



International efforts to combat climate change

Deffaf Mohammed,
University of Sfax(**Tunisia**)
mohamed.defaf@gmail.com

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Abstract:

The international community is the main actor in protecting the environment from all threats, especially the phenomenon of climate change, where a set of legal mechanisms have been developed, including institutional mechanisms such as the Intergovernmental Panel on Climate Change, and the enactment of a set of international instruments to confront this dangerous phenomenon, such as the United Nations Framework Convention on Climate Change, and several policies have been prepared to reduce this phenomenon, including the policy of mitigation and adaptation.

Keywords: *The phenomenon of climate change, the international community, to adapt, mitigate, protect the environment*

I. INTRODUCTION

After the Second World War, the world witnessed many changes at all levels and levels, due to the change of concepts and data, which led to the consolidation of new values and principles on which the new international order is based, as well as the emergence of new issues that were not raised before, which now compete with security, military and strategic issues, as well as environmental issues that have become a great priority in the missions of the international community.

Environmental issues in general have captured the concerns of the international community, especially the issue of climate change, which prompted the international community to make great international efforts to agree on effective measures that limit the emission of gases that cause global warming, and its effects, and the search for formulas for environmental dialogue, and coordination of positions among the countries of the world, in order to reach "comprehensive governance" capable of dealing with avoiding disaster and making it possible, as it would rationalize the social and economic system in the short term and adopt Another approach in production that can mitigate the negative repercussions on the climate depends, of course, on the decision of the vital institutions essential to the international system

From here, it is clear the importance of studying the subject of climate change, and trying to show the seriousness of this phenomenon, which has worsened terribly, and to show its most important causes, and how to find effective mechanisms to combat it, and this is what prompts us to pose the problem:

To what extent do agencies and actors contribute to confronting climate change at the international level?

In order to answer the problem, it is necessary to use the descriptive approach and the analytical approach by focusing on describing the phenomenon of climate change in an accurate and ignorant manner, while indicating its causes and the effects of this phenomenon, and also using the analytical method, which helps to identify the shortcomings of some international instruments, and highlight the bright spots of these instruments in order to provide some addition.

In order to familiarize ourselves with the phenomenon of climate change, a two-component bilateral plan was followed, where the first element focused on the conceptual and legal framework of the phenomenon of climate change, and the second element dealt with the planned international efforts to confront the risks of climate change.

1. Conceptual and legal framework of climate change

Climate change is considered one of the thorny and complex environmental issues, if not the most important at all, due to its danger to the world as a whole, and because it involves complex interactions that have repercussions at all levels, whether political, economic, social, environmental, given the real and clear threat it poses that is an obstacle to achieving sustainable development in various countries of the world, especially the poor ones.

The exacerbation of this phenomenon and the expansion of its regional and local dimensions have led to attention to the level of damage it may cause, whose effects have gone beyond immediate perception to a future perception that prompted countries to review their accounts and direct their attention more to this problem.

In order to combat this complex and negative phenomenon effectively, it is necessary first to define the latter, and then to identify the causes of this phenomenon in order to reach the most important effects that result from this phenomenon.

1.1. The concept of climate change

The climate in its various components represents an open system that affects and is affected by various internal and external factors that make up it and surround it, and for this it was agreed that it is considered a basic and effective determinant that countries must take into account when preparing economic, social, and especially environmental programs, where Philippe débrousses says: "Our civilization needs a great lesson in humility, man must know that what he takes away from his environment robs him of himself". (débrousses, 1990, pp. 55-56)

The same features take the problem of climate change, which is one of the most important challenges facing humanity, attention to it began at the end of the 19th century, after scientists and researchers in the field of climatology and the earth were able to confirm the scientific fact that the earth's climate is constantly changing, and in a way that will have a negative impact on the lifestyle of the earth's inhabitants in all respects, and since then several jurisprudential and legal definitions have been provided.

1.1.1 Jurisprudential definition of climate change

Among the most important jurisprudential definitions of climate change is the Intergovernmental Panel on Climate Change (GIEC), which states: "All acts of change that can be expressed statistically and that can continue for decades on consecutive and resulting from the internal interactions of the components of the climate system."

Experts from the United Nations International Panel on Climate Change (IPCC) define it as "a change in climate status that can be identified by changes in rate and/or variables in their characteristics, which usually last for a long period of decades or more, and the term refers to any change in climate over time, whether as a result of natural or human-induced changes."

According to the World Meteorological Organization (WMO), climate change can refer to long-term changes in average weather conditions. (maljean & venessarichard, 2004, p. 33)

According to the Global Climate Observing System (GLOS) experts, climate change means all changes in the climate system, including the drivers and effects of the change and the changes themselves.

These reports prepared by this definition have contributed to reaching a scientific consensus on the phenomenon of climate change, and have found that most of the contrary changes observed over the past fifty years are caused by human activities by more than 90%.

There is what defines it as "those fast-paced climate fluctuations that the planet has witnessed in recent decades caused by imbalances in the Earth's climate system due to the increase in the quantities of greenhouse gases in the atmosphere, which trap more heat, and prevent it from being discharged into outer space, causing its rise and changes in precipitation patterns, rates and the nature of the seasons, as these changes are attributed to unbalanced human activities since the Industrial Revolution." (maafi, 2020, p. 438)

1.1.2 The legal concept of climate change

In its first paragraph, the United Nations Framework Convention on Climate Change defines climate change as: "those changes that are directly or indirectly attributable to human activity that causes a change in the composition of the global atmosphere, which, in addition to the natural variability of the climate, is observed over similar periods of time" (United Nations Framework Convention on Climate Change, 1992)

It is clear from all these jurisprudential and legal definitions that the phenomenon of climate change has become one of the most prominent issues at the forefront of the world's concerns at the present time, given its link and direct impact on various vital sectors, the most important of which are: agriculture, water, energy, health.... etc., which made it receive wide attention by various international organizations and bodies concerned with the environment, and

established the convictions of climate scientists that these changes are the result of the intervention of human activity due to the gases that cause global warming to the Earth's atmosphere, as a result of the use of fossil fuels for the generation and use of energy, and when burning forests, agricultural activities and changes in land use.

The 1992 UN Convention on Climate Change is called the Framework Convention because it gives states a legal framework for a preliminary settlement with content that is soft enough to allow all States parties to accede even if their expectations differ from the rules and standards of a general nature established by the Convention.(alecsander, 1993)

1.2. Causes of climate change and mechanisms for identifying it

In this element, the causes leading to the occurrence of climate change will be addressed, and then the most important mechanisms to help identify this phenomenon will be identified.

1.2.1. Causes of climate change

There are several reasons that led to the development of the phenomenon, some of which are attributed to human action and some of which are attributed to nature, because man since his inception on earth, and he makes tremendous changes in nature and the environment, some of which have had a positive impact and have been an outlet for the development of humanity throughout history, and some of which led to the deterioration of the environment and became a clear challenge to humanity given the weakening of development in all fields.

On the one hand, climate change may occur due to the increase in human activity to the proportions of greenhouse gases in the atmosphere, which is trapping more heat, the more human societies follow more complex lifestyles and rely on machines, the more energy they need, and the high demand for the latter means burning more fossil fuels (oil, gas, coal) and thus raising the levels of heat-trapping gases in the atmosphere, thus showing the contribution of humans to amplify the ability of greenhouse gases to trap heat.

It also shows the impact of the human element and its contribution to the exacerbation of the phenomenon through its excessive use of natural resources, especially non-renewable ones, in addition to the elimination of green spaces through the use of land for construction, agriculture and forest formation and its impact on the physical and biological specifications of the earth's surface.(Tassadit, 2014, p. 07)

As for natural causes, they occur as a result of astronomical factors, including solar activity, changing its flow, the geometric position of the Earth, which is related to the shape of the orbit, the tilt of the Earth's axis and the date of the occurrence of the four seasons, all of which are external factors and influences, occurring from extraterrestrial influences, and climate change occurs as a result of purely internal factors such as volcanic balances, and changing chemical properties of the atmosphere.

1.2.2. Mechanisms to identify the phenomenon of climate change

The phenomenon of climate change can be identified through several ways that can be presented as follows:

a. Biological methods

These methods adopt monitoring the amount of carbon dioxide in the atmosphere through geological ages, and the impact of fluctuation of this percentage on the surface temperature of the earth, and it should be noted that the increase in the proportion of carbon dioxide (CO₂) in the atmosphere is usually associated with volcanic activity that works to put large amounts of volcanic ash in the atmosphere, specifically in the upper layers of the atmosphere, and the effective activity of Iceland volcano in 2010 is a good example of this interpretation.

b. Climate models

Climate models are defined as physical laws that describe the dynamics of the atmosphere and oceans, with mathematical relationships, using the computer, and thus it is a mathematical representation of air, ambient and surface processes, where climate models are used to predict the weather and study the sensitivity that occurs on the terrestrial climate system when any disturbance occurs, such as the increase in carbon dioxide in the atmosphere, and the change in the flow of solar radiation.

It should be noted that in these models, the land is divided into a network of coordinates to come up with a three-dimensional model, in which all variables such as: temperature, humidity level and wind speed are calculated on all coordinates.

c. Actual monitoring

There are four types of geothermal temperature monitoring, including continental surface monitoring, over the seas and oceans, overhead monitoring and satellite information, the actual monitoring of surface temperature in the British Isles began about three and a half centuries ago, and among the most important types of monitoring that are used as a guide in dealing with the problem of global warming, there is a remote sensing method using thermal spectra and microwaves, which is done for a deep layer of the atmosphere, more than five kilometers thick, in order to monitor the temperature of the surface and water.

The state of fluctuation in the climate pattern is one of the important reasons for the occurrence of a number of disasters, especially affecting the countries of the South, especially in cases of severe drought, as unlike tropical cyclones and floods, the risks associated with drought remain poorly understood because they are related to the time factor, and it is not possible to systematically limit their losses and effects, as global standards for measuring drought risks are still applied slowly and have not received attention at the international level, until after the matter developed into a state of severe famine.(Shafia Haddad, 2018)

2. Planned international efforts to confront the risks of climate change

In light of the global environmental changes resulting from human activities or natural disasters, which topped the list of concerns of the international community, the latter rushed with all its spectrums to find urgent solutions in order to remedy the damage to the planet, and to draw a road plan in order to establish the parameters of a pure environmental future free of threats.

2.1. International institutional mechanisms for the protection of the environment from climate change "IPCC"

In this element, we will discuss an organization that is considered a climate technologist, the Intergovernmental Panel on Climate Change, and then highlight the role that international justice can play through the International Court of Justice in the field of climate protection.

2.1.1. Intergovernmental Panel on Climate Change

Established in 1988, the Commission is the culmination of efforts by the World Meteorological Organization and the United Nations Environment Programme, and the mission of this institution is to carry out comprehensive assessments of scientific, technical, economic and social information available worldwide in order to understand the scientific basis of climate change risks, causes and potential impacts on the environment and to develop strategic measures to mitigate or adapt to this change.(zaid, 2020, p. 102)

The latter's work is governed by principles that assess:

- a. The danger of human-induced climate change.
- b. Potential consequences of global warming.
- c. Possible options for mitigating the effects of climate change.

It should be noted that this body is operated by an international team on climate change

consisting of 400 experts, representing 195 countries, in addition to many times this number of ocean surveyors, economists and others, who undertake the task of evaluating scientific information on the phenomenon of climate change, and standing at its effects, by dividing the team into four committees, as follows:(Hafaf, 2020)

- a. **The First Committee:** undertakes the scientific evaluation of the changes that occur as a result of climate change after confirming its scientific fact.
- b. **The Second Committee:** Its task is to identify the effects of climate change and determine appropriate measures to be allocated to it.
- c. **The Third Committee:** examines the proposals submitted by countries to reduce greenhouse emissions.
- d. **The Fourth Committee:** its task is to carry out international statistics in order to identify the sources of greenhouse gas emissions.

In addition, the Commission has a simple structural organization, including a general assembly held annually, an elected executive committee whose task is to report to the general assembly, a general secretariat that organizes meetings and liaises with the governments of countries, and everyone related to the work of the authority, in addition to a group of technical committees.

The reporting system is considered the core or essence of the work of the Commission on Climate Change, as it prepares evaluation reports from which the governments of countries derive all the statistics, information and data that help them mitigate and adapt to the effects of climate change.

2.1.2. The role of the International Court of Justice in climate protection

Unlike some international conventions in the environmental field, the international framework conventions on climate change and their protocols do not contain any provision that includes the submission of disputes arising from the application of the Convention to the International Court of Justice, perhaps because States have used to resort to other means to settle their international disputes in the environmental field, such as negotiation and arbitration, and specialized or regional courts such as the International Tribunal of the Sea and the European Court of Human Rights, which used the term "dispute" instead of the word "dispute" and the phrase "situation". non-compliance" instead of "violation".

However, developing countries that do not produce greenhouse gases or contribute very little, individually or collectively, can use the International Court of Justice to obtain international legal remedies against one or more industrialized States or request an advisory opinion from the Court, through the specialized agencies of the United Nations, or by the General Assembly itself that would develop international legal principles.

2.2. International protection of the environment against climate change through international instruments

The international community has intensified its efforts to address the phenomenon of climate change, as it has enacted several international instruments to address this dangerous phenomenon, which threatens the stability of life on the planet.

2.2.1. United Nations Framework Convention on Climate Change (UNFCCC)

The United Nations Framework Convention on Climate Change was issued as a first step to address the problem of climate change, through the Earth Summit in 1992 within the framework of cooperation between the Ramsa Convention and the United Nations Convention on Climate Change, and in preparation for the Fifth Conference of the Parties to the United Nations Framework Convention on Climate Change, the Ramsar Secretariat commissioned the International Union for Conservation of Nature to prepare a technical document entitled Wetlands and Climate Change in order to discuss ways of cooperation between the two conventions, where Resolution No. (3 VIII of 2002) affirmed. the Conference of the Parties and

the Scientific and Technical Review Panel of the Ramsar Convention to continue to cooperate with the Convention on Climate Change.

2.2.2. Ramsar Convention

The Convention on Wetlands of International Importance as Migratory Bird Habitats was held in the name of the Ramsar Convention in relation to the Iranian city of Ramsar on February 2, 1971, entered into force in December 1975, where this Convention organizes a conference every 3 years with the participation of representatives of the governments that are members of the Convention as well as a number of international governmental and non-governmental organizations, experts in matters related to wetlands.

In order to address the problem of climate change, the Convention Secretariat has issued several resolutions that emphasize the need to preserve and restore degraded wetlands in order to reduce climate change, including: Resolution No. 24 X on climate change and wetlands of 2008, which was updated and replaced by Resolution VIII.3 on climate change and wetlands impacts, adaptation and mitigation of 2002, on the potential climate change consequences for the conservation and wise use of wetlands.

It also called on the contracting parties to the Ramsar Convention to manage wetlands wisely to ensure greater resilience to climate change and reduce this phenomenon.

2.2.3. Paris Agreement 2015

The summit took place in the French capital, Paris, from November 30 to December 12, 2015, and it represents the 21st session of the Conference of the Parties to the United Nations Framework Convention on Climate Change, as well as the 11th edition of the parties to the Kyoto Convention, with the participation of more than 40,000 officials representing delegations from 195 countries participating in the conference, and the summit concluded that the States parties reached an agreement that French Foreign Minister Laurent Fabius described as a fair and legally binding agreement.

2.2.4. Cwinhagen Summit

The United Nations Climate Change Conference was held in December 2009 in Copenhagen, Denmark, representing the fifteenth session of the Parties to the United Nations Framework Convention on Climate Change and the fifth meeting of the Parties to the Kyoto Protocol, in accordance with the Bali Roadmap.

The meeting was attended by more than a hundred heads of state, led by US President Barack Obama, which increased the volume of ambitions about the possibility of reaching an agreement, but the negotiations failed, which made world public opinion reach the conviction that major countries, led by the United States of America, are not ready to take actual binding decisions to protect the environment, through which climate change can be confronted.

After that, conferences aimed at establishing a general framework that includes all parties emitting greenhouse gases followed, starting with the Mexican Cancun conferences (2010), passing through the Durban Summit in South Africa (2011), then the Doha Summit, the capital of Qatar (2012), and the Paris COP21 summit, which culminated in an agreement that observers described as historic and unprecedented. (Idir, 2017, p. 92)

2.2.5. Kyoto Protocol

The Kyoto Protocol was concluded in Japan from 1 to 10 December 1997 and was drafted by the Ad Hoc Group on the Berlin Mandate to be presented to the States Parties at the Third Conference of the Parties. The Protocol was signed by 159 States on March 16, 1998, in November 1998 by more than 60 States, and after completing the requirements of Article 25 related to the entry into force, the Protocol entered into force on February 16, 2005. (Moussaei, 2017, p. 197)

It is worth noting that the Kyoto Protocol tried to stipulate specific commitments and commitments unlike the Climate Change Convention, and what distinguishes this protocol is its

distinction between the obligations of all States Parties and those of developed countries, and this is based on the principle of common but differentiated responsibilities stipulated in Article 3/1 of the Climate Change Convention, where this principle held developed countries the greatest responsibility for greenhouse gas emissions, and one of the most important obligations of States Parties are:

The Kyoto Protocol committed developed States Parties to a reduction of at least 5% compared to 1990, to be made during a period from 2008 to 2012.

- a. EU countries should reduce their emissions by 8%.
- b. The United States should reduce its emissions by 7%.
- c. Canada will reduce its emissions by 6%.
- d. Japan will reduce its emissions by 6%.
- e. Russia, on the other hand, maintains its level of emissions.
- f. Australia could raise its emissions by 8 per cent.

3. Proposed policies to address the risks of climate change

In this element, flexible mechanisms to protect the environment from the risks of climate change will be addressed, then short- and long-term treatments dedicated to confronting the risks of climate change will be discussed, and then we will conclude this element by focusing on mitigation and adaptation policies as one of the proposed policies to reduce the phenomenon of climate change.

3.1. Flexible mechanisms as a means of protecting the environment from climate change

Resilience mechanisms are considered one of the most successful economic tools to protect the environment, as countries under these mechanisms impose on public and private companies investing in various economic sectors to reduce greenhouse gas emissions, by imposing certain percentages of pollution for these companies, and if they cannot respect the ceiling set for them from emissions, they resort to buying pollution loans or so-called pollution licenses from companies that have achieved important results in reducing emissions given the ceiling set for them, the surplus is sold in the emissions trading market or the market for the purchase of pollution licenses.

It should be noted that flexible mechanisms can be divided into two types: the emissions trading mechanism, which is a market mechanism, and the second type, the joint implementation mechanism and clean development, which are based on economic projects, with the participation of various countries belonging to the Kyoto Protocol according to the wealth of certain rules.

3.2. Short- and long-term remedies to address climate change risks

Governments, leaders and environmental organizations are taking action to reduce them by strategizing and taking the necessary measures:

a. Short-term treatments:

It includes measures aimed at reducing greenhouse gas emissions in many areas, and the use of various media in their application, environmental education tools aimed at spreading environmental awareness among the population of the dangers of climate change, and the consequences of the continuous increase in greenhouse gases, which are:

- Saving energy consumption in transportation, homes and buildings by saving in various activities such as washing, ironing... And the adoption of solar cells and biofuels as a source of energy used in public facilities and various means of transportation.
- Water savings.
- Improve the scientific understanding of climate change and positively sensitize decision-makers and the public to the effects of climate change.

b. Long term treatments

- Measures adopted by governments in the fight against climate change in the long term.

- Stop forest burning operations and pay attention to afforestation due to the effectiveness of trees in absorbing carbon and thus reducing its percentage as the first greenhouse gas.
- Shift towards renewable and sustainable energy sources such as the sun and wind...
- Capture, capture and storage of carbon dioxide, which is a modern technological project aimed at reducing the amount released to the atmosphere by storing it in the lower layers of the earth's crust or in the depths of the ocean.
- Promote genetically modified algae and marine plankton that absorb more carbon dioxide.

3.3.Mitigation and adaptation policies

3.3.1. Mitigation policy

Mitigation is measures that reduce resource consumption and reduce greenhouse gas emissions in an attempt to slow the process of climate change, and this measure is centered on reducing and reducing cumulative emissions for all parties related to energy supply, transportation, construction, industry, agriculture, and waste management.

3.3.2. Adaptation policy

Adaptation is a process of compatibility in nature or the human system in response to real or expected climate changes or to reduce damage, the ability of societies to adapt is linked to the content of their wealth, education and control of technologies, and scientific reports show that much should not be relied on the adaptation process because there are natural determinants that prevent it, for example, sea level rise on coastal areas and the consequent displacement, and the rise in temperatures that extend the survival of thousands of living species, so it emphasizes the need to integrate policies Adapt to mitigation through a single strategic vision.

II. Methods and Materials:

These methods and tools must be presented precisely and clearly without exaggeration so that other researchers can re-examine or verify them. The author can describe the tools and methods used in the form of a scheme, table or diagram to explain methods used.

III. Results and discussion :

Among the most important findings of this paper are the following:

The ecological balance is a balance of ecosystems, but human intervention through its irrational uses of fossil energy sources contributed to increasing the volume of greenhouse gas emissions in the atmosphere, increasing its heat retention, which increased the earth's warming, leading to global climate change, and the occurrence of extreme weather events. In addition to human factors, there are natural factors that have also contributed to the exacerbation of this phenomenon, and thus global production of agricultural crops is affected, famines occur, and fish wealth will be affected by the inundation of beaches.

From this rostrum, the following proposals can be made: Making the problem of climate change and global warming one of the main issues in international forums, especially in the work of the Ordinary General Assembly and the Economic Council.

IV. Conclusion:

Scientists and jurists considered the phenomenon of climate change one of the most important phenomena that imposed itself on the entire world in general, and the international community in particular, namely the phenomenon of climate change, by identifying the most important concepts that make up this phenomenon, introducing it and simplifying its concept on the one hand, and on the other hand, standing on the most important reasons for the emergence of the latter and highlighting the most important effects of it, and then Al-Aruj on the international efforts that the international community has made and is carrying out in all its

spectrums to reduce the problems of this negative phenomenon, by focusing There are three pivotal points, namely the role played by international agencies to address this phenomenon, as well as the most important international agreement to reduce this phenomenon, and the last point is the policies decided to confront the risks of climate change.

– **Referrals and references:**

Books :

alecsander, K. (1993). *une technique juridique caractéristique du droitin ternational de l'environnement* (Vol. 39). afdi.

alecsander, K. (1993). *une technique juridique caractéristique du droitin ternational de l'environnement* (Vol. 39). afdi.

chazoune, I. b. (2009). le protocole de Kyoto à la convention cadre desnation uniessm les changenents etimatique. (l'ONU, Éd.) 10.

débousses, p. (1990). *la terre malade des hommes*. paris: éditions du rocher.

Hafaf, I. B. (2020, juit). The Role of International Law in Climate Protection. *the Journal of Studies and Research, Arab Journal for Research and Studies in the Humanities and Social Sciences*, 12(03), 280.

Idir, N. A. (2017, juin). United Nations in Facing the Challenge of Climate Change, Paris Summit 2015. *the Journal of World Politics*(01), 92.

maafi, f. (2020, janvier 16). The impact of climate change on hydrothermal temperatures in the Middle East and North Africa region. *algerien journal of security and development*, 09, 438.

maljean, s., & venessarichard, d. e. (2004). *Mécanismes internationaux de suivi et mise en œuvre des conventions internationales de protection de l'environnement, institut du développement durable et des relations internationales*. DC Wachinton: WMO.

Moussaei, M. (2017). *Non-governmental organizations and their role in protecting the environment*. Algeria, Algeria: Dar Al-Khudonia Publications.

nations, u. (2015). adoption of the paris agreement.

Shafia Haddad, N. G. (2018). The impact of dimate change on sustainable development - a case study of Algeria. *the Journal of Industrial Economics*(15), 03.

Tassadit, B. (2014). *The effects of climate change on sustainable development in Algeria*. Boumerdes, algeria.

(1992). *United Nations Framework Convention on Climate Change*. New York.

zaid, s. (2020). on putting international environmental agreements into effect. *the Algerian Journal of Legal, Political and Economic Sciences*, 56(04), 101- 102.

- **Journal article :**

- zaid, s. (2020). on putting international environmental agreements into effect. *the Algerian Journal of Legal, Political and Economic Sciences*, 56(04), 101- 102.
- maafi, f. (2020, janvier 16). The impact of climate change on hydrothermal temperatures in the Middle East and North Africa region. *algerien journal of security and development*, 09, 438.
- Idir, N. A. (2017, juin). United Nations in Facing the Challenge of Climate Change, Paris Summit 2015. *the Journal of World Politics*(01), 92.
- Hafaf, I. B. (2020, juit). The Role of International Law in Climate Protection. *the Journal of Studies and Research, Arab Journal for Research and Studies in the Humanities and Social Sciences*, 12(03), 280.

Rapports:

(1992). *United Nations Framework Convention on Climate Change*. New York.

chazoune, I. b. (2009). le protocole de Kyoto à la convention cadre des nations unies sur les changements climatiques. (l'ONU, Éd.) 10.

nations, u. (2015). adoption of the paris agreement.