



Group of Twenty (G20)

Topic B: Actions of the G20
Members on the Paris
Agreement

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Introduction to the Committee

The G20 is a group of countries that represent approximately 85% of the world economy. Founded in 1999 after the Asian financial crisis, it had its first assembly on December 15 and 16 that same year. Its objective is to prevent any further crises for the central banks and finance ministers of 19 countries and the European Union. All Finance Ministers and Central Governors of the G20 members meet every year to discuss and try to solve problems such as restoring fiscal balances, repairing financial market regulation systems, strengthening international economic cooperation, among others (Kevin, 2010), in order to avoid any economic depressions that may affect multiple countries, similar to what happened in the 30's, at all costs. Each year, the G20 summit takes place in a different country and region, demonstrating an exercise in cross-culturalism and integration and promoting a comprehensive perspective on possible solutions to the issues at hand.

Introduction to the Topic

Climate change is known today as the global alteration of the Earth's temperature. There are a lot of gases and components that are naturally released in small quantities over time, like carbon dioxide, methane, and nitrous oxide, that can amplify the greenhouse effect, which is "is a process that occurs when gases in Earth's atmosphere trap the Sun's heat" (NASA Climate Kids, n.d.), and lead to a slight increase in temperature. Although it is a gradual, natural process, human intervention has significantly sped it up, increasing certain gas concentrations through industrial processes.

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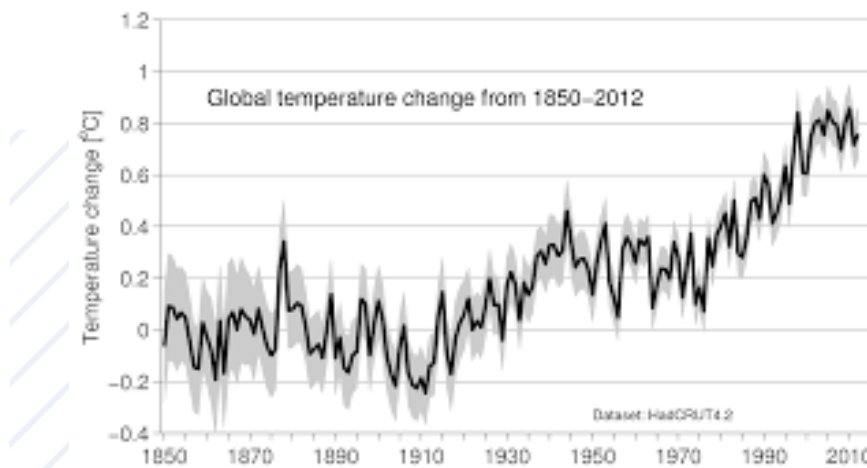
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The current warming trend is a result of human activity beginning in the mid-20th century and growing at an unprecedented rate (NASA: Global Climate Change, n.d.), with past studies affirming that the Industrial Revolution, an event that marked a before and after in the era of machines, caused an abrupt deviation from previous trends (INECC, 2018).



(Hawkins, 2012)

This event mainly increased carbon dioxide emissions; the burning of various fossil fuels caused global CO₂ parts per million (ppm) concentrations to rise almost 50% compared to pre-industrial levels (Kondratenko, 2021). Likewise, methane and nitrous oxide, compounds mainly used in various irrigation systems, also pose a much greater risk than those gases produced naturally. The increase in temperature caused by the high levels of greenhouse gases is provoking a great retention of solar energy, causing what is known today as "Global Warming" (Vazquez, 2018).

The consequences of climate change are very delicate as they are simple negative alterations that can surpass their limits, causing various disasters

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around the world. One of the main consequences of this major problem is the increase in global temperature; glaciers at the poles are melting as a result, which endangers most coastal cities. It also affects cities not close to the sea with droughts, fewer crops and decreased food production. With temperatures rising, additional pollution, and deforestation, nature becomes vulnerable to fires, which can lead to the death of multiple species, mainly in forests and jungles, such as what happened during the 2020 Amazon fire. The incident included multiple disasters, such as the loss of many plants and animals living in the surrounding area and more than 43,000 square kilometers of jungle.

As a result of the aforementioned and signed in December 2015, the Paris Agreement took place during the United Nations Framework Convention on Climate Change's (UNFCCC) 21st Conference (COP21). The Paris Agreement is the first universal document that mainly speaks about climate change, where an international limit has been established to maintain the global temperature increase below 2 Celsius degrees. Today, the percentage of each continent that has signed the Paris Agreement is: 92.6% of the African continent; 83.3% of Asian countries; Australia and New Zealand both signed; 82.4% of European countries; 85.7% of Oceania; and 100% of North American and South American countries.

Another aspect of this issue that affects different communities is worth highlighting. According to Silva (2019), it is estimated that by 2030 more than 100 million people will fall into poverty as a consequence of global warming, especially in developing communities, where more than 2.5 billion people obtain their income from agriculture. An increase in temperature leads to droughts, which stunt crop growth and cause extreme poverty. It was believed that climate change would affect humanity in a faraway future; however, as recent studies show, this prediction was reduced to 2030, bringing with it various diseases and weather episodes such as heat waves, ice storms,

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hurricanes, and tornadoes, among others. It is estimated there will be more than 60,000 deaths caused by climate change, of which the main affected will be children under 18 years and elders over 65. Likewise, various species of animals, plants, and even entire ecosystems around the world will be impacted in different levels.

Historical Background

Humans are constantly influencing the environment and the planet's temperature by cutting down forests, burning fossil fuels, and farming livestock. These activities produce an amount of greenhouse gases that surpasses what naturally happens in the atmosphere, increasing the greenhouse effect and leading to global warming. But before delving deeper into that data, it is important to revisit different events throughout history that have impacted the development of this international issue.

The Industrial Revolution and carbon increases in 1720. In the 18th century, from 1760 to 1840, the change from handmade processes to machine manufacturing, from agrarian to industrial, was initiated by the industrial revolution.

It is essential to highlight that this period originated many “positive” changes in society since it gave people more access to opportunities and services. Some examples of this are: goods became less expensive and more affordable; there was an evolution in transportation and medicine; more job opportunities and the chance of a better quality of life were presented; women started getting involved in politics; import and export markets were created; and the expansion of world trade. Despite these benefits, the industrial revolution also led to inequalities between people who managed businesses and the working

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class, overcrowded cities, large amounts of pollution, unhealthy conditions for the working class, and child labor.

Moreover, factories expelled massive carbon dioxide concentrations, which harmed the environment. However, it has also helped the environment in two important ways: firstly, the vegetated land's greening has expanded over the last 35 years; and secondly, photosynthesis has increased, encouraging plant growth. Nonetheless, the massive amounts of carbon dioxide expelled into the atmosphere as a result of the burning of oil, gas, coal, and wood since the industrial revolution have led to climate change and global warming.

The Keeling Curve, March 1958. The Keeling Curve represents the concentration of carbon dioxide in the atmosphere and was named in honour of its creator, Dr. Charles David Keeling. In 1956, Dr. Charles David Keeling started studying carbon dioxide (CO₂) in the atmosphere. In order to calculate the amount of CO₂ contained in the air, he took air samples and measured them. Eventually, he noticed a pattern; the samples obtained at night contained higher CO₂ levels than those taken during the day. After analyzing this data, he came to the conclusion that CO₂ concentration is lower at this time because plants feed themselves during the day and release CO₂ at night. Over the years, Keeling noticed another pattern: the CO₂ concentration in the curve decreases during spring and summer and in consequence, photosynthesis is more efficient in these months; CO₂ is removed from the air and there's more leafing of vegetation and plant growth. On the other hand, in autumn and winter, CO₂ levels are higher due to photosynthesis slowing or halting, meaning CO₂ levels increase.

After some years, Keeling moved on to the Mauna Loa Observatory in Hawaii to continue with his observation about atmospheric CO₂ changes, choosing this place since it was located far from substantial CO₂ sources. It wasn't until

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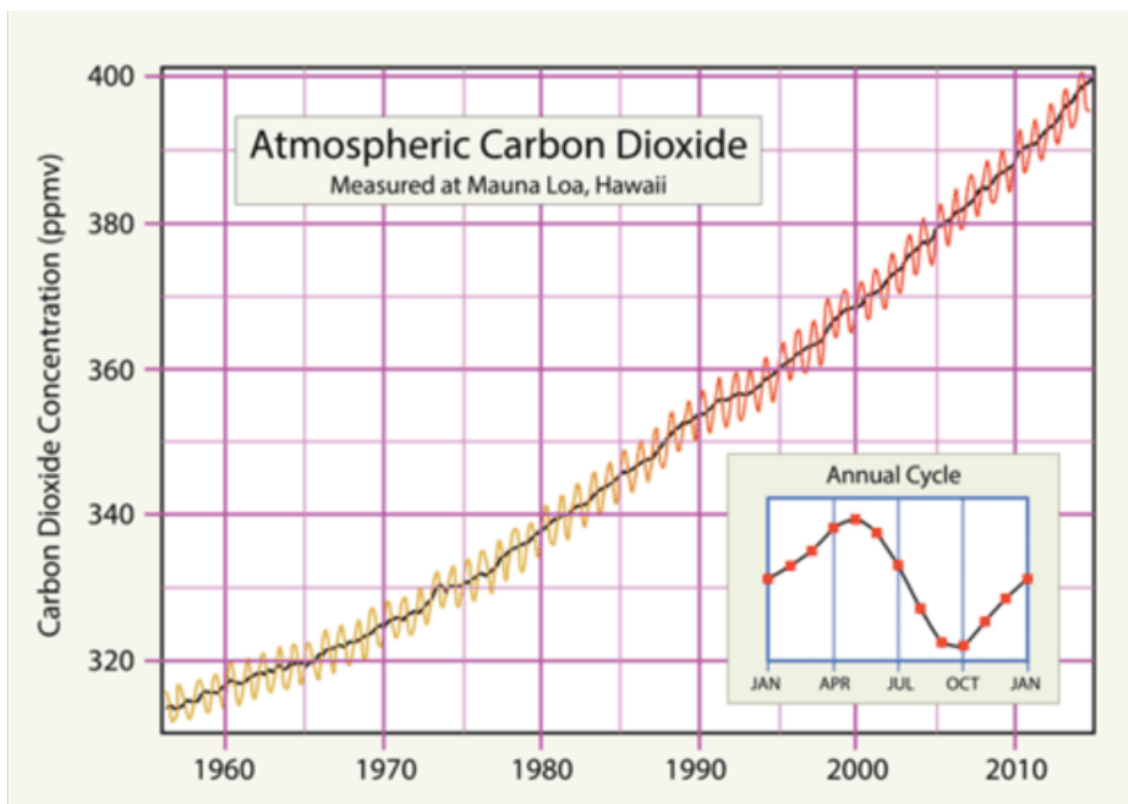
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then that he started to realize CO₂ levels around the world were rising every year. The curve showed that the average concentration of CO₂ in 1959 was 316 ppmv of dry air, which rose to approximately 370 ppmv in 2000. The constant curve increase troubled many climatologists, who feared the increase of Earth's temperatures would lead to climate change and global warming.



(Guerin, 2018)

The United Nations Conference on the Environment in Stockholm, June 16, 1972. This event was the first global conference to counteract

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environmental changes. In order to manage the environment, the participants adopted 3 major decisions in the Stockholm Declaration.

The Stockholm Action Plan contained 3 categories (Global Environmental Assessment Program, Environmental Management Activities, and International Measures to Support Assessment and Management Activities), which were later broken down into 109 recommendations, and a group of five resolutions: banning the test of nuclear weapons, international environmental data collection, leading actions related to development and the environment, international organizational changes, and the establishment and environmental fund.

In addition, a major outcome of the Stockholm Conference was the establishment of the United Nations Environmental Program (UNEP), a new leader for environmental matters. It was not until 1972, however, that the Stockholm outcomes were presented to the General Assembly, which accepted the Declaration and Action Plan. In order for the UN to continue engaging with environmental issues, they established an arrangement to guarantee their follow-up.

1974. During this year, a scientific hypothesis was published in the journal Nature by Sherwood Rowland and Mario Molina, which explained that chemicals human produced may harm the ozone layer. The ozone protects the Earth from ultraviolet radiation, meaning that this could cause major damage to animals, humans, and plants.

World Plan of Action on the Ozone Layer. In 1977, the United Nations Environment Programme (UNEP) established a plan that aimed to monitor and research intensively the ozone layer. Later, in 1981, UNEP's Government Council allowed UNEP to draft a global convention about ozone layer

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protection. In response, the Vienna Convention for the Protection of the Ozone Layer was created.

Vienna Convention for the Protection of the Ozone Layer. The first convention to be signed by every country, the Vienna Convention aimed to promote the collaboration of nations, who exchanged information about the impacts human activities have on the ozone layer.

During the Vienna Convention negotiations, UNEP and countries discussed different protocols for ozone layer degradation. The Vienna Convention went on its own and was still available for signature in March 1985 and later, in 1987, a group under UNEP negotiated a protocol, which later became the Montreal Protocol.

The Montreal Protocol, September 15, 1987. In 1987, a group under UNEP drafted the Montreal Protocol. This agreement has been affirmed by every country in the world and has been considered the most successful plan regarding the protection of the environment. It aims to protect the ozone layer and cease the production and importation of ozone degrading substances, which contain chemicals that are released into the atmosphere and damage the ozone layer. In order for States to join this protocol, they must already be part of the Vienna Convention.

The Montreal Protocol became stronger after the establishment of six amendments: London 1990, Copenhagen 1992, Vienna 1995, Montreal 1997, Beijing 1999, and Kigali 2016. The agreement also demanded provisions for the “Control Measures, calculation of control levels, control of trade with non-Parties, special situation of developing countries, reporting of data, non-compliance, and technical assistance” (UNEP, n.d.), including other themes. An important outcome of the Montreal Protocol was that it had more

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environmental benefits than established. The most important was the reduction of greenhouse gases in the atmosphere, including ozone degrading substances.

Toronto Conference on the Changing Atmosphere, June 27-30, 1988.

Scientists from organizations around the world met in different locations, following the signing of the United Nations Vienna Convention on the Protection of the Ozone Layer in 1985 and the Villach Conference in 1985. The participants of the meeting discussed how much climate change could be expected in future years, leading to the Toronto Conference in 1988.

The Toronto Conference became the first international conference that combined policy with science. The agreement also gained the support of some international organizations such as the UN, the World Meteorological Organization and the Canadian government. However, it wasn't until 1988 in Toronto when 300 scientists from around the world came together in the International Conference of the Changing Atmosphere: Implications for Global Security, and highlighted the impacts on the atmosphere.

Stephen Lewis, Canada's ambassador in the United Nations, established the final declaration of the situation as "an unintended, uncontrolled, globally pervasive experiment" (1988). Later, after recognizing the circumstances affecting the atmosphere, the Toronto Conference took a more global address by integrating the Vienna Convention and the Geneva Convention.

Current Relevance

New challenges for survival are being presented due to climate change. It's known that human health is vulnerable to this threat. Additionally, the changing

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environment is expected to cause more heat stress, more frequent and intense drought, storms, heat waves, and directly harm animals, among others.

Since the start of the industrial era in 1750, about 375 billion tons of carbon have been released to the atmosphere as CO₂. Likewise, the greenhouse gas concentration in the atmosphere reached a new record high during 2011. According to the United Nations World Meteorological Organization (WMO), between 1990 and 2011 the gas concentration increased 30 per cent in radiative forcing (the warming effect on Earth's climate). The Bulletin reports on atmospheric concentrations and not emissions of greenhouse gases: emissions represent what goes into the atmosphere while concentrations are what remain in the atmosphere after the complex system of interactions between the atmosphere, biosphere and the oceans (UN News, 2012).

2011 statistics prominently featured in the 2012 UN Climate Change Conference in Qatar. Negotiations focused on ensuring the implementation of agreements like the "Doha Climate Gateway" package and amendments to the Kyoto Protocol to establish its second commitment period. The conference also agreed to terminate the Ad Hoc Working Group on Long-term Cooperative Action under the Convention (AWG-LCA). The AWG-LCA is a subsidiary body that enables the implementation of the Bali Action Plan. This mechanism addressed damage and loss in developing countries that are particularly vulnerable to climate change effects.

The Mauna Loa Observatory, located in Hawaii, US is in charge of monitoring and measuring the elements in the atmosphere that contribute to climate change. It can also measure the substances that may damage the ozone layer. The data is being collected at an altitude of 3400 m in the northern subtropics and as such may not be the same as the globally averaged CO₂ concentration at sea level.

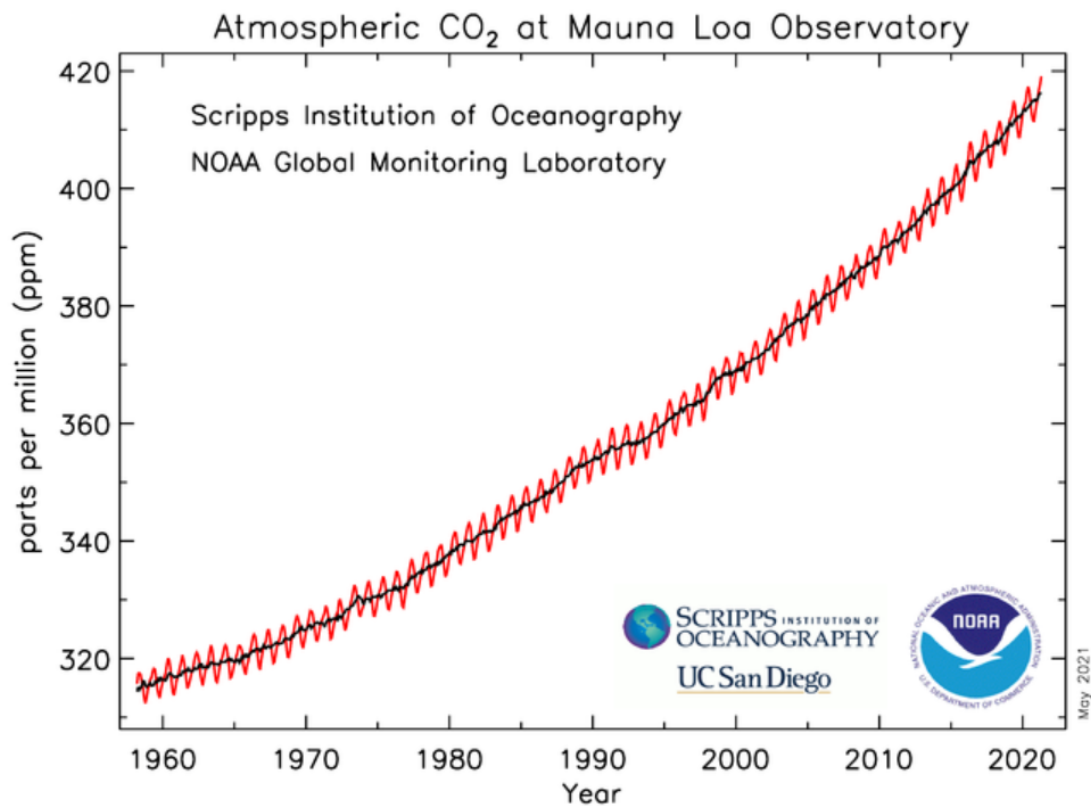
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(Mauna Loa Laboratories, 2021)

This graph shows an atmospheric amount of CO₂ measured at the Mauna Loa Center. This has been the longest recorded direct measurement, initiated by the aforementioned director David Keeling in 1958.

At the COP21, in Paris, France on December 12, 2015, parties to the United Nations Framework Convention on Climate Change (UNFCCC) signed a landmark agreement to combat climate change to accelerate and intensify actions needed for a sustainable low carbon future. The main goal of the Paris

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Agreement is to limit and reduce global warming under 2 degrees, preferably to 1.5 degrees Celsius; this agreement brings together all nations for a common cause by providing a pathway for developed nations to assist developing nations in their path to create transparent monitoring, reporting, and successful individual and collective climate actions.

The official 32 pages agreement document establish a framework for a climate urgent action, including:

- Mitigation as well adaptation measures against climate change
- Annual and transparent reporting
- Strength to the climate goals
- Support to the developing countries

At the same time, some terms in the Paris Agreement include:

- To set out a global framework to avoid dangerous climate change by limiting and reducing global warming to below 2°C and pursuing efforts to reach 1.5°C above pre-industrial levels.
- To undertake rapid reductions thereafter in accordance with the best available science and to achieve a balance between emissions (carbon dioxide and petroleum derivatives) and removals in the 2nd half of the century.
- The submission of the National Climate Action plans as a way of contributing to the agreement's objectives.

The Intergovernmental Panel on Climate Change (IPCC), "the United Nations body for assessing the science related to climate change" (IPCC, n.d.), delivered a special report in the city of Incheon, Republic of Korea, on October 8, 2018. The mentioned report about Global Warming would be a scientific key

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for further projects inside the Paris Agreement. Ninety one authors and editors from 40 nations prepared the IPCC report as a response to an invitation from the United Nations Framework Convention on Climate Change (UNFCCC) when it adopted the Paris agreement in 2015. The report emphasizes a number of climate change impacts that could be avoided by accomplishing the goal of limiting global warming to 1.5°C compared to the current warming trend. For example, by 2100, sea levels would rise globally 10 cm, while the probability of an ice free Arctic Ocean in summer would be once in a century.

In response, the movement Fridays For Future (FFF) is mainly focused on climate strikes. It started in August 2018 after a school strike planned by Greta Thunberg, a now 18 year old girl from Stockholm, Sweden, and environmental activist, who organized a three-week strike when she sat down outside the Sweden Government's offices every school day demanding urgent actions to address the climate change crisis.

Although she was alone for this first protest, soon enough she was joined by other people. On September 8, Greta and her partners decided to continue their strike until the local police and government gave them a pathway to the Paris Agreement. They created #FridaysForFuture to attract and bring more young people from all over the world to join and support the cause.

Likewise, given the escalating climate crisis, the UN Secretary-General was convening the Climate Action Summit during 2019 to increase ambition and accelerate action by countries and other investors, including the private sector. The Summit demonstrates that having the knowledge and tools to address climate change can provide the impetus for stronger national climate plans. Said summit took place at the UN General Assembly Headquarters Offices in New York, on September 23, 2019. The summit also demonstrated the need to

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urgently update and improve their short-term commitments by 2020 and the mid-term commitments by 2030.

On the other hand, most regions of the United States have seen the frost-free season, defined as the stretch between the last below -32° F during the spring and the first days during fall. According to a report of the National Climate Assessment that was released in early 2014, the average length of that season has lengthened the most dramatically shown in the Southwest, where it was 19 days longer compared to other periods of records such as in 1901-1960 and 1991-2012. The Pacific Northwest has seen its frost-free season lengthen by 16 days, while the Northeast and Southeast have seen their warmest seasons lengthen by 10 days and 6 days each. If the greenhouse gases emissions continue rising, the frost-free season will continuously lengthen as well. In response, the extreme changes are more likely in the mountain regions of the West, where the frost-free season could extend by 80 days or more.

As temperatures rise and air becomes warmer, more moisture evaporates from land and water to go into the atmosphere. More moisture in the air generally means a higher probability of more rain and snow (precipitation). But this extra precipitation is not spread evenly around the globe and some places might actually get less precipitation than they used to get. That is because climate change causes shifts in air and ocean currents, which can in turn change weather patterns.

The world is already getting more precipitation right now than it did 100 years ago: 6% more in the United States and nearly 2% more worldwide, but the effects vary by region. The north, for example, is getting more precipitation while the south gets less. It is expected precipitation will increase in higher latitudes and decrease in areas closer to the Equator. At the same time, across the globe, hot days are getting hotter and more frequent. Heat waves are

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becoming more common and intense, although in many parts of the country the 1930s still hold the record for number of heat waves.

By midcentury, if greenhouse gas emissions are not significantly stopped, the cold and warm high temperatures are expected to increase at least 5 degrees in most areas and rise to 10 degrees by the late century. The National Climate Assessment estimates 20-30 more days over 90 degrees in most areas by mid-century. A recent study by the National Climate Assessment estimates that the annual number of days with a heat index above 100 degrees will double, while days with a heat index above 105 degrees will be tripled compared to the end of the 20th century.

Simultaneously and as a result of all the previous data, scientists are uncertain if climate change will lead societies to an increased number of cases of hurricanes, since there is more evidence ocean temperatures are getting warmer and sea levels higher. Stronger hurricanes are predicted to be more constant and costly in terms of damages and deaths and warmer sea surface temperatures could intensify:

- Tropical storms.
- Higher wind speeds.
- Make landfall or to provoke a hurricane.

In all these situations there is the potential for more damage. Based on complex modeling, the National Oceanic and Atmospheric Administration (NOAA) has predicted the increase in hurricanes in category 4 and 5, which are likely to increase wind speeds.

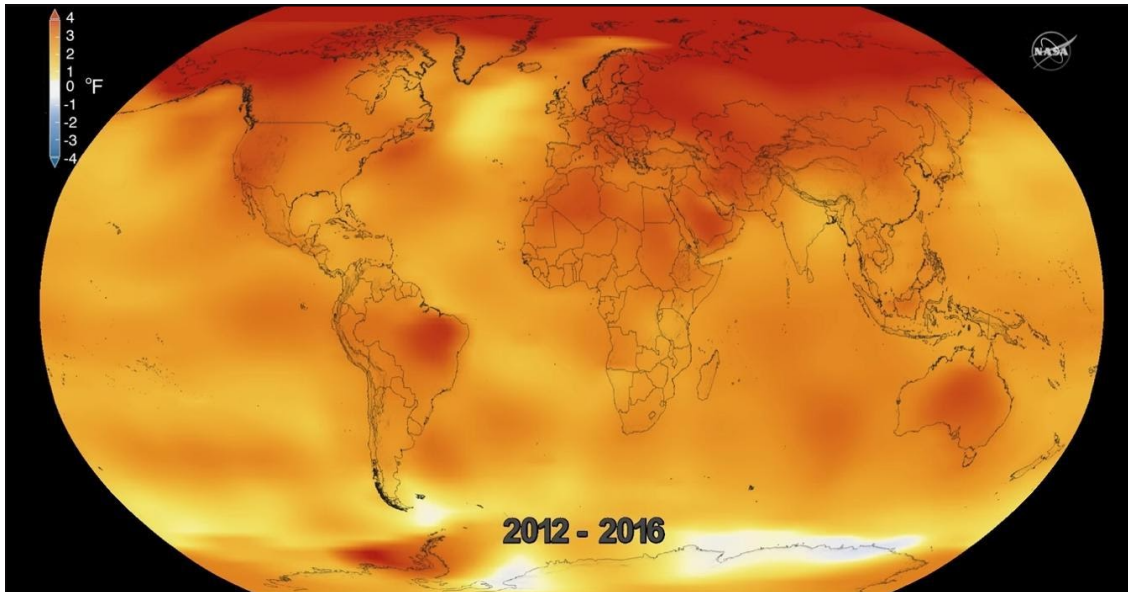
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(NASA & NOAA, 2017)

Regarding temperature, according to several analyses by NASA and the National Oceanic and Atmospheric Administration (NOAA), Earth's 2016 surface temperature has been the warmest since 1880. Globally-averaged temperatures in 2016 were 1.78 degrees Fahrenheit (or 0.99 °C) warmer than the mid-20th century mean. As GISS (Goddard Institute for Space Studies) director, Gavin Schmit, said, "2016 is remarkably the third record year in a row in this series [global average surface temperatures]" (2017).

The importance of addressing the climate crisis lies in the way global warming is affecting society and many nations: provoking displacement, loss of homes and valuable things, and leaving people homeless, to mention some examples. According to the UNHCR (UN Refugee Agency), internally displaced people (IDPs) or refugees are in the state of "statelessness" on the frontlines of the

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climate change emergency. Many are living right now in shelters, where there is typically a lack of resources.

During 2020, the UNHCR appointed a special advisory on climate action. The person in charge of it will serve as a global advocate, responsible for providing oversight and actions for the UNHCR's climate action agenda, which is mainly focused on three areas:

- Law and policy: providing legal advice and support to the international community as well as protection for refugees and other people in situations of displacement caused by natural disasters and climate change situations, always respecting their rights.
- Operations: reducing environmental degradation in displacement and enhancing the preparedness and resilience for displaced people and communities caused by climate change effects.
- UNHCR's environmental footprint: improving the organization's environmental sustainability by reducing their greenhouse gas emissions and minimizing negative impacts on the environment.

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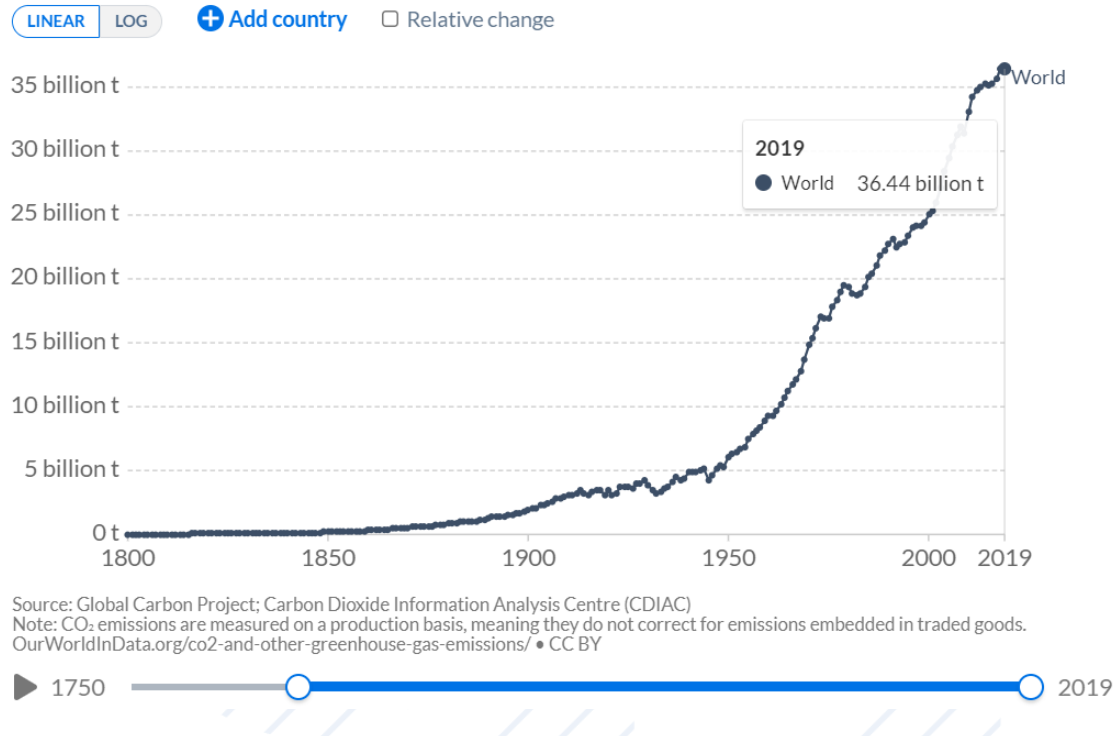
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Annual CO₂ emissions

Carbon dioxide (CO₂) emissions from the burning of fossil fuels for energy and cement production. Land use change is not included.

Our World
in Data



(Ritchie, H and Roser, M. n.d.)

This chart shows the growth of global emissions from the mid-18th century through 2019. Growth in emissions was still relatively slow until the mid-20th century, and in 1950 the world emitted 6 billion tonnes of carbon dioxide. By 1990 this had almost quadrupled to 22 billion tonnes. Emissions have continued to grow rapidly; nowadays over 36 billion tonnes are broadcasted each year.

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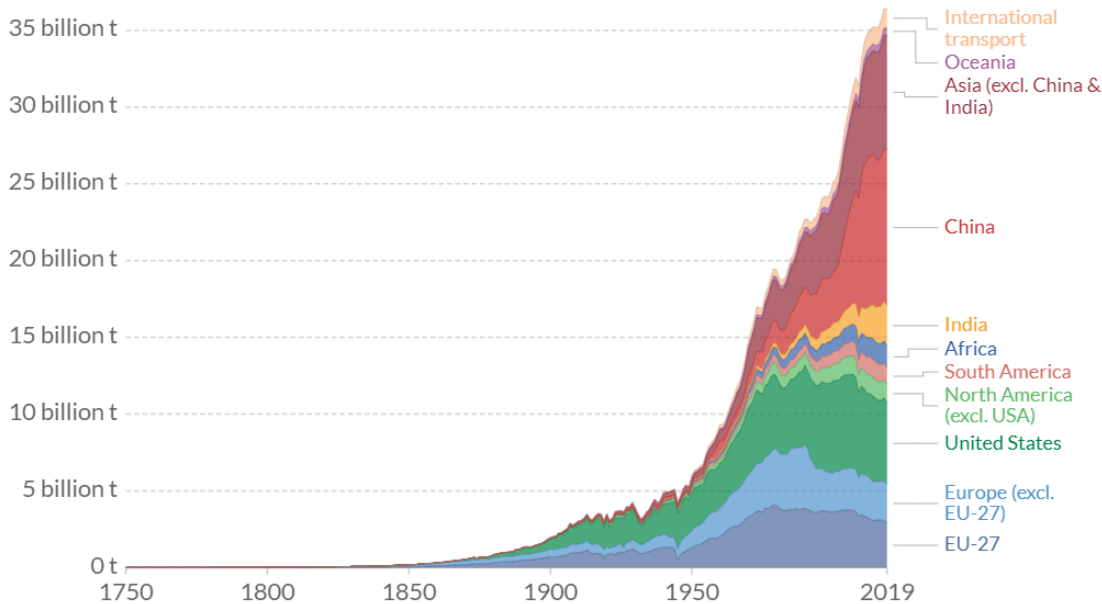
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Annual total CO₂ emissions, by world region

Our World in Data

+ Add region ☐ Relative



(Ritchie, H and Roser, M. n.d.)

This chart illustrates the breakdown of global CO₂ emissions by region. Until well into the 20th century, global emissions were mainly from Europe and the United States, with more than 90% of emissions produced in Europe or the USA in 1900. Even by 1950, it accounted for more than 85% of emissions each year. But in recent decades this has changed significantly. In the second half of the 20th century there was a significant rise in emissions in the rest of the world, particularly across Asia, and most notably, China. The USA and Europe nowadays account for just under one-third of emissions.

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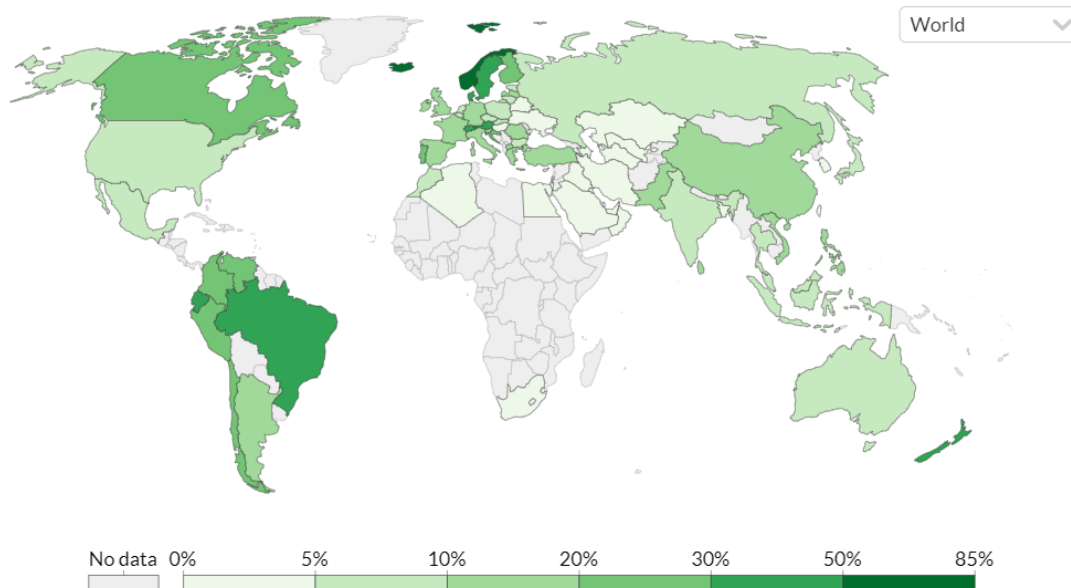
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In order to stop and reduce CO₂ emissions and therefore climate change and local air pollution, the world and complete nations need to rapidly look forward to low-carbon and renewable sources of energy. Renewable energy is taking a special role in the process of making our energy system more sustainable.

Share of primary energy from renewable sources, 2019

Renewable energy sources includes hydropower, solar, wind, geothermal, bioenergy, wave and tidal. It does not include traditional biofuels, which can be a key energy source especially in lower-income settings.



Source: Our World in Data based on BP Statistical Review of World Energy (2020)

OurWorldInData.org/energy • CC BY

Note: Primary energy is calculated using the 'substitution method' which takes account of the inefficiencies energy production from fossil fuels.

(Ritchie, H and Roser, M. 2019)

In this chart, the use of primary energy sources and consumption that came from renewable technologies, such as hydropower, solar, wind, geothermal, tidal, wave and modern biofuels can be seen. During 2019, nearly 11 percent

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of global primary energy came from renewable energy. Nowadays, climate change has the biggest long-term impact on the global economy. If no actions are taken, global temperatures could rise by more than 3°C and the world economy could decrease nearly 18 percent in the next 30 years. The impact could vary if decisive actions are taken to meet the aims set in the Paris Agreement.

According to the Swiss Re Institute's new Climate Economic Index; climate change will impact 48 countries affecting 90 percent of the world economy by 2050, the institute shows different scenarios:

- 18% if no mitigating actions are taken (3.2°C increase)
- 14% if some mitigating actions are taken (2.6°C increase)
- 11% if further mitigating actions are taken (2°C increase)
- 4% if the Paris Agreements objectives are reach (increase)

Asia would be the continent taking the hardest hit, with China losing nearly 24 percent of its GDP in the worst scenario, while the United States would lose nearly 10 percent of it and Europe almost 11 percent. During the first day of the signing of the official document about the Paris Agreement at the COP21, nearly 175 countries signed, including France, Somalia, Barbados, Brazil, Italy, United States of America (has just came back to sign the Agreement, after a withdrawal by the previous President), Mexico, Spain, Ireland and Germany.

International Actions

Over the years and due to the current consequences of climate change, several organizations have initiated various projects around the world to eradicate this problem. Some of them are APAN (Asian Pacific Adaptation Network) and C40 Cities International, which are two organizations that help to

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eliminate or reduce climate change through collaboration with multiple enterprises. The only difference between them is that APAN is not directly related to the United Nations unlike C40 Cities International, which was created after the Paris Agreement.

Similarly, since 2009, Climate Action Tracker (CAT) has been an organization that works independently from any specific organization. CAT quantifies and evaluates climate change mitigation commitments and assesses whether countries are on track to meeting those (CAT, n.d.). Based on the Paris Agreement, CAT is in charge of monitoring governmental activities of 36 countries to ensure that they are in line with the established level of less than 2°C. CAT covers about 80% of global emissions and approximately 70% of global population, where the national actions they track are:

- Effect of current policies on emissions
- Impact of pledges, targets and NDCs
- Fair share and comparability of effort

The Climate Action Tracker also assesses the total global effort of current policies on global warming over the 21st century and emissions gap. The funding resources are from ClimateWorks Foundation, the European Climate Foundation, and the German Ministry for Environment, Nature Conservation and Nuclear Safety (BMU) via the International Climate Initiative (CAT, n.d.).

Additionally, the Under2 organization, established in 2017, is a sub-dedication that elaborated a project based on international strategic changes through monetary funds used to help emerging and developing regions in the face of climatic situations. This fund has several priorities representing an infrastructure change for 2050, promoting knowledge about climate policies and actions in multiple locations. However, at the same time, this project has

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multiple complications as one of its priorities is to participate in international negotiations on issues related to climate change and in the same way to expand the boundaries and reach more needed places. For the last two years the main projects have been based on reducing climate change, mostly in Mexico:

- Calculating the base scenario for GHG emissions in Colima, Mexico (2019)
- Developing a road map for the implementation of carbon tax in Sonora, Mexico (2019)
- Developing a road map for the implementation of carbon tax in Tabasco, Mexico (2019)
- Updating the GHG inventory in Colima, Mexico (2018)
- Developing a State Action Plan on Climate Change in West Bengal, India (2017)
- Developing a Carbon Management Plan in Yucatán, Mexico (2017) (The Climate Group, 2021)

For its part, in 2018 a judicial court specialized in environmental law was launched in Peru. The cases it focuses on consist of illegal environmental actions such as non-permitted and excessive deforestation, activities outside the legal scope, among other activities that threaten the environment.

The field of agriculture has always been very profitable in business; however there are areas in which agriculture is occupied more as means of subsistence, a situation that mainly is presented in rural areas where people live in poverty. Nowadays, climate change has affected them due to the increased heat and humidity in crops, causing them to be unable to grow which causes rural people to neither eat nor sell products. In response, countries such as the

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United States have created reserves for various sectors of industry in order to avoid a downfall in any one sector of the country.

In the case of protected areas, these represent about 1,118,917 square kilometers in the current territory of the United States of America; between 12 and 14 percent in the case of Canada, which has 4000 protected areas, including another 13% of the marine area that the country possesses; and also Australia possess around 40% of the entire country in protected areas with over 4,200 properties in the territories.

Thanks to the current multiple technological developments, the use of renewable energy is increasing. In the year 2020, the use of renewable energy in the US increased to 12%. Even when this energy is still unknown, unused and unaccepted by population, the data showed in the last decade has indicated the numbers will not stop increasing. This could mean the use of certain gases and chemicals that tempt against the climate become obsolete, which could end in a favorable conclusion for many people.

Moreover, nowadays multiple countries are developing new strategies of eco-friendly solutions. Such as Finland, which is considered one of the cleanest countries thanks to multiple strategies without the need to use state of the art technology. With the country's cleanliness developments, they were able to reach a very high score together with the update in which they developed multiple renewable energies since they were able to clean the air that people breathed, earning them the position of one of the cleanest countries in the world as mentioned before. Likewise, Norway could develop enough resources and technologies to complete 100% of renewable energy with the main target of public services, reducing more than 50% of the CO2 contamination than in the past decades.

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UN Actions

In order to combat this problem, the UN has provided conventions, organizations, agreements, between others. The UN Intergovernmental Panel on Climate Change (IPCC) aims to contribute with more clear scientific information. The Fifth Assessment Report provides reviews about sea level rise and what causes it. The United Nations Framework Convention on Climate Change aims to cease dangerous human impact on the climate system. The Kyoto Protocol helps countries to develop targets in order to reduce emission. And finally, the Paris Agreement, which aims to decrease the climate change threat by strengthening a global response about it. At the same time, other actions carried out by the different UN organisms will be described below.

Group of 20 (G-20). Since the G-20 members contribute to almost 80 percent of global greenhouse gas emissions, it leads them to cut down 2.5 gigatonnes of carbon dioxide equivalent per year by 2030. For G20 to minimize its impact, the State members have to decarbonized their economies and build climate change actions, which developed the following actions for the G20 members to include:

A shift towards massive use of public transport in large metropolitan areas in Argentina, a commitment to full decarbonization of the energy supply by 2050 in Brazil, a ban on all new coal-fired power plants in China, regulations to refrain from investment in fossil fuel infrastructure in the EU, an economy-wide green industrialization strategy towards zero-emission technologies in India, an increase in carbon pricing levels, with priority for the power and building sector, in Japan, and vehicle and fuel economy standards that target zero emissions from new cars in 2030, in the US (UNEP, n.d.).

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The World Meteorological Organization (WMO), October 11, 1947. This intergovernmental organization was founded in 1873, signed in 1947, and established in 1950. In 1951 it became a specialized agency in “meteorology, operational hydrology and related geophysical sciences” (UNFCCC, n.d.) for the UN. Nowadays, it has 193 members and aims to impart international cooperation and global leadership in climate, weather, water resources and environmental issues, as well as provide safety and economical benefits. The WMO supports the National Meteorological and Hydrological Services, which provides information about the climate and weather by observing and understating it, besides it supports national needs in order to protect the environment resources.

Additionally, WMO has setted goals and objectives such as: developing the components of the Global Observing System; consolidate the requirements of the WMO programs in order to have satellite observations; increase throughout the WMO members more satellite data, products and services; increase the advantage of satellite applications, and represent WMO through space-related organizations. Furthermore, WMO as well has provided help by developing national projects; some of the most recent are the following: Adaptation Programme in Africa (GFCS APA) Phase II: Building Resilience in Disaster Risk Management, Food Security and Health. CLIMANDES. Afghanistan Hydromet & Early Warning Services for Resilience. Climate Resilience for Increased Resilience in the Sahel.

The Intergovernmental Panel on Climate Change (IPCC), 1988. Created by the United Nations Environment Programme and the World Meteorological Organization in 1988, and established in that same year by the WMO and UNEP, endorsed by the UN General Assembly. Known for being the UN body for the evaluation of science related to climate change and confirmed by 195 members. It aims to provide policymakers to governments with scientific basis

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information of climate change, in order to understand the impacts of human activities in it.

Through its analysis, the IPCC has established knowledge on climate change. Specifically, in order to inform and communicate to the world what is happening with Earth in consequence of climate change, IPCC has developed the following actions: working groups, task forces, activities such as lead author meetings, expert meetings, scoping meetings and sessions. The last actions are reports, which are mainly the key for international negotiation of climate change. Also, IPCC organizes meetings of experts and lead authors to prepare reports. To communicate the findings and works, the organization provides speakers to other conferences (IPCC, 2018).

The United Nations Framework Convention on Climate Change (UNFCCC), March 21, 1994. This convention is made up of 197 Parties, achieving universal membership. It is the main treaty of two agreements: The 2015 Paris Agreement, which aims to raise global temperatures up to 1.5 degrees celsius, and the Kyoto Protocol, turning the main objective of these three agreements to stabilize greenhouse gas concentrations, which will prevent dangerous impacts of humans between the climate system.

The UNFCCC secretariat is an important part of its body. It was established in 1992 and is managed by 450 employees from over 100 countries. It is mainly in charge of the response to the threat of global climate change. The secretariat provides important and substantial assistance, such as facilitating intergovernmental climate change negotiations. Adding support bodies which develop the administration of the UNFCCC, the Kyoto Protocol and the Paris Agreement. Also maintains the registry for Nationally Determined Contributions (NDC). Finally organizes each year three negotiating sessions.

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The United Nations Environment Programme (UNEP), June 1972. The United Nations Environment Programme (UNEP) is the leading environmental authority in the UN system. The UNEP uses its expertise to strengthen and intensify environmental standards, efforts and practices, while helping and implementing environmental obligations at a country, regional and global levels. The organization's mission is to provide leadership and encourage participation and partnership in caring for the environment by inspiring, informing and adapting.

UNEP has re-organised and planned its work programme, having currently six areas of concentration guided by the scientific, UNEP mandate and priorities from global and regional goals:

1. Climate change: it focuses on the ability of countries to integrate climate change to their responsibilities and priorities by providing leadership in adaptation, mitigation, technology and finance.
2. Post-conflict and Disaster management: conducts environmental assessments in affected countries. Provides guidance for implementing frameworks for improved environmental management at a legislative and institutional levels.
3. Ecosystem management: it facilitates management and restoration in a manner consistent with consistent and sustainable development. It includes the Global Programme of Action (GPA).
4. Environmental governance: it supports governments in establishing, implementing and strengthening the processes, institutions, laws (policies) and programs to achieve the sustainable aims at the country, regional, and global levels.
5. Harmful substances UNEP: it strives to minimise the impact of harmful substances and dangerous waste on the environment.

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6. Resource efficiency/ sustainable consumption and productions: it focuses on regional and global efforts to ensure natural resources and assure they are produced, processed and consumed in an environmentally friendly way.

Climate Transparency, 2014. Climate Transparency, is a global partnership with a common mission, “to stimulate a race to the top” in climate actions on the countries part of the G20 through complete transparency. It was co-founded under the management of Peter Eigen in late 201 and aims to increase pressure and awareness among policy-makers inside G20 governments.

G20 economies have a decisive role by reaching the goals of the Paris Agreement, with 4.7 billion people, the 85 percent of the global GDP and also being responsible for 80 percent of the global CO2 emissions. Climate Transparency has a global partnership that brings together scientists, NGOs, and other organisations; the majority is part of the G20. The ORG also has 80 indicators inside the areas of mitigation, adaptation and finance with complete transparency.

Points to Discuss

1. Context

- a. Actions to prevent forest loss and degradation of forest land
- b. Concentration of carbon footprints and greenhouse gas emissions
- c. Growth of low emission energy technologies

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- i. Desmantelation of benign energy technologies
- d. Climate change health risks
- e. Impact of climate change with existing threats
 - i. Protection on human communities

2. Development

- a. Use of renewable energies services
- b. Learning about appropriate monitoring climate impacts and adaptation measure effectiveness
- c. Mechanism to communicate, educate, build capacity, and raise awareness about climate change impacts
- d. Improving community resilience and adaptive capacity

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