing that available environmental resources cannot afford it, Algeria's population has nearly doubled 7 times since 1962 until the present day, the population has increased from 6 million to more than 41 million, with an increase of more than 0.3% per year, as mentioned earlier. Much of Algeria's land area is exposed to desertification. A high proportion of cars are supposed to be removed from use, in addition to the huge volume of medical waste incinerated in an inappropriate and unsanitary manner to reduce the cost and evade the to evade paying taxes, the volume of these wastes is estimated at about 124 thousand tons per year. On the other hand, a study carried out by the National Agency for Water Resources in Algeria on the

quality of water consumed shows that 40 per cent are of good quality, 45 per cent are of satisfactory quality and 15 per cent are of poor quality (Mohamed, 2010, pp. 11-12).

3-2Public awareness of the need for sustainable development in Algeria's economy: (Guesmi, 2012, p. 27)

Notwithstanding the existence of policies aimed at sustainable development; however, they remain inconsistent and under valuable, and the Algerian Government's endeavours have been to bring in laboratory equipment and the necessary equipment to prevent petroleum pollution, following funding from the Global Environment Fund for the Maghreb Program to Combat Pollution resulting from hydrocarbons. Ongoing works are also linked to the rehabilitation of drinking water supply and sewage treatment system, through the rehabilitation of 10 cities with a population of more than 2 million, the rehabilitation of 24 sewage treatment plant, as well as partnership initiatives with European countries to improve the management of water resources. With regard to reducing the issue of water shortages in Algiers and in some major coastal cities, the Government had set up seawater desalination plants, which had cost some 25 million US \$, with a capacity of up to 200 thousand cubic metres per day. In addition to the imposition of the Water Quality Preservation Tax, since the 1996 Finance law establishes a Water Quality Tax, which is collected on behalf of the National Fund for the Integrated Management of Water Resources by water production and distribution enterprises. (Edwarde, 2001, p. 116)

The Government has also taken several measures, including the choice of pollutant-free fuels, and the transformation into a new source of electricity or solar energy. It has begun to generalize the use of diluted petroleum gas as a fuel gas and the introduction of unleaded gasoline. During 2009, it records some 40,000 vehicles converted into diluted petroleum gas, and the completion of 160 filling station spread across the Territory. The successful environmental policy is one that paves the way for environmental awareness, where lessons on the environment are included in the elementary education, and a textbook is printed to environmental education course for the secondary education. It also established radio and television programs over the environment that are shared by the public written press specialized in the treatment and dissemination of ecological topics. The strategy currently being pursued also aims to favour technical choices accepted by peasants on the one hand, and to take into account the importance of

the environment on the other, as well as to work intensively to restore 03 million hectares of steppe and to give greater priority to drift lands. Algeria also promulgated the Algerian Territory management Act in 2001, under which the Ministry of Territory Management and the Environment launched a comprehensive national census of all special wastes by organizing workshops to train persons from the productive sectors of this type of waste who carry out the census process according to a thoughtful methodology. In fact, seven provinces in the country, namely, Algiers, Skikda, Ghardaia, Tlemcen, M'sila and Batna, witnessed the organization of two-day workshops under the supervision of international experts, which included engineers assigned to the special waste file at the level of environmental province inspectorates, as well as officials within organizations that sort out special waste. The current workshops' schedule for the management of special waste in Algeria have been scheduled, and the facilities provided by the new law as well as the establishment of a plan for coordinating the work between the various bodies. (Jaoude, 2017, p. 102)

III Conclusion:

As human beings endeavour to further satisfy their needs by raising economic growth rates in various economic and social activities, human beings have disrupted the environmental balance and its manifestations were environmental pollution, desertification, climate change and loss of biodiversity. In order to maintain the continuing satisfaction of the present needs without sacrificing the potential and ability of environmental resources to address scarcity of the future, environmental considerations must be at the centre of development-oriented efforts, resulting in a new concept of development and economic growth: It is the concept of "sustainable development".

Algeria has embraced concepts of sustainable environmental development, but in general, the reality has been characterized by specifications that have been a major obstacle to the implementation of these strategies aimed at achieving the goals of sustainable development through environmental conservation. The concept of the environment has been linked to projects classified as dangerous outputs to the environment, such as extractive activities and hydrocarbon. While there are plenty other activities related to many critical environmental resources such as forests/fisheries, dams, water, other sources of energy, and urbanization, not yet covered by the legislation with adequate care; as well as the generally weak legislative base, as an inevitable result of the Algerian

official's weak environmental culture ", with a weak oversight and evaluation aspect in Algeria. This has resulted in poor results in both the environmental and even the developmental field.

The foregoing can confirm the study's hypotheses. Algeria has the potential to be a leader in economic development in its three dimensions, but the inclusion of environmental sustainability in Algeria's economic plans remains insufficient.

As a result, some of the alternative proposals we consider as a means of achieving the desired objectives could be included:

- Strengthening institutions contributing to environmental protection with the necessity to promote people's participation.
- General awareness of the need for sustainable development and action to create a genuine environmental culture among the officials before society.
- Integrated ecosystem management with the need to monitor, evaluate and assess the results of launched projects at an appropriate time
- Optimal use of natural resources with total prohibition of non-earmarked agricultural land use, as well as the possibility of reviewing the economic and social dividend of exploiting untapped arable land in the light of the determinants we have mentioned, along with the successful means to involve investors in planning and implementing these projects with a timetable for the rehabilitation of pastoral areas and rain fed agriculture.
- The use of natural gas as much as possible, especially with the abundance of this substance in our country, while increasing the efficiency of distribution networks and completing the procedures for the full cessation of the gases' burning accompanying the production and refining of petroleum.

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