

The legal framework for addressing climate change to achieve environmental security

الإطار القانوني لمعالجة ظاهرة التغير المناخي لتحقيق الأمن البيئي

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Abstract:

The legal framework for tackling climate change serves as a crucial cornerstone in promoting environmental security, It encompasses a range of policies, laws, and agreements designed to reduce the adverse effects of climate change while safeguarding natural resources for the benefit of future generations, Equally vital is the emphasis on meeting environmental security needs, which include advancing the shift toward clean energy and fostering a green economy.

This study aims to explore the following question: How effective are legal initiatives in combating climate change while ensuring environmental security? To tackle this issue, the research plan has been structured to first define the concepts of climate change and environmental security, followed by an examination of the adverse impacts of climate change on environmental security. And The legal basis for addressing climate change at the international and national levels is then examined, followed by the requirements necessary to achieve environmental security while addressing climate change.

Keywords: framework; Legal; Processing; Change; Environmental.

ملخص:

إن الإطار القانوني الذي يتعامل مع مشكلة التغير المناخي يعد أساساً مهماً لتحقيق الأمن البيئي فيتضمن هذا الإطار مجموعة من السياسات والقوانين والاتفاقيات التي تهدف إلى تقليل من الآثار السلبية للتغير المناخي وضمان استمرارية الموارد الطبيعية للأجيال المقبلة، كما يجب التركيز على الأخذ بمتطلبات تحقيق الأمن البيئي ومنها الانتقال نحو الطاقة النظيفة والتوجه نحو الاقتصاد الأخضر.

ولهذا سنحاول من خلال هذه الدراسة معالجة الإشكالية الأتية ما مدى فعالية الجهود القانونية لمكافحة التغير المناخي في ظل تحقيق الأمن البيئي؟، وللإجابة على هاته الإشكالية ارتأينا تقسيم خطة البحث إلى التعريف بظاهرة التغير المناخي والأمن البيئي، ثم تبين الآثار السلبية لظاهرة التغير المناخي على الأمن البيئي، ثم دراسة الأساس القانوني لمعالجة ظاهرة التغير المناخي على مستوى الدولي والوطني، ثم التطرق إلى متطلبات الواجب توافرها لتحقيق الأمن البيئي في ظل معالجة ظاهرة التغير المناخي.

الكلمات المفتاحية: الإطار؛ القانوني؛ المعالجة؛ التغير؛ البيئي.

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Introduction:

Climate change has emerged as one of the most pressing challenges of this century, impacting every corner of the globe without exception. It has evolved into an urgent environmental concern and an undeniable scientific reality. Furthermore, it stands as a long-term global issue, marked by intricate interactions and far-reaching consequences that extend across political, social, environmental, and economic dimensions.

The impacts of climate change encompass numerous negative consequences that pose a significant threat to environmental security. These include droughts, desertification, water scarcity, intense wildfires, rising sea levels, increased flooding, melting ice in polar regions, destructive storms, and the ongoing decline in biodiversity.

The factors contributing to climate change cannot be reduced to just one or two; rather, they are the result of a complex and interconnected web of natural and human influences. Human activities are considered the primary drivers of this phenomenon, encompassing industrial activities, intensive use of fossil fuels like oil and gas, and the resultant emissions of harmful gases, alongside practices such as deforestation. While natural factors also play a role, their impact is generally less significant compared to human activities. These include variations in solar activity, earthquakes, volcanic eruptions, and other natural phenomena.

The issue of "climate change and its impact on environmental security" is a pressing matter that demands immediate action from the international community to address this threat to humanity and ecosystems. It also calls for significant focus on scientific and academic research, given the novelty of the subject and the ongoing nature of its effects. As part of efforts to mitigate the repercussions of climate change, the global community has established numerous agreements, most notably the United Nations Framework Convention on Climate Change. Furthermore, several countries, including Algeria, have developed national strategies and enacted legislation aimed at safeguarding the environment, thereby contributing to the promotion of environmental security.

To address this research, we have chosen to adopt the descriptive-analytical method, as it aligns well with the nature of the subject. This approach aims to explore how various agreements and laws have tackled the issue of climate change, while also examining the negative impacts associated with this phenomenon. Climate change is a global environmental challenge that affects all countries around the world without exception.

This study aims to explore the following question: How effective are legal initiatives in combating climate change while ensuring environmental security? To tackle this issue, the research plan has been structured to first define the concepts of climate change and environmental security, followed by an examination of the adverse impacts of climate change on environmental security. And The legal basis for addressing climate change at the international and national levels is then examined followed by the requirements necessary to achieve environmental security while addressing climate change.

Section I: Defining the phenomenon of climate change and environmental security

This section focuses on introducing the concepts of climate change and environmental security highlighting the strong interconnection between them. Climate change directly affects environmental security through its impact on natural resources such as water and land, exacerbating environmental issues like desertification, drought, and floods. While climate change refers to long-term shifts in temperature and weather patterns, environmental security pertains to the stability and well-being of ecosystems, along with their capacity to withstand challenges and disruptions. This is what will be discussed below :

A) Definition of climate change:

Climate change which the world is currently grappling with, stands out as one of the most pressing issues garnering attention from nations across the spectrum, whether developed or developing. This is largely due to its widespread negative impacts that have touched various aspects of human life. Furthermore, the unsustainable exploitation of natural resources and the deterioration

of the environment have emerged as significant challenges confronting global systems, Although environmental issues are not a recent phenomenon, the realization of their full scope has come relatively late, spurred by the evident consequences of environmental degradation.

Global concerns have significantly risen in recent times due to climate change, particularly following studies that have highlighted its severity and persistence, alongside its escalating impact on both the environment and human populations, Every continent has experienced sharp climate shifts, which have triggered devastating natural disasters in numerous regions, This phenomenon has worsened as a result of intensive human activities that disrupted ecological balance and threatened the stability of natural systems, Consequently the international community has been prompted to bolster efforts to study the issue, delve deeper into its causes and characteristics, and formulate strategies to mitigate its effects and reduce its future repercussions.

The second paragraph of Article 1 in the United Nations Framework Convention on Climate Change defines the term "climate change" as encompassing any alteration in climate resulting directly or indirectly from human activity, This change affects the composition of the global atmosphere and is observed alongside natural climate variations over comparable time periods.

The Intergovernmental Panel on Climate Change (IPCC) has defined the phenomenon of climate change as encompassing all statistically measurable changes that can persist for extended periods, often spanning decades, These changes may result from human activities or arise from internal interactions within the components of the climate system.¹

This definition aligns closely with the provisions of the United Nations Framework Convention on Climate Change, as most definitions related to climate change recognize human activity as the primary driver behind this phenomenon. However, it is important not to reduce the causes solely to human factors, as there are other contributors to climate change, including natural factors stemming from interactions within the climate system itself, as well as increasing population growth and other influencing elements.

Climate change refers to lasting alterations in global temperatures and weather patterns, which can stem from natural processes or human actions, More precisely it is defined as a long-term transformation in the fundamental characteristics of the Earth's climate, It is assessed by observing shifts in the average or the range of variability of its fundamental elements, Such alterations typically unfold over extended periods, spanning several decades or more.

B) Definition of environmental security:

Since the end of the Cold War the absence of a global consensus on environmental security has become increasingly evident, This lack of clarity is prominently displayed in official statements policies, and international agreements, where a unified definition or well-defined approach to tackling this issue remains elusive, Given the escalating environmental challenges and pressures that jeopardize the sustainability of life and natural resources, international organizations and relevant stakeholders are striving to craft a clear and comprehensive definition of environmental security.

Numerous definitions have been introduced to shed light on this concept, There is the definition provided by Al-Hamdani Talal Badr Abdullah, in his book **International Environmental Security** defines environmental security as the range of legal actions implemented to address threats that disrupt environmental stability, whether on a local or international scale, This refers to situations caused either by direct human actions or natural occurrences that pose risks to international peace, security, and human rights both now and in the future, These challenges demand a unified response from states and international organizations, emphasizing collaboration and adherence to a binding framework.²

Many argue that environmental security revolves around preserving both local and global environmental equilibrium, a crucial foundation for sustaining human activities.³

Environmental security encompasses a range of measures and initiatives aimed at safeguarding the environment and preserving its natural resources from threats or damage that could

disrupt its balance and sustainability, It involves tackling critical issues such as climate change, pollution, biodiversity loss, and the overall deterioration of environmental quality, Therefore Environmental security aims to promote sustainable development by ensuring the preservation of resources for future generations, It emphasizes minimizing environmental risks that could negatively impact human health and overall well-being.

These steps and initiatives must be implemented by nations, governments, and organizations involved in environmental issues in order to ensure environmental security.

The foundation of environmental security is a set of principles, the most important of which is the principle of proactivity, which is based on developing proactive strategic strategies to prevent environmental hazards from occurring, This idea was used by the United Nations when drafting the Framework Convention on Combating Climate Change.⁴

And The preventative principle, which includes the creation of strategies and plans to address environmental emergencies and calamities and mitigate their harmful consequences.

Lastly, there is the idea of sustainable development, which is a comprehensive plan that integrates the economic, social, and environmental aspects of the twenty-first century agenda that was created at the Rio Declaration in 1992.

Section II: The negative effects of climate change

Climate change has a number of detrimental effects on the environment, economy, sustainable development, and communities worldwide. Some of the effects are:

A) The impact of climate change on the environment:

Climate change significantly affects the environment, leading to long-lasting shifts in climate patterns both regionally and globally, These changes may occur gradually over time or unfold rapidly influencing various environmental factors in numerous ways, such as:

1-Change in the ecosystem: These changes encompass shifts in the distribution of forests and deserts, as well as changes in ocean currents and wind motions, This may be seen in rainfall quantity and temperature distribution.

2-Loss of biodiversity: One of the most serious issues facing the environment and the world as a whole is the reduction of biodiversity. This phrase describes the continuous decrease in the variety of live organisms, including plants, animals, and microorganisms, due to the growing effects of climate change, Due to this decrease, the ecological balance is directly impacted, leading to the extinction of several species and the disruption of ecosystems, which puts the environment, climate, and human health at risk.

3-Desertification: Desertification is an environmental process that is brought about by a confluence of factors, including climate change and human actions, that cause land degradation in dry, semidry and arid areas. Soil fertility is lost as a result of desertification, which threatens food security and lowers agricultural output, Additionally, it has a detrimental impact on the livelihoods of communities that depend on these lands as their main means of support.

4-Drought and lack of rain: Low precipitation and drought are all-natural events that have a major impact on the environment and natural resources, In the impacted areas, they worsen socioeconomic issues, contribute to the degradation of agriculture, and cause water resources to decline.

B) The impact of climate change on the global economy: Climate change is having an increasingly significant impact on the world economy, posing a serious threat to a wide range of industries including agriculture, industry, energy, and international commerce, This is what will be addressed below:

1-The impact of climate change on the agricultural sector: Agriculture stands as a vital pillar of economic activity, playing a key role in bolstering and sustaining numerous sectors at both local and global levels, It serves as the main supplier of raw materials essential for a wide range of industries and offers substantial employment opportunities, particularly benefiting rural communities, The agri-food sector is increasingly vulnerable to the growing impacts of climate change, with natural

disasters causing billions of dollars in losses to crop and livestock production and jeopardizing significant progress in development efforts.

2-The impact of climate change on the industrial sector : The link between climate change and the industrial sector is deeply interconnected. Industry significantly impacts the climate by releasing greenhouse gases, with carbon dioxide from industrial activities—especially those tied to fossil fuels—being one of the most prominent contributors. On the other hand, climate change exerts a notable influence on the industrial sector, bringing both economic and technical challenges. These effects drive up production costs and disrupt manufacturing operations. Additionally, they lead to higher raw material prices, especially for materials reliant on consistent climatic conditions for their production.

3- The impact of climate change on the energy sector : As global energy demand continues to rise its availability has become a vital concern for both developed and developing economies. Proper management of energy resources plays a crucial role in driving economic progress and ensuring sustainable growth.⁵

Climate change directly affects energy supplies, as rising temperatures and increased carbon dioxide levels lead to changes in renewable and fossil energy production. This also impacts energy consumption, through changes in seasonal demand for cooling and heating due to temperature fluctuations. On the other hand, gases emitted from the energy sector, especially electricity, are the largest source of emissions, which contributes significantly to the exacerbation of the phenomenon of global warming and pushes countries to accelerate the transition to renewable energy.

4- The impact of climate change on global trade : Climate change is profoundly affecting global trade, introducing considerable challenges to production, transportation, and supply chain operations. Elevated temperatures and the growing frequency of natural disasters, including hurricanes, floods, and droughts, have heightened the vulnerability of transportation and storage infrastructure. This disruption has resulted in shipment delays and higher costs for both businesses and consumers.

c) The impact of climate change on sustainable development: Climate change directly undermines sustainable development, with its impact being far more severe in the poorer nations of the Global South compared to the wealthier countries of the Global North. This disproportionate burden persists even though these less affluent countries contribute only a small fraction to global greenhouse gas emissions. The disparity arises from the vulnerability of their economies and their restricted capacity to adapt to the consequences of climate change. Climate change stands as one of the most pressing challenges presented by our current reality. We are at a crossroads: we can either take decisive action to address these issues and work to reduce their effects, or turn a blind eye, thereby worsening the crisis. Neglecting this challenge will undermine efforts to alleviate poverty and carry grave consequences for generations to come.⁶

Addressing climate change requires integrating it with the principles of sustainable development. To effectively tackle this issue, it is crucial to prioritize efforts such as poverty reduction and fostering economic growth when shaping development policies in developing nations. Within this framework the decision to focus on mitigation or adaptation presents a valuable opportunity for these countries to reimagine their development strategies through a fresh and innovative lens.

Section III: The legal basis for addressing the effects of climate change at the international and national levels

The foundation for tackling the impacts of climate change lies in a combination of international agreements, treaties, and national laws. Globally, key legal frameworks such as the United Nations Framework Convention on Climate Change, the Kyoto Protocol, and the Paris Agreement stand out as pivotal instruments guiding collective efforts to address climate change and reduce its consequences.

At the national level, the foundation for action lies in the environmental laws and policies that countries implement to align with their international commitments. These regulations address

the management of natural resources, establish goals for cutting carbon emissions, and promote a shift toward renewable energy sources, This is what we will study below:

A) At the international level: In this regard, the international community, including nations and organizations, has made significant efforts to promote and implement measures to protect and preserve the environment, Numerous declarations and resolutions have resulted from research studies, seminars, and conferences, as well as the signing of international treaties that explicitly highlight the value of environmental preservation and conservation.

In the 1980s, climate change became recognized as a worldwide environmental issue, and international attempts to solve it started to become more structured, The United Nations Environment Programme (UNEP) Council of Governors started working in 1981 to establish an international agreement for the purpose of preserving the ozone layer. In 1985, this project led to the creation of a draft global framework for safeguarding this crucial layer, These initiatives were based on United Nations General Assembly Resolution 43/53, which is titled "Protecting the global climate for present and future generations. "

International organizations and groups have been founded with the goals of safeguarding the environment and addressing climate change, and there have been several international conferences on the subject, The United Nations Framework Convention on Climate Change 1992, the Kyoto Protocol 1997, and the Paris Agreement 2015 are just a few examples of the many international treaties that have been signed in an effort to address climate change, In what follows, we will try to study what is stated in these international agreements :

1- Convention Framework on Climate Change United Nations 1992 : The World Meteorological Organization and the United Nations Environment Programme were established following numerous studies presented at the International Conference on Climate Change held in Toronto, Canada, in 1988, In 1990 the United Nations General Assembly passed resolution 45/212, which established an Intergovernmental Negotiating Committee (IGNC) tasked with negotiating an international convention for the protection of the global climate, This agreement was signed in June 1992 during the Rio de Janeiro Conference on Environment and Development, with ratification by 196 countries to date, and entered into force in March 1994.

The aim of this agreement is to establish a comprehensive framework for countries to globally combat climate change, mitigate and reduce greenhouse gas emissions, prevent damage to the climate system, and enable ecosystems to naturally adapt to climate change, without disrupting sustainable development or compromising environmental security, The agreement represents a new approach to international environmental action.

The agreement contained 26 articles and two annexes that established fundamental principles for combating climate change and contributed to educating the global public on climate change issues, It also recognized that developed countries bear responsibility for causing climate change through greenhouse gas emissions from factories, The United Nations Framework Convention on Climate Change is defined as a framework agreement because it contains certain general principles and guidelines that form the basis for cooperation between the parties in this area, It does not constitute a legal obligation, Its scope is limited to defining the principles and mechanisms for achieving the established goals, Therefore the agreement aims to attract as many countries as possible, given the sensitivity and importance of this issue.⁷

The overarching principle of this framework agreement was the principle of "common but differentiated responsibilities" It also established several legitimate mechanisms for monitoring the implementation of the provisions and terms of the framework agreement, including the Conference of the Parties, or COP, which is the most important body of the climate change agreement and through which decisions related to it are made, The conference has been held annually since 1995 to examine the scale of the climate crisis and develop global mechanisms to address it, The most recent was the COP 27 2022 summit in Sharm el-Sheikh.

But this agreement is not really enforceable, This is especially true because it mainly follows the idea that different countries have "common but differentiated responsibilities, " It also has a system

for checking how countries are following through on the promises they made as part of the agreement.

2- Protocol Kyoto 1997 : Because the 1992 Framework Convention on Climate Change wasn't strong enough to force countries to follow its rules, its problems have become clear, especially as carbon and greenhouse gas emissions have increased in many developed countries. This has led many countries involved to ask for a stronger agreement that clearly defines who is responsible for what. So, the Kyoto Protocol of 1997 was created after the Framework Convention. It was a legally binding agreement that detailed what each country was responsible for in the fight against climate change.

This is what really took place at the third conference in Japan in 1997, But the United States of America withdrew from this protocol. This led the world's countries to agree on the Bonn-Marrakesh Agreement, It explained how the Kyoto Protocol would start being used in 2005, This protocol had rules for all member countries, no matter how developed they were, It also had other rules that only developed countries had to follow.

The Kyoto Protocol used the idea that all countries have a shared responsibility to deal with climate change, but that their responsibilities are different depending on their circumstances, It required developed countries to lower their greenhouse gas emissions by different amounts depending on the country, Unlike developed countries developing countries do not have to commit to lowering greenhouse gases under the Kyoto Protocol. However, this does not mean they don't care about greenhouse gases, There is the Clean Development Mechanism, a mechanism specifically directed at developing countries, providing them with the opportunity for sustainable development and helping them achieve the main objectives of the Framework Convention and its Protocol.

To meet the world's promises in the Kyoto Protocol, countries must take steps together that everyone agrees on, These steps should not hurt the interests or economies of any country, whether rich or poor. The goal is to lower greenhouse gas emissions at a cost that makes sense.⁸

In order to fulfill the obligations of the Kyoto Protocol, it was necessary to implement the Protocol's provisions to ensure that greenhouse gas emissions were reduced without negatively impacting the economic equilibrium of nations, The Clean Development Mechanism (CDM), which is addressed in Article 12 and seeks to help developing nations accomplish development via environmentally sound investment initiatives, is one of these strategies, Additionally there is the joint implementation mechanism mentioned in Article 6, as well as the emissions reduction unit trading mechanism outlined in Article 17 The trading method relies on nations' pledges to lower carbon emissions in accordance with the rates set for them. A country that achieves emissions below the permitted levels may sell the excess shares to another country that has exceeded the set limit in return for a known payment.

3- Agreement Climate Change paris 2015 : The member states of the United Nations came to a watershed agreement on climate change after four years of lengthy deliberations and rigorous meetings. In particular, this occurred during a conference in Paris in December 2015, This meeting was a component of the 21st session of the Conference of the Parties, a large meeting that brought together delegates from different nations worldwide, The primary objective was to address the climate problem, which is something that everyone is extremely concerned about, with a unified strategy Although the discussions were not simple, the Paris Agreement, which gained broad support, was ultimately reached, The goal was to create a global framework for managing climate change in a coordinated and efficient way.

Although the discussions were not simple, the Paris Agreement, which gained broad support, was ultimately reached. The goal was to create a global framework for managing climate change in a coordinated and efficient way, Developed nations are obligated to provide financial assistance to developing nations, foster their skills in accordance with reliable scientific data, and establish a new

climate system that includes all nations and strives to strike a balance between their interests and future environmental needs.

Following 2020, this accord seeks to establish a new worldwide framework for addressing climate change. The introduction makes it clear that the signing nations are aware of the severity of the climate catastrophe that threatens all of mankind. The agreement's fundamental clauses addressed three crucial areas: the problem of greenhouse gas emissions, which are a factor in global warming, the necessity for nations to prepare for the ongoing climate change, and the significance of technology transfer between rich and poor countries.

A wide range of complicated legal challenges were covered by the Paris Agreement. The aim was to strike a balance between the needs of climate justice and the demands of environmental protection. The main priority was lowering emissions, but with a flexible strategy because every nation has its own distinct circumstances and skills. The goal was not to mandate consistent norms for everyone. In Article 4, the Paris Agreement established explicit targets for cutting emissions. The route to lowering emissions in order to strike a balance between their sources and absorption mechanisms is determined by scientific criteria. The principle of common but differentiated responsibilities holds that industrialized nations have a greater duty due to their past involvement in causing the climate catastrophe, as there are differences in obligations between developed and developing countries. This allows for flexibility in carrying out commitments, which vary depending on each nation's capacity as well as its economic and social conditions.⁹

Through Article 7 in particular, the Paris Agreement also sought to create a clear framework for addressing the challenge of adapting to the negative consequences of climate change. It was not just dry legal language; it also conveyed a deep humanitarian perspective. As developing nations undoubtedly encounter greater challenges, there are also obstacles that vary from country to country. This makes us consider the significance of international unity, which is now a need rather than a choice. The topic of funding was also covered in the Paris Agreement: The notion of climate finance is essentially rooted in the United Nations Framework Convention on Climate Change, which was the foundation of the climate finance system that we have today. The notion first started out with basic regulations that mandated some nations to aid less developed ones, but it has since grown and become more complicated. For instance, the Paris Agreement highlighted the necessity for wealthy nations to help poor nations with technology transfer, capacity building, and financial aid.¹⁰

The question of transparency, which simply means that everything should be apparent to everyone, is ultimately addressed. The Paris Agreement places a great deal of emphasis on this idea. Transparency increases trust between nations. The significance of submitting and reviewing reports is emphasized in legal texts, and financial aid and technical assistance require close supervision. Addressing climate change is a complicated task that calls for a collaborative approach with complete accountability and transparency.

The Paris Agreement is notable for embracing the idea of shared but distinct responsibility, which served as the foundation for this framework. Compared to developing nations, developed nations bore a greater burden. The issues it raised ranged from technical to financial, and this tenet attempted to remedy current development gaps. Since financial assistance and technology transfer became essential components of successful implementation, some nations had trouble fulfilling their commitments. Throughout the negotiations, climate justice remained a major source of worry. For instance, as the existential threats they encounter set them apart from other nations, small island nations continued to voice their worries. The agreement was notable for its voluntary commitments.

and the lack of deterrent measures cast doubt on its efficacy, However, some people viewed this flexibility as a chance to promote widespread participation.

In conclusion, these agreements are not the only way that the global community has tried to deal with the repercussions of climate change, The Stockholm Conference in Sweden in 1972, the Rio de Janeiro Conference in 1992, and the Sharm elSheikh Conference in Egypt in 2022 are just a few of the significant international meetings that have taken place, In addition to the primary function of the UN and its numerous institutions, there has been the creation of specialized international organizations and agencies dedicated to the problems of the environment and climate change, such as the Intergovernmental Panel on Climate Change (IPCC) and the World Meteorological Organization (WMO).

B) At the national level : The subject of climate change is given a lot of weight by Algeria, Since its independence, it has ratified more than 20 international and regional agreements related to environmental protection, including at least five that specifically address climate change, The sheer volume of accords demonstrates a strong political commitment to incorporating this topic into the nation's numerous economic, social, and environmental policies.

Thus, the impact of human activities on the climate is mitigated and the environment is protected in Algeria by a series of laws and regulations that address climate change In addition to creating national policies pertaining to renewable energy, controlling the use of natural resources, and fighting greenhouse gas emissions, Algeria has implemented a legislative framework geared at compliance with international climate accords like the Paris Agreement.

The implementation of systems to monitor industrial and agricultural operations that create pollution as well as laws that promote the usage of clean energy and the utilization of sustainable resources, are examples of these measures, Another trend is the inclusion of environmental concerns in national development policies to guarantee that the nation is able to deal with climate change challenges and promote sustainable development.

Additionally, the Algerian legislature has enacted a number of laws to safeguard the environment as a whole, with a special emphasis on the fight against climate change, These laws include the following: Law 01/19 relating to the management and control of waste disposal, Law 03/10 relating to environmental protection within the framework of sustainable development, Law 04/09 relating to the promotion of renewable energies within the framework of sustainable development, Law 04/20 including the prevention of major risks within the framework of sustainable development and other laws that all fall within the framework of environmental protection and addressing climate change.

Algerian legislator have made notable progress in tackling climate change on an institutional level by forming a number of organizations charged with protecting the environment and addressing the difficulties posed by climate change. The National Agency for Climate Change is one of the most important of these institutions, and it was created to serve as a vehicle for conceiving and implementing national policies in the area of climate change and its effects on economic and social development, The responsibilities of this organization are part of a worldwide structure that tracks changes in the climate, Additionally it aims to promote skills and capacities in a variety of industries in order to ensure the sustainability of resources and achieve security and stability for the populace.

Additionally, the National Observatory for Environment and Sustainable Development was founded to carry out a number of crucial responsibilities within its purview, These duties include gathering data and information pertaining to the environment and sustainable development from national organizations and specialized agencies, processing this data to create useful and relevant information tools, monitoring natural environments and ensuring their sustainable management, and designing networks to track and measure pollution rates.

Founded in 1988, the Renewable Energy Development Center is a scientific and technical organization dedicated to advancing and improving the use of renewable energy, The center's mission is to create and carry out research projects that advance science in the areas of wind, solar photovoltaic, and concentrated solar thermal energy, And Executive Decree No : 02/262 established the National Center for Cleaner Production Technology, This facility is a financial autonomous and legitimate industrial and commercial organization, The Minister responsible for the Environment oversees it.

Executive Decree No : 13/110, which governs the management of ozone-depleting chemicals as well as the tools and items that include them, created the Controlled Substances Monitoring Committee, The Ministry of the Environment oversees this interministerial committee, "Controlled substances" refers to ozonedepleting substances that must be handled with care and follow particular environmental requirements.

Section IV: Requirements for achieving environmental security

The creation of a comprehensive environmental strategy, grounded in the methodical research and preservation of the environment, is essential for achieving environmental security at the national or international level. In addition to strong deterrent mechanisms to protect the environment from polluting goods and activities, this strategy should also include unambiguous plans, programs, and controls, The international environmental agreements that countries are a party to demonstrate this commitment clearly, It obligates itself to implement its provisions through special international bodies established to monitor implementation, In addition countries support this trend internally by establishing institutions and bodies specialized in monitoring environmental issues at the national level and ensuring the effective implementation of environmental policies, Therefore the following must be done:

1- Developing environmental strategies and plans: The necessity of developing a specialized and expert framework via research and study centers that can monitor, diagnose, and analyze environmental issues in order to identify effective solutions is emphasized here, Furthermore efforts must be made to develop sound and appropriate laws and regulations that support the creation of a strong legal framework for the protection and preservation of the environment.

2- Enhancing the role of environmental awareness in achieving environmental security: The increasing awareness of environmental issues that have a significant impact on the quality of human life and pose a threat to the future of future generations has made environmental education increasingly important , As a result, increasing public understanding of environmental concerns has grown to be a necessity.

We need to make environmental conservation including all of its elements, a habit and culture that people and organizations embrace, This is accomplished by improving a proper grasp of the environment and its elements, as well as by cultivating values, attitudes, and skills, Additionally, it necessitates increasing understanding of the related social, technical, and environmental systems,

In this case, it is essential to concentrate on the trilogy: "deeper understanding of the environment," "positive interaction with the environment," and "working to preserve the environment." ¹¹

The Ministry of Environment, educational and religious organizations, the family, and associated civil society groups like youth centers, clubs, schools, and universities bear the primary responsibility for raising environmental awareness.

Environmental media also plays a crucial role in educating the public about the environment using a variety of methods, including books, magazines, pamphlets, posters, and all the novel techniques that modern technology has made available. Due to its sophisticated methods, especially when used correctly, it is the most potent instrument for shifting people's and society's attitudes toward our goals. Its diverse strategies, particularly visual ones, make it a crucial and efficient tool for directing and teaching society as well as disseminating knowledge across its diverse cultural and intellectual communities. Environmental media can also be successful in reaching every sector of society, regardless of cultural and opinion distinctions, in a way that is both efficient and all-inclusive.

3- Strengthening the role of civil society in achieving environmental security: New technologies and globalization, as well as the demand for democracy and development, have all played a major role in redefining the notion of civil society. Given these changes, it has become challenging for any individual, group, or organization, no matter how powerful or big, to completely regulate them. In order to address a new and different security landscape, we must now reevaluate and modify our ideas, as well as rearrange and reorganize security agencies. In this scenario, civil society organizations play a more important role, especially in the areas of environmental protection, human rights, and community. In order to accomplish shared and sustainable objectives, it is necessary to improve the collaboration of these organizations with all governmental bodies involved in the environment.

4- Strengthening environmental collection: With the goal of development, rising human demands are connected to consumption and the growth of economic activities—whether industrial commercial, or anything else—and the environment has a big influence on the economic system. The costs incurred by an individual as a result of direct economic activity, on the other hand, differ from the resources allocated by market mechanisms due to their inefficiency. As a consequence of this action, society as a whole often bears greater costs, leading to extra burdens on the environment and society.

The challenge of connecting economic activities aimed at attaining sustainable development with the negative consequences of environmental degradation, such as noise, pollution, fires, global warming floods, and others, arises here. Environmental taxation or green taxes are examples of economic policy instruments that the state may use to intervene successfully in this environmental damage in order to safeguard the environment. ¹²

They are defined as taxes imposed on economic practices that negatively impact the environment and result in tangible damage from various activities. These taxes can be directed toward polluting products and practices by taking measures to encourage the use of more environmentally friendly technologies. Tax rates should also be determined based on a careful assessment of the degree and severity of harmful emissions to the environment.

The OECD also defines environmental taxes as "compulsory, nonrefundable financial payments imposed on tax bases, provided that these payments have a relationship with the

environment, Specific environmental-related fees and charges are excluded if they are considered to be reciprocal payments with the government. "

Some have defined it as "an emission fee, where the government collects a fee for each unit of carbon dioxide or hydrogen emitted into the air."¹³

5- Moving towards a green economy: The green economy arises from increased advances in economic factors, such as lowering environmental risks and lack of natural life, which helps to advance equality among people and enhance their social well-being, The green economy is also seen as a paradigm for economic development that is founded on sustainable development and a grasp of environmental economics, It is an organized approach to establishing a clean society and environment that contributes to raising the economic level and moving society towards a better life, while at the same time maintaining the balance of the environment with all forms of biodiversity.

6- Moving towards the use of renewable and clean energy: Energy has been seen as the most dominant force on all human endeavors in many fields, making it a crucial component for the survival and advancement of human life across the centuries, Because nonrenewable resources are now the primary source of energy, there is an immediate need to find alternatives, As a result, scientists have begun looking for new energy sources that are sustainable, affordable, environmentally benign, and renewable, so that future needs can be met more effectively.

As a result, scientists have begun looking for new energy sources that are sustainable affordable, environmentally benign, and renewable, so that future needs can be met more effectively.¹⁴

7- Countries are working to establish strict laws to protect the environment: Given the growing environmental risks the globe is currently experiencing, it is more imperative than ever to enact laws that strictly regulate environmental protection and sustainability for future generations, The goal of environmental law is to conserve natural resources, lessen pollution, protect biodiversity, and encourage sustainable development by establishing regulations for human activities that affect the environment, such as industrial, agricultural, and construction operations.

In order to safeguard the environment, it is necessary to enact stringent legislation aimed at lowering pollution and protecting the long-term viability of natural resources, These laws should address a variety of topics, including waste management, pollution reduction, biodiversity protection and sustainable land-use management, Moreover, in order for these laws to be implemented effectively and that they be followed, severe sanctions must be applied to offenders.

8- Promoting the principle of protecting biodiversity: The living fabric of our globe is biodiversity. It serves as the basis for human well-being, both now and in the future, Its quick fall threatens both people and the environment, To restrict and reverse this decline, it is necessary to alter people's behaviors, roles, and interactions with biodiversity.

The richness of our planet is greatly influenced by its biodiversity, Its loss poses a threat to many of the accomplishments that humanity has made with tremendous effort and diligence, and it is crucial to the development process.

Conclusion:

Climate change is a multifaceted issue that poses a threat to the planet's temperature and has a number of challenging consequences. Because of the diverse kinds of energy sources utilized climate change is now one of humanity's most complicated challenges. We can examine the most important findings and recommendations made throughout the research by talking about this subject :

1-Results :

- Climate change is a global problem whose effects extend to all parts of the world, but depending on the country and its environmental and geographical conditions, they are felt differently.
- The main cause of climate change is considered to be irresponsible human activity and over-exploitation of natural resources.
- Most international agreements and conferences contain only recommendations and declarations that are not binding on member states because they have no actual power to ensure their implementation.
- Climate change violates intergenerational climate justice.
- Climate financing is a major obstacle to climate justice because rich countries haven't kept their promises to give money to poorer countries. This money would help them deal with the effects of climate change and adjust to the changes.

2- Suggestions:

- Strengthening international efforts to create a global organization to combat climate change.
- Global agreements need to be changed so that the right to climate justice is included as an environmental right, making it a human right.
- Help government plans and businesses that want to cut down on pollution, by having strong rules for industries that pollute.
- Make community campaigns stronger so people know how important it is to protect the environment and lower carbon emissions. Also, make sure people understand that both individuals and groups are responsible.
- We must rely on renewable energy sources, such as solar and wind, while reducing our dependence on fossil fuels.
- Investing more in environmental technologies and new ideas that reduce the effects of climate change. This includes things like electric vehicles, farming that doesn't harm the environment, moving towards a green economy, and using renewable energy.
- We want to support and improve climate science research to find better ways to reduce the effects of climate change now and in the future.

¹ Adani Amira Abdel-Adim, Climate Change and Sustainable Development in Light of Public International Law, Dar Al-Nahda Al-Arabiya, Cairo, 2023, p12.

² Al-Hamdani Talal Badr Abdullah, International Environmental Security, National Center for Legal Publications, Cairo, 2002, p33.

³ Firas Abbas Al-Bayani, Human Security Between Truth and Falsehood, Ghaida Publishing and Distribution, Amman, 2010, p31.

⁴ Bourgaia Fathi, Rakash Jahida, Mechanisms for Achieving Environmental Security in Algeria in Light of Climate Change, Academic Journal of Legal and Political Research, Volume 8, Issue 2, 2024, p 57.

⁵ Ahmed Ibrahim Abdel Aal Hassan, "Renewable and Alternative Energy as an Approach to Environmental Preservation and Sustainable Development in Developing Countries," a study published in the Journal of the Spirit of Laws, College of Law, Abu Dhabi University, College of Business Administration, Issue 91, July 2020, p 43.

⁶ Abdul Hakim Binoud, Climate Change and Sustainable Development, Zayed International Foundation for the Environment, Abu Dhabi, First Edition, 2022, p 7 .

⁷ Zarqin Abdelkader, Shashou Qwaider, "International Legal Protection of Climate," Journal of Scientific Research in Environmental Legislation, Volume 6, Issue 2 ,2019, p 90-91.

⁸ Ouro-Gnaou, the Etats and the international protection of Environment, this doctorate, University of Bordeaux, France, 2014, P 134.

⁹ Ahmed Hamid Al-Badri, International Climate Protection within the Framework of Sustainable Development, Anki Printing and Publishing House, Baghdad, 2021, p 273.

¹⁰ Muj Fahad Ali, International Environmental Law Rules in Light of the 2015 Paris Climate Agreement: An Analytical Study, Master's Thesis, Middle East University, Faculty of Law, 2017, p 69.

¹¹ Abdul Qader Al-Shaikhli, Environmental Protection in Light of Sharia, Law, Administration, Education and Media, Al-Halabi Legal Publications, Beirut, 2009, pp 276-277.

¹² Al-Ayashi Ajlan, Activating the Role of Environmental Taxation to Achieve Sustainable Development - The Case of Algeria - International Scientific Conference on Sustainable Development and the Efficient Use of Available Resources, University of Setif, Faculty of Economics and Management Sciences, April 7-8, 2008, p 2.

¹³ Nazih Abdel Maqsooud Mohamed Mabrouk, Green Taxes and Tradable Licenses as Tools for Pollution Control, Alexandria, Dar Al Fikr Al Jami'i, First Edition, 2011, p 39.

¹⁴ Abdul Rahman Al-Saadani, Thanaa Meligy Awda, Modern Developments in Environmental Science: Environmental Problems and Deep Solutions, Cairo, Dar Al-Kitab Al-Hadith, First Edition, 2008, p 105.

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