HASMUN

23-24
DECEMBER
2023

UNFCCC

United Nations Framework on Climate Change

HASTRAIN'23

UNFCCC

United Nations Framework Convention on Climate Change

STUDY GUIDE

Agenda Item: Promoting the transition to sustainable and renewable energy sources to mitigate climate change and reduce dependence on fossil fuels

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LETTER FROM SECRETARY GENERAL

Dearest Delegates,

It is with great pleasure and enthusiasm that I extend a warm welcome to each of you as you embark on your HASTRAIN'23 journey. As the Secretary-General of the Kadir Has University Model United Nations HASTRAIN Conference 2023, I am honored to guide you through this enriching experience of diplomacy, collaboration, and international engagement.

The Model United Nations is a unique way to practice your critical thinking, negotiation skills, and a deep understanding of global affairs. This study guide has been carefully crafted to provide you with the essential information and resources to navigate the complex issues that will be addressed during our conference. Whether you are participating for the first time or you are an experienced participant, this guide is designed to assist you in your preparation and contribute tothe success of your committee sessions.

I encourage you to approach the conference with an open mind, a commitment to understanding diverse perspectives, and a dedication to finding creative and effective solutions to the global challenges we face. Remember that your role as a delegate is not only to represent the interests of your assigned country but also to contribute to the collective effort of finding resolutions that benefit the international community as a whole.

As the Secretary-General, I am confident that the HASTRAIN'23 will be a memorable and transformative experience for each one of you. Take full advantage of the opportunities to engage with your fellow delegates, share your ideas, and build lasting connections.

In conclusion, I extend my gratitude to each and every one of you for your enthusiastic participation. May this be an amazing and rewarding experience I cannot wait to meet you all in person and witness the positive impact we can create together.

#welcomehome, Delegates!

Sincerely,

Aylin Rassad

LETTER FROM DEPUTY SECRETARY GENERAL

Dear Delegates,

It is with great enthusiasm and anticipation that I extend my warmest welcome to each and every one of you at the Kadir Has University Model United Nations Conference Hastrain'23. As the Deputy Secretary General, it is my privilege to be a part of this inspiring gathering of young minds and future leaders in diplomacy.

As you prepare for this conference, I urge you to dive into comprehensive research, critically analyze the provided study guides, and develop innovative policy recommendations. I understand the dedication and diligence required to excel in Model United Nations, and I am confident that each of you will rise to the occasion.

Through this conference, I hope to see you not only excel in the art of diplomacy but also develop a deeper understanding of global affairs, empathy for different perspectives, and respect for diverse cultures. Remember, the essence of MUN lies in fostering an atmosphere of dialogue, negotiation, and cooperation.

In addition to the committee sessions, Hastrain'23 offers a range of workshops, networking opportunities, and social events that are designed to enhance your overall experience. I encourage you to take advantage of these opportunities to expand your knowledge, build lasting connections, and forge friendships with like-minded individuals from around the world.

Your role as a delegate is not just to represent a country or organization, but to embody the ideals of global citizenship, empathy, and leadership. Your active participation and thoughtful contributions will undoubtedly shape the outcome of the conference.

As we embark on this MUN journey together, I extend my wholehearted support and encouragement to each of you. I am eager to witness your intellectual prowess, diplomatic finesse, and commitment to constructive dialogue during the sessions. At Hastrain'23, I am confident that your dedication and passion will set the stage for an unforgettable conference experience.

On behalf of the Secretariat and the entire organizing team, I wish you the very best in your preparations for the conference. Embrace the challenges, engage with an open mind, and let the spirit of diplomacy guide you towards impactful resolutions and enriching interactions.

I am honored to be a part of this transformative experience with you, and I look forward to meeting you all at Hastrain'23. #Welcomehome , all!

Warm regards,

Nazrin Sadigova

Letter from the Chairboard

Esteemed participants,

We extend our warmest welcome to all distinguished individuals joining us for the United Nations Framework Convention on Climate Change. It is with great pride that we, Eylül Su Karaman and İdil Çimen, currently pursuing studies in Economics at Istanbul Technical University and French Interpretation and Translation in Yıldız Technical University, respectively, assume the roles of your chairboard for this conference.

Our chosen agenda item addresses a significant sociopolitical issue that often goes addressed without efficient solutions, unfortunately. This topic is not only crucial for the present but also holds the potential to gain even greater importance in the years to come. We are confident that the committee we have meticulously prepared will provide each delegate with essential information, expanding their perspectives in a manner unprecedented.

Since our objective is to recreate a diplomatic debate within the United Nations setting, it is essential to adhere to the established rules of procedure and diplomatic decorum. It is advised that all delegates familiarize themselves with, and if feasible, practice the relevant rules of procedure applicable to the specific simulated body in advance. As representatives of your respective nations at the 2023 session of the UNFCCC, it is expected that you thoroughly study the specified chapters in this guide and undertake additional, detailed research on areas pertinent to the positions and interests of the nations you represent, ensuring meaningful participation in the debate.

As we conclude, we express our gratitude to the esteemed Secretary-General, Ms. Aylin Rassad and Deputy Secretary General Nazrin Sadigova, for entrusting us with this opportunity.

We trust that you will derive as much enjoyment from participating as we did from preparing this guide. We eagerly anticipate meeting each one of you in the coming weeks!

Best regards,

Eylül Su Karaman & İdil Çimen

Chairboard of the UNFCCC

1. An Introduction to United Nations Framework Convention on Climate Change:

a. Purpose of the UNFCCC

The UNFCCC secretariat (UN Climate Change) is the United Nations entity tasked with supporting the global response to the threat of climate change. UNFCCC stands for United Nations Framework Convention on Climate Change. The Convention has near universal membership and is the parent treaty of the 2015 Paris Agreement. The main aim of the Paris Agreement is to keep the global average temperature rise this century as close as possible to 1.5 degrees Celsius above pre-industrial levels. The UNFCCC is also the parent treaty of the 1997 Kyoto Protocol. The ultimate objective of all three agreements under the UNFCCC is to stabilise greenhouse gas concentrations in the atmosphere at a level that will prevent dangerous human interference with the climate system, in a time frame which allows ecosystems to adapt naturally and enables sustainable development.

b. Actions of the UNFCCC

Focusing in its early years largely on facilitating the intergovernmental climate change negotiations, the secretariat today supports a complex architecture of bodies that serve to advance the implementation of the Convention, the Kyoto Protocol and the Paris Agreement.

The secretariat provides technical expertise and assists in the analysis and review of climate change information reported by Parties and in the implementation of the Kyoto mechanisms. It also maintains the registry for Nationally Determined Contributions (NDC) established under the Paris Agreement, a key aspect of implementation of the Paris Agreement.

The secretariat organises and supports between two and four negotiating sessions each year. The largest and most important is the Conference of the Parties, held annually and hosted in different locations around the globe. It is the largest annual United Nations conference, attended on average by around 25,000 participants. In addition to these major conferences, the secretariat organises annual sessions of the so-called subsidiary bodies as well as a large number of meetings and workshops throughout the year.

In recent years, the secretariat also supports the Marrakech Partnership for Global Climate Action, agreed by governments to signal that successful climate action requires strong support from a wide range of actors, including regions, cities, business, investors and all parts of civil society. At UN Climate Change Conferences, a large number of events demonstrate how non-Party stakeholders are working with governments and the UN system to implement the Paris Agreement. In addition, the secretariat co-organizes regional Climate Weeks. The important events aim to drive forward Paris Agreement implementation at the regional level and to build new climate action partnerships.

Throughout the year, the secretariat strives to keep all stakeholders informed on the negotiating process and climate action through a variety of communication products, including the website and social media. Around one million people visit the UN Climate Change website every year, and the secretariat's social media accounts, including on Twitter, Facebook, Instagram, and LinkedIn have a combined following of around 1.8 million people.

c. UNFCCC's Main Objectives

Advocating for sustainable development: The issue of climate change is intricately connected to sustainable development concerns. As such, the goal is to foster sustainable development in all nations, with a particular focus on those most susceptible to the repercussions of climate change.

Promoting global collaboration: Effectively dealing with climate change necessitates a collective and worldwide effort, emphasizing the goal of fostering international cooperation in both climate action and adaptation.

Enabling the exchange of technology and expertise: The advancement and implementation of clean technologies play a crucial role in mitigating greenhouse gas emissions. Consequently, the objective is to facilitate the transfer of technology and knowledge among nations.

Offering financial assistance: Developing nations might need economic support to bolster their initiatives in addressing climate change. Thus, the goal is to provide funding to these countries for the transformation of their economies and adaptation to climate change, utilizing mechanisms like the Green Climate Fund.

2. An Introduction to Agenda Item: Promoting the transition to sustainable and renewable energy sources to mitigate climate change and reduce dependence on fossil fuels

a. Sustainable and Renewable Energy

Literally "to make new again", a renewable resource is one that is naturally replenished with time, like the growth of new organisms or natural recycling of materials. Renewable energy is any energy production which uses one of these resources. Renewable resources do not have a fixed quantity - more can always be generated. However, if the rate of use exceeds the rate of renewal - that is, the source is used more than it's being recreated - its continued use will become unsustainable. Generally, renewable energy is taken to mean any of the following:

- Solar power
- Wind power
- Hydropower
- Tidal power
- Geothermal power

Resources are considered non-renewable if they take a very long time to be created (e.g. fossil fuels) or if their creation happened long ago and is not likely to happen again (e.g. uranium). Primary energy flows are almost always renewable. On the other hand, biofuels are renewable and definitely count as fuels.

Literally, that which can be maintained for a definable period of time, sustainable energy is energy production that can last for the foreseeable future. Sustainable energy practices must rely on resources which can continue to supply our needs. These sources must be used cautiously so that they will not be used up, run out, or otherwise become unusable.

Even renewable resources can become unsustainable. If a resource is used up faster than it can regenerate, it will eventually be entirely depleted despite its renewability. Conversely, a non-

renewable resource can be sustainable if it's used in moderation. Again, if used without caution, these too may become depleted in a short time.

For most people sustainable energy use means that the environment is not significantly damaged due to accumulated effects of an energy practice. This part of the definition of sustainable energy is quite politically charged with widely varying opinions. Often advocates for fossil fuels will claim that coal, oil and natural gas are sustainable because the reserves for these are so large, discounting the problems with climate change.

b. Climate Change

Climate change is a long-term change in the average weather patterns that have come to define Earth's local, regional and global climates. These changes have a broad range of observed effects that are synonymous with the term. If we would define the difference between climate change and weather conditions, weather refers to atmospheric conditions that occur locally over short periods of time—from minutes to hours or days. Familiar examples include rain, snow, clouds, winds, floods, or thunderstorms.

Climate, on the other hand, refers to the long-term (usually at least 30 years) regional or even global average of temperature, humidity, and rainfall patterns over seasons, years, or decades.

On the perspective of climate changes observed on the Earth since the mid-20th century are driven by human activities, particularly fossil fuel burning, which increases heat-trapping greenhouse gas levels in Earth's atmosphere, raising Earth's average surface temperature. Natural processes, which have been overwhelmed by human activities, can also contribute to climate change, including internal variability (e.g., cyclical ocean patterns like El Niño, La Niña and the Pacific Decadal Oscillation) and external forcings (e.g., volcanic activity, changes in the Sun's energy output, variations in Earth's orbit).

Scientists use observations from the ground, air, and space, along with computer models, to monitor and study past, present, and future climate change. Climate data records provide evidence of climate change key indicators, such as global land and ocean temperature increases; rising sea levels; ice loss at Earth's poles and in mountain glaciers; frequency and severity changes in extreme weather such as hurricanes, heatwaves, wildfires, droughts, floods, and precipitation; and cloud and vegetation cover changes.

"Climate change" and "global warming" are often used interchangeably but have distinct meanings.

c. Global Warming:

Global warming is the long-term heating of Earth's surface observed since the pre-industrial period (between 1850 and 1900) due to human activities, primarily fossil fuel burning, which increases heat-trapping greenhouse gas levels in Earth's atmosphere. This term is not interchangeable with the term "climate change."

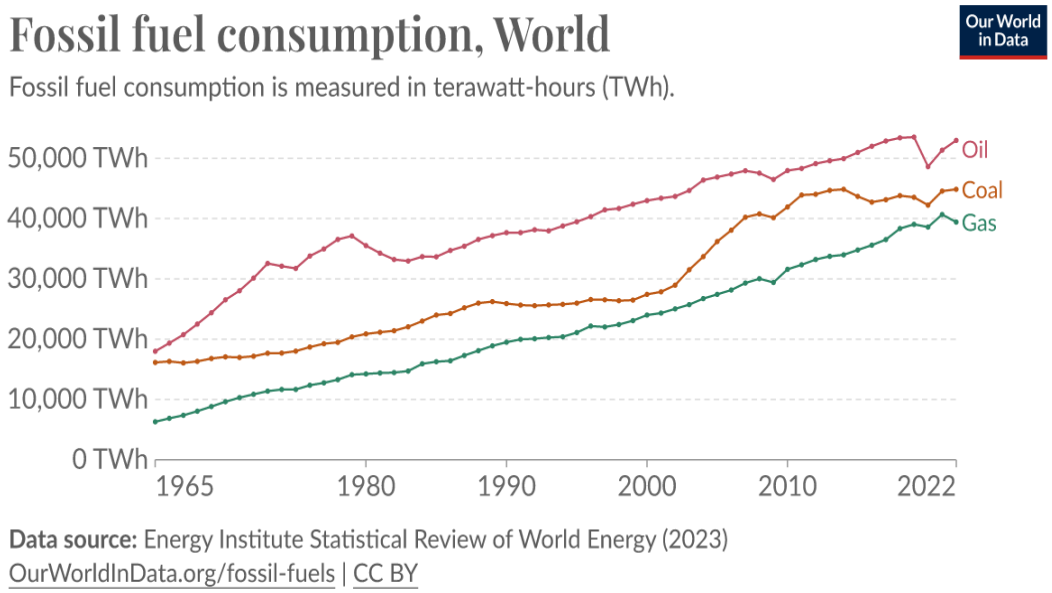
Since the pre-industrial period, human activities are estimated to have increased Earth's global average temperature by about 1 degree Celsius (1.8 degrees Fahrenheit), a number that is currently increasing by more than 0.2 degrees Celsius (0.36 degrees Fahrenheit) per decade. The current warming trend is unequivocally the result of human activity since the 1950s and is proceeding at an unprecedented rate over millennia.

d. Fossil Fuel Consumption and Substantial Graphics with Explanation:

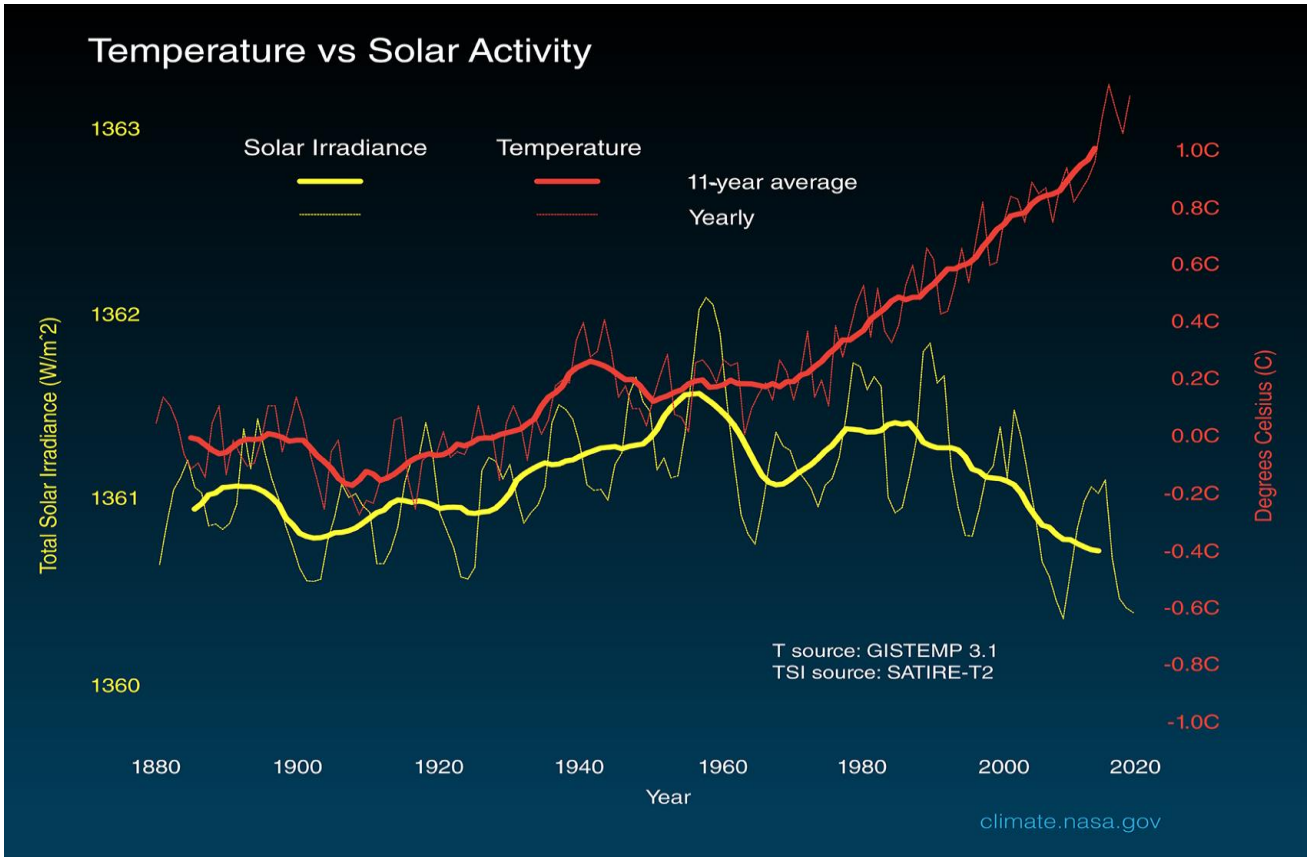
Fossil fuels are made from decomposing plants and animals. These fuels are found in Earth's crust and contain carbon and hydrogen, which can be burned for energy. Coal, oil, and natural gas are examples of fossil fuels. Coal is a material usually found in sedimentary rock deposits where rock and dead plant and animal matter are piled up in layers. More than 50 percent of a piece of coal's weight must be from fossilised plants. Oil is originally found as a solid material between layers of sedimentary rock, like shale. This material is heated in order to produce the thick oil that can be used to make gasoline. Natural gas is usually found in pockets above oil deposits. It can also be found in sedimentary rock layers that don't contain oil. Natural gas is primarily made up of methan.

The existing processes for generating, refining, and using energy have adverse effects on the environment. The combustion of fossil fuels not only harms the environment but also poses significant health risks to individuals. Electricity production frequently involves burning coal, releasing gases into the atmosphere as air pollution. This pollution can adversely affect people's health, leading to respiratory problems such as asthma.

In conclusion with that topic, renewable energy and sustainable development are widely discussed and highly debated topics. The current and majority opinion is that for sustainable development renewable energy is a necessity and plenty of it is available, which can be harvested economically and in an environmentally friendly way. There are also dissenters who feel strongly that fossil fuels are far from exhausted, can be used with clean technologies, which are already developed, while technical problems for renewable energy are far from solved and they are very often more damaging to the environment and society than envisaged. The phenomena of global warming and carbon dioxide build-up are also inseparably entangled with sustainability and energy.



iii. You can check the related consumption data and your country’s consumption level from the link by both observing the graphic and table model: https://ourworldindata.org/fossil-fuels .



On July 10, 2020, the chart provided above illustrates a comparison between changes in global surface temperature (depicted by the red line) and the Earth's reception of solar energy from the Sun (illustrated by the yellow line) measured in watts per square meter since the year 1880. The thinner lines represent yearly fluctuations, while the thicker lines depict 11-year average trends. The use of 11-year averages aims to minimize year-to-year natural variations in the data, enhancing the visibility of underlying trends.

The Earth's receipt of solar energy has adhered to the Sun's natural 11-year cycle, characterized by minor fluctuations, with no discernible increase since the 1950s. Concurrently, there has been a notable rise in global temperatures during the same timeframe. Consequently, it is highly improbable that the observed warming trend in global temperatures over the past fifty years can be attributed to solar activity.

3. Definition of Key Terms

Solar Energy: Solar radiation, with the capacity to generate heat, induce chemical reactions, or produce electricity, surpasses the Earth's current and anticipated energy needs by a considerable margin. For instance, India holds the distinction of being the world's leading producer of solar energy. Approximately one-third of India's energy is sourced from renewable sources.

Thermal Energy: Thermal energy is the internal energy found in a system when it is in a state of thermodynamic equilibrium due to its temperature. Unlike the energy in systems not in a state of equilibrium, thermal energy is not easily converted into useful work. For instance, a flowing fluid or a moving solid contains energy that can be harnessed for work in mechanical devices like windmills or waterwheels. However, when the same fluid or solid is in a thermodynamic equilibrium state with an equivalent amount of energy as thermal energy, it cannot perform work unless combined with another substance at a different temperature, as seen in a heat engine.

Wind Energy: Wind power is the process of converting wind energy into a practical and usable form of energy. This conversion is achieved through various means, including the use of wind turbines for electricity generation, windmills for mechanical power, wind pumps for water pumping or drainage, and sails for propelling ships. The total economically viable power that can be harnessed from the wind exceeds the current global human energy consumption from all sources. Wind power is characterized by its abundance, renewability, widespread distribution, cleanliness, and lack of greenhouse gas emissions during operation. As an alternative to fossil fuels, wind power has a cost per unit of energy produced that is comparable to new coal and natural gas installations. In Brazil, wind power has emerged as one of the most rapidly expanding energy sources. Despite the rising costs associated with renewable energy, the government maintains a steadfast commitment to the development of wind power and other renewable energy sources.

Tidal Energy: Tidal energy refers to a type of power generated through the natural ebb and flow of tides resulting from gravitational interactions among Earth, the sun, and the moon. Tidal currents, possessing ample energy for extraction, arise when water accelerates as it passes through a constriction. By deploying specially designed generators in appropriate locations, tidal energy can be transformed into practical forms of power, such as electricity. Additionally, various other forms of energy can be derived from the ocean, encompassing waves, enduring ocean currents, and variations in temperature and salinity within seawater.

Hydroelectric Energy: Hydroelectric energy is produced by transforming the kinetic energy of water into electrical energy. To capture this energy, large hydroelectric structures are constructed to harness the maximum potential of this renewable, environmentally friendly local resource. Hydroelectric power stations accomplish the conversion of water's potential energy into electricity by transferring it between two locations at varying heights or elevations. For instance, Zimbabwe has implemented the construction of mini-hydropower plants to supply energy to residents in rural areas,

leading to reduced environmental degradation. Meanwhile, the Republic of Korea is actively constructing tidal power plants along its coastlines, with an investment exceeding $1 billion over the next few years to establish these facilities

Wave Energy: Wave energy is a sustainable power source that involves harnessing the energy of ocean waves to produce electricity. This form of power is beneficial for electricity generation, water desalination, and pumping water into reservoirs. The device responsible for generating this energy is known as the wave energy converter.

Geothermal Energy: Geothermal energy is the energy sourced from the heat within the Earth. The heat originating from the Earth's center conducts outward, warming the outer rock layers known as the mantle. When this rock undergoes melting, it transforms into molten magma. By harnessing this heat, water is converted into steam, which propels turbines, ultimately generating electrical energy.

Nuclear Energy: Nuclear energy refers to the energy contained within the nucleus or core of an atom. Atoms, which are the fundamental units composing all matter in the universe, are held together by energy within the nucleus, officially termed the "strong force" due to its powerful nature. The dense nucleus of an atom contains a substantial amount of energy. Nuclear energy can be harnessed to generate electricity, but it necessitates the release of this energy from the atom. This release is achieved through the process of nuclear fission, wherein atoms are split to unleash the stored energy. For instance, the Philippine government is contemplating the reactivation of a nuclear power plant to address the country's energy requirements, a decision that has sparked both local and international protests.

Biomass Energy: Biomass consists of organic matter derived from living organisms, including plants and animals. The primary materials utilized for energy production from biomass are plants, wood, and waste, collectively referred to as biomass feedstocks. It's important to note that biomass energy can be either a renewable or nonrenewable energy source.

Feed-in-tarriff: It is a public policy approach designed to promote the production of renewable energy. A feed-in tariff stimulates market expansion by offering developers extended purchase agreements for the electricity generated from renewable sources. It has demonstrated itself as the most effective policy to foster the renewable energy market to date.

Grid: It is an electrical network consisting of transformers, substations, transmission lines, and other devices that facilitate the transportation of electricity from the power source to the end consumers.

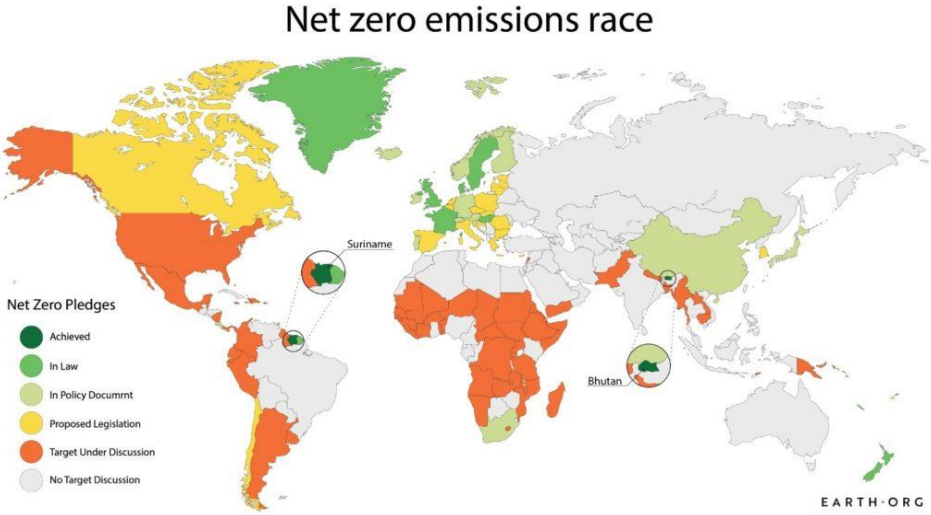
Off-the-grid power: "Being 'off the grid' refers to facilities that generate all their energy independently and are not linked to any external sources, such as the electrical power grid." The majority of off-grid generators rely on solar, wind, and geothermal energy sources.

Sustainable Development: Sustainable development is a strategy for societal, economic, and environmental planning that seeks to harmonize the current and future social and economic requirements of humanity while ensuring the preservation of the natural environment and preventing excessive harm to it.

Carbon Footprint: Carbon footprints quantify the overall volume of greenhouse gases released throughout the manufacturing, processing, and retail phases of consumer goods. The objective is to pinpoint significant emission sources within supply chains, providing essential information to stakeholders for implementing measures aimed at emission reduction. Additionally, carbon footprints can be conveyed to consumers through the use of carbon labels.

Decreasing the human carbon footprint can be accomplished by embracing renewable energy sources like solar, wind, and geothermal, as opposed to depending on fossil fuels. Such a shift has the potential to substantially reduce greenhouse gas emissions, contributing to the mitigation of climate change. A critical strategy involves improving energy efficiency across diverse sectors, encompassing buildings, transportation, and industrial production. This entails the use of more efficient appliances and equipment, advocating for sustainable transportation practices, and implementing eco-friendly urban planning.

Net Zero Targets: The United States and the European Union have set targets for achieving net-zero emissions by 2050, and numerous companies globally have made similar commitments. These pledges revolve around the goal of reaching a state where entities do not contribute to additional emissions causing climate change but rather work towards absorbing sunlight and retaining heat.



Historical View on the Climate Change Diplomacy and Timeline

Date	**Description of the Event**
1896 First Scientific Discoveries	Svante Arrhenius of Sweden acknowledges that burning coal enhances the "natural greenhouse effect," but proposes the idea that it could potentially be advantageous for future generations.
1920-25	These five years were the era of large-scale petroleum development which begins with the opening of Texas and Persian Gulf oil fields.

1972	The Stockholm Conference, which convened to address human environmental concerns, led to the establishment of the United Nations Environment Programme (UNEP). A significant outcome of this conference was the formation of environmental ministries and agencies in numerous countries globally. These institutions were given the responsibility of overseeing environmental conditions, formulating protective policies, and enforcing environmental regulations.
1973	The first oil shock (Escalating oil prices led to a surge in inflation, giving rise to a phenomenon known as a vicious price spiral, which directly affected both consumers and industries.)
1979	Second oil shock
1979	The First World Climate Conference takes place in Geneva. The Stockholm Conference led to the establishment of the World Climate Programme and the World Climate Research Programme. Furthermore, the Intergovernmental Panel on Climate Change (IPCC) was formed in 1988 through collaboration between the World Meteorological Organization (WMO) and the United Nations Environment Programme (UNEP).
1987	The adoption of the Montreal Protocol occurred with the purpose of prohibiting the use of chemicals that have the potential to harm the ozone layer.
1990	First Intergovernmental Panel on Climate Change (IPCC) report notes pattern of past warming while signaling that future warming is likely.
1992	United Nations conference in Rio de Janeiro creates the UN Framework Convention on Climate Change (UNFCCC).
1995	The initial Conference of the Parties (COP 1) convened in Berlin, where it endorsed the Berlin Mandate. This mandate initiated negotiations for the establishment of legally binding targets aimed at reducing greenhouse gas emissions. The adoption of the Berlin Mandate laid the groundwork for subsequent negotiations, culminating in the eventual ratification of the Kyoto Protocol in 1997.

1997	Kyoto Protocol is created with the intent to limit greenhouse gas emissions from industrialized countries. The United States of America, which is the largest greenhouse gas emitter at the time, does not sign on.
2001	President George W. Bush withdrew the United States from the Kyoto process, citing the argument that industrialized nations were being assigned a more substantial responsibility for emission reduction compared to developing nations.
2005	Kyoto Protocol goes into effect and all major industrialized countries sign on, still except the U.S.
2005	The launch of the EU's Emissions Trading System marks a significant development. Introduced by the European Union, this initiative stands as the world's leading and most expansive emissions trading program. It is recognized as a pivotal cornerstone of the EU's climate policy.
2006	China becomes the world’s largest GHG emitter.
2007	Fourth IPCC report notes that effects of global warming are occurring.
2009	Copenhagen Accord drafted at the COP15 in Copenhagen.
2010	The Cancun Agreements were formulated and largely embraced during the COP16. Governments endorsed these agreements, comprising a comprehensive set of measures designed to support developing countries in addressing climate change. A pivotal outcome of this accord was the creation of the Green Climate Fund.
2011	Canada withdraws from the Kyoto Protocol.
2012	The Doha Amendment to the Kyoto Protocol signifies a collective commitment by governments to expedite their actions in pursuit of a comprehensive global climate change agreement by 2015. It entails a pledge to consider additional measures for emission reduction beyond current commitments before 2020. Moreover, the amendment establishes fresh emission reduction targets for participating nations spanning the period from 2012 to 2020.

2013	The involved parties have agreed upon a timetable for nations to submit their suggested contributions for the upcoming international climate agreement. They have also implemented measures to accelerate actions before 2020 and established a mechanism to address losses and damages in vulnerable developing nations caused by climate change. Furthermore, there have been enhancements in the implementation of previously agreed-upon measures, including climate finance, and improvements in the transparency of reporting on emissions.
2015	Paris Agreement which replaces the Kyoto Protocol, is adopted by nearly 200 countries, this time including the U.S.
2016	Paris Agreement goes into effect.
2017	President Donald Trump announces his purposal to withdraw the United States from the Paris Agreement.
2018	The United Nations Intergovernmental Panel on Climate Change (IPCC) issues a special report examining the consequences of a 1.5°C temperature increase above pre-industrial levels. The report finds that the necessary reduction in emissions exceeds initial scientific estimates.
2020	The European Green Deal has been approved, featuring a proposal to elevate the European Union's target for reducing greenhouse gas emissions by 2030. This proposal, accompanied by an impact assessment, aims to attain a minimum reduction of 50%, progressing towards a 55% decrease compared to 1990 levels.
2021	The COP26 summit gathers in Glasgow. At this event, nations collectively embraced the objective of achieving climate neutrality, augmented financial support for vulnerable developing nations, and reduced funding for new projects involving fossil fuels. However, there was no consensus on a unified approach to the phase-out of coal usage.
2022	COP27 is held in Sharm el-Sheikh. Nations reached an accord to establish a fund for loss and damage to assist vulnerable countries affected by climate-related disasters. Nevertheless, advancements towards phasing out fossil fuels and transitioning were sluggish.

2023	The IPCC Sixth Assessment Report for policymakers (AR6) has been released. This comprehensive report from the Intergovernmental Panel on Climate Change (IPCC) concludes an eight-year effort that began in 2015. The report is divided into three sections, with a primary emphasis on the fundamental aspects of warming, its impacts, and potential solutions. The primary components of the report were published in 2021 and 2022, while three specialized reports delved into the specific ramifications of a 1.5°C temperature increase on land in 2018, and on oceans and the cryosphere in 2019.

B. Status Quo of the Renewable Energy

To comprehend the critical importance of energy production, it is essential to examine current figures and their context. As per the calculations by the International Panel on Climate Change (IPCC), human-induced global emissions experienced the most substantial increase in history during the 2000-2010 decade, rising by 2.2% annually compared to 1.3% per annum from 1970 to 2000. This resulted in approximately 49 gigatons of emitted CO2 per year in 2010. Of this total, 78% is attributed to fossil fuel combustion and industrial processes, amounting to around 32 GtCO2 per year (Edenhofer, O., et al. 2014: 6). It is crucial to contextualise these numbers by examining which sectors and entities contribute the most significant emissions.

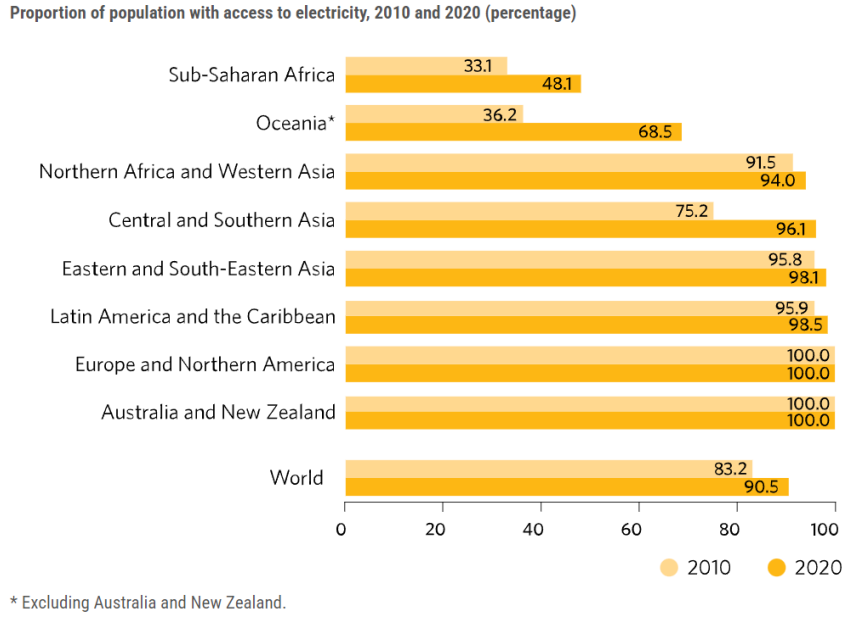
While various sectors contribute to climate change, some significantly surpass others in their contributions. Notably, electricity and heat production emerge as the leading contributor, accounting for 25% (Edenhofer, O., et al. 2014: 8–9). However, the current proportions of sustainable energy in specific sectors present a less encouraging picture. In heating and cooling, constituting 51% of total energy consumption, only 10.2% is derived from renewable sources. Similarly, in the transport sector, comprising 32% of the total, a mere 3.4% is sourced from renewable energy. Conversely, the power sector shows promise, representing 17% of the total, with a renewable share of 27.1% (André et al. 2021: 8). Moreover, certain sectors have shown no improvement; for instance, "the transport sector's renewable energy share did not increase" (André et al. 2021: 7). Despite progress, renewable energy still commands a relatively low market share. In 2019, only 11.2% of total energy consumption was from renewable sources, marking a modest increase from 8.7% in 2009—a mere 2.5% uptick. Should this trajectory persist, achieving the objectives of SDG7 and the Paris Agreement seems doubtful (André et al. 2021: 6).

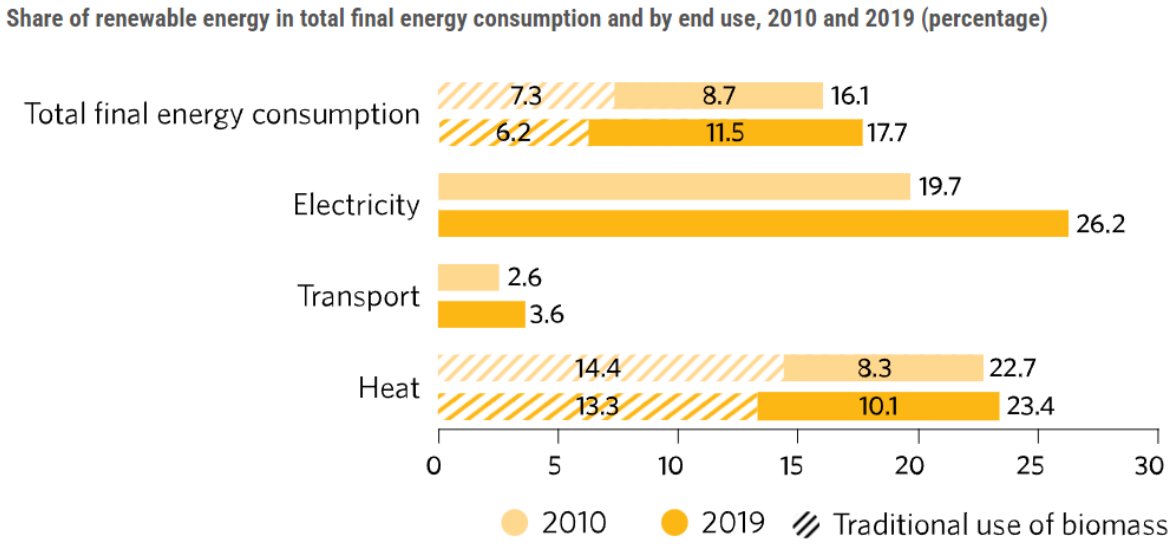
Examining the emissions by different countries, it becomes evident that all the major contributors to greenhouse gases are industrialized nations. China leads the ranking with 30%, followed by the United States at 15%, the EU-28 at 9%, India at 7%, Russia at 5%, and Japan at 4%.

The combined emissions from all other states account for 30% (Boden et al. 2017: 1). This highlights the significant global disparity between affluent industrial nations and developing countries.

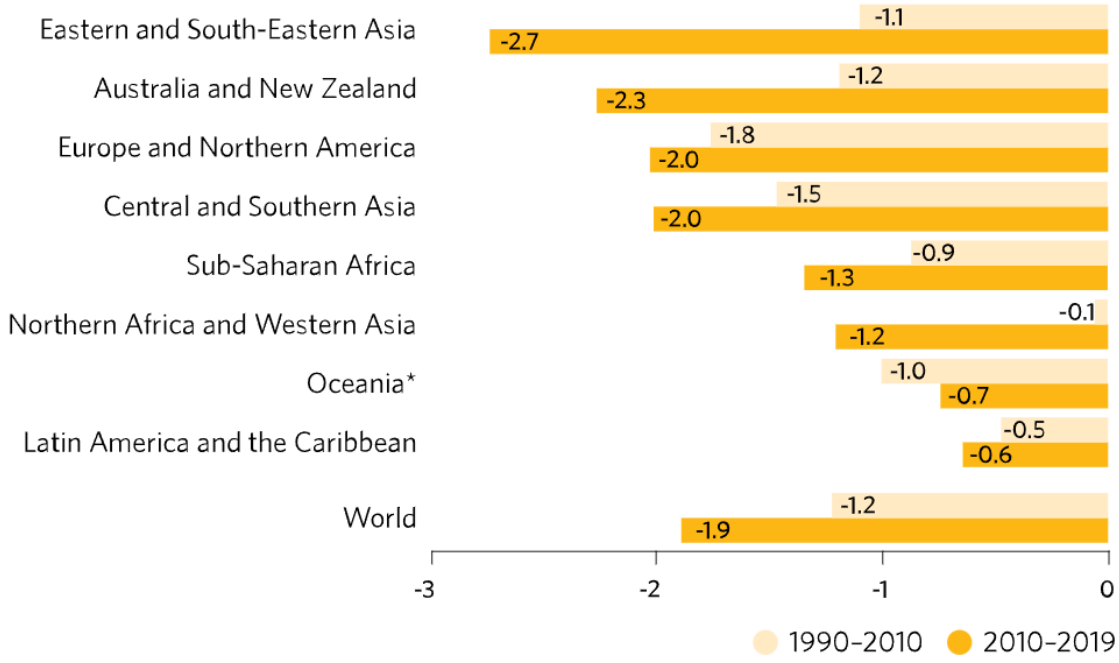
Electricity, a crucial aspect of energy, remains inaccessible to a substantial portion of the global population. In 2019, approximately 759 million people, or around 10% of the world's population, lacked access to electricity. In comparison to 2010, the percentage of people with access increased from 83% to 90%, with 1.1 billion gaining electricity access for the first time during this period (Department of Economic and Social Affairs - Statistics Division 2021: 1).

However, a substantial discrepancy exists in electricity access between the global north and the global south. Analyzing the data, regions such as Europe, Northern America, Australia, and New Zealand all boast a 100% access rate. In contrast, many nations in Sub-Saharan Africa rank at the bottom with a 46% access rate, though this represents a 13% improvement from 2010 to 2019 (Department of Economic and Social Affairs - Statistics Division 2021: 1). Here are some graphs stated below:



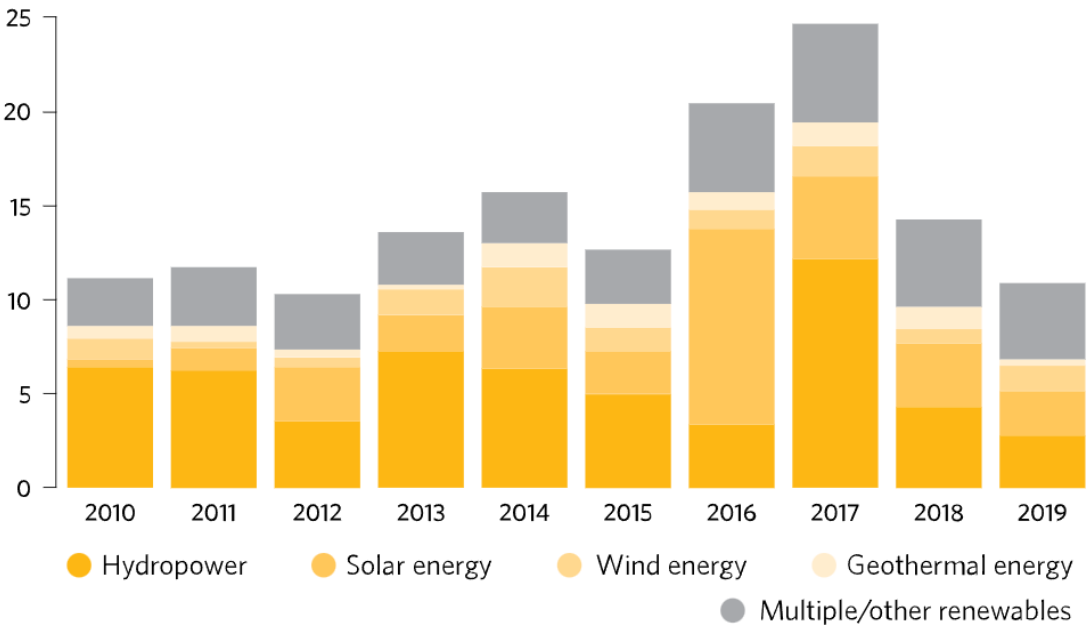


Average annual growth rate of primary energy intensity, 1990–2010 and 2010–2019 (percentage)



*Excluding Australia and New Zealand

International financial flows to developing countries in support of clean and renewable energy, by type of technology, 2000–2019 (billions of US dollars at 2019 prices and exchange rates)



Access to renewable energy extends beyond electricity and encompasses various forms of energy consumption that play a crucial role. The adoption of renewable energy not only addresses certain dangers and issues but also offers benefits, as it is often more locally producible and generally less harmful than the oil, gas, and other hazardous energy sources it aims to replace. One critical area impacted is food production. The United Nations estimates that "one third of the world's population

will still be using dangerous and inefficient cooking systems in 2030" (Department of Economic and Social Affairs - Statistics Division 2021: 1). The expectation is that clean energy will contribute to alleviating these challenges, along with addressing social and gender disparities. In this context, SDG7 directly intersects with other Sustainable Development Goals (SDGs).

C. Sustainable Energy for All Initiative and the SDG 7 Measurements

The Sustainable Energy for All Initiative focuses on the societal aspect of transitioning to sustainable energy within the framework of SDG 7. This initiative, established in 2011 by the UN Secretary-General, operates as a collaborative effort involving governments, the private sector, and civil society. It is driven by three interconnected objectives to be accomplished by 2030 (United Nations: 1):

1. Guarantee universal access to modern energy services.
2. Accelerate the global rate of improvement in energy efficiency.
3. Increase the proportion of renewable energy in the global energy mix.

This aligns with the objectives of SDG 7, which have been established up to the year 2030, allowing for the possibility of later adjustments or the introduction of new goals (Department of Economic and Social Affairs 2021: 1). The monitoring of SDG 7 is organized into six categories:

- Access to electricity
- Access to clean cooking
- Renewable energy
- Energy efficiency
- International financial flow

Renewable capacity per capita
(Energy Sector Management Assistance Program: 1)

To monitor the success of the SDG 7 several targets have been set with their pursuant counterpart indicators. These are as following to the UN:

	Target	**Descriptive**
7.1	By 2030, ensure universal access to affordable, reliable and modern energy services	7.1.1 Proportion of population with access to electricity 7.1.2 Proportion of population with primary reliance on clean fuels and technology
7.2	By 2030, increase substantially the share of renewable energy in the global energy mix	7.2.1 Renewable energy share in the total final energy consumption
7.3	By 2030, double the global rate of improvement in energy efficiency	7.3.1 Energy intensity measured in terms of 9 primary energy and GDP
7.a	By 2030, enhance international cooperation to facilitate access to clean energy research and	7.a.1 International financial flows to developing countries in support of clean energy

	technology, including renewable energy, energy efficiency and advanced and cleaner fossil-fuel technology, and promote investment in energy infrastructure and clean energy technology	research and development and renewable energy production, including in hybrid systems
7.b	By 2030, expand infrastructure and upgrade technology for supplying modern and sustainable energy services for all in developing countries, in particular least developed countries, small island developing States, and land-locked developing countries, in accordance with their respective programmes of support	7.b.1 Installed renewable energy-generating capacity in developing countries (in watts per capita)

They serve as guidelines for assessing the SDG 7 objectives and are interconnected with the Energy for All Initiative, providing a framework for measurement employed by ESMAP. The ongoing Covid-19 pandemic has impacted various facets of life, including the transition from fossil fuels to renewable alternatives. In 2020, the initial year of the pandemic, few to no new policies supporting renewable energy were endorsed by individual countries. Additionally, "investment in fossil fuels in COVID-19 recovery packages was six times higher than for renewable energy" (André et al. 2021: 10–11).

7. Major Countries and Organizations Involved

In order to derive further information throughout the policy of your country about the related agenda, you can check the data from https://www.un.org by searching your country profile.

United States of America

The United States stands as one of the largest consumers of energy, primarily reliant on fossil fuels. However, in recent years, the country has shown a growing shift towards alternative energy sources due to the tightening of international, federal, state, and local regulations. Approximately a quarter of the global energy production from renewable sources comes from the United States, with hydroelectric power leading the way, followed by wind power and biomass. Some states in the US have implemented the Renewable Portfolio Standard (RPS) in addition to feed-in-tariffs, mandating energy suppliers to generate a specific quantity of renewable energy units. Various initiatives in different states include offering zero-interest loans to residential customers for installing modern and more efficient energy systems, as well as providing tax credits in exchange for the adoption of renewable energy.

The People's Republic of China

China has been consistently labeled as one of the leading contributors to pollution and has faced criticism for its perceived lack of action. However, since the introduction of the Renewable Energy Law in 2005, which has undergone multiple revisions, the Chinese government has been actively promoting the adoption of renewable energy, particularly through policies such as Renewable Portfolio Standards (RPS) and feed-in tariffs. Addressing challenges like inadequate grid infrastructure in rural areas and difficulties in power exchange between regions, China has initiated the construction of extensive power grids in regions lacking independent renewable energy networks. Despite these efforts, China still relies predominantly on coal as of today.

United Kingdom

In contrast, the United Kingdom has built its economy for over a century on substantial reserves of oil, coal, and other fossil fuels. Currently, it encounters greater challenges compared to other European counterparts in achieving its self-imposed target of having 15% of total energy sourced from renewables by 2020. Despite these challenges, the UK has implemented various measures that could serve as a model for countries facing similar conditions. Notably, the UK is pioneering the development of one of the most advanced offshore wind facilities, illustrating the importance of aligning policies and technological investments with the unique characteristics of their natural environments.

Germany

Since 1990, substantial investments have been directed toward renewable sources, leading to noteworthy implementation and significant advancements across all types of renewable energy. A pivotal catalyst for the reduction of fossil fuel usage was the German Renewable Energy Act, enacted in 2000 (Erneuenbare-Energien-Gesetz, EEG). Additional measures included ensuring energy producers a minimum connection price for all renewable energy supplied to public grids and obligating grid operators to establish direct and efficient connections between renewable energy production centers and the grid to favor connections from renewable sources. Another critical element in Germany's energy policies has been the introduction of various taxes on the consumption of fossil fuels and CO2 emissions. Germany has emerged as a global frontrunner in renewable energy production, opting to gradually discontinue nuclear power in favor of sustainable energy sources. Germany contributes to nearly 12% of the world's total renewable energy production. The primary sectors driving energy production in the country include wind power, biomass, and solar energy.

Russian Federation

Russia boasts the world's largest known natural gas reserves, surpassing any other location. It ranks second in terms of coal reserves and holds the eighth position globally in oil reserves. Despite these abundant fossil fuel resources, Russia currently lags in renewable energy production. However, there are intentions and plans to move in the direction of developing renewable energy sources.

Iran

Iran possesses the world's fourth-largest oil reserves and stands among the nations with the largest natural gas reserves. As a prominent member of both OPEC and GECF, the country has garnered $47 billion in oil export revenues. Nearly half of Iran's domestic energy consumption is attributed to the consumption of natural gas and oil. The anticipated lifting of sanctions, as part of the impending nuclear deal with the US, is expected to boost exports and potentially reshape the global energy landscape.

Iceland

Iceland leads the list of nations actively engaged in renewable energy, as it provides heat to 85% of the country's housing. The predominant sources of energy in Iceland are geothermal and hydroelectric power.

Norway

Norway relies on three primary sources of electricity: hydroelectric, geothermal, and wind power. Notably, the country has strategically developed its renewable energy sector to cater more to the export market rather than focusing primarily on domestic consumption.

Saudi Arabia

Saudi Arabia, one of the top three global oil exporters, possesses the second-largest oil reserves worldwide, estimated at 268 billion barrels. It held the leading position until January 2011 when Venezuela declared an increase in their proven reserves to 297 billion barrels.

Brazil

Brazil, classified as a developing country, stands out as a notable example of a nation that prioritizes renewable energy over fossil fuels. A significant 85.4% of Brazil's energy is derived from renewable sources, with sugarcane ethanol playing a prominent role, thanks to its abundance in the country. Following an oil shortage in the 1970s, Brazil strategically shifted its focus towards developing renewable energies, leading to its advanced utilization of these sustainable energy sources.

Canada

Canada's primary concern regarding climate change lies in the rapidity of its warming. The country is experiencing a warming rate that is twice as fast as the global average, with the Canadian Arctic warming up at an astonishing rate three times higher than the global average.

Mexico

Mexico is witnessing a continual increase in greenhouse gas emissions, and this trend is anticipated to persist until 2023 and extend into 2030. President Lopez Obrador's climate policies are characterized by a regressive approach, prioritizing fossil fuels as the primary energy source, and there has been a dismantling of climate change institutions.

OPEC

The Organization of the Petroleum Exporting Countries (OPEC) is a coalition of major oil-producing nations collaborating as a cartel to influence global oil prices, maximizing profits for member countries. However, the primary focus on oil production profits carries adverse environmental consequences, contributing to climate change. The combustion of fossil fuels, such as oil, releases greenhouse gases into the atmosphere, intensifying climate change by trapping sunlight. In a critical period where there's an urgent need to curtail carbon emissions and shift to clean energy, OPEC's actions have the potential to worsen the climate crisis by perpetuating dependence on fossil fuels. This, in turn, could impede efforts to restrict global warming to the recommended 1.5°C above pre-industrial levels, as advised by the Intergovernmental Panel on Climate Change.

8. United Nations Involvement

a. Relevant Resolutions, Treaties and Events

- **The United Nations Conference on Environment and Development in Rio de Janeiro in 1992** highlighted concerns about the unsustainability of contemporary fossil fuel consumption rates in its Agenda 21. It emphasized the necessity of tapping into more balanced and sustainable energy sources.
- **The United Nations Framework Convention on Climate Change (UNFCCC)**, adopted almost universally on March 21, 1994, aimed at stabilizing greenhouse gas concentrations in the atmosphere to prevent dangerous anthropogenic interference with the climate system.
- **The Kyoto Protocol**, in force since 2005, involved commitments from states from 2008 to 2012. Although extended by the **Doha Agreement,** only 36 states committed to a second term.
- In 2001, during the 9th session of the **Commission on Sustainable Development (CDS-9)**, members decided to allocate more political and economic will to the global implementation of cleaner and more sustainable energy.
- **The Johannesburg Plan of Implementation**, arising from the **World Summit on Sustainable Development in 2002**, called for diverse actions, emphasizing the positive impacts of a sustainable energy system on poverty eradication and economic growth. It also set goals for distributing alternative, clean, affordable energy in rural and impoverished areas.
- **The Sustainable Energy for All initiative (SEforALL)**, launched in 2011 by the UN Secretary-General, outlined three objectives to achieve by 2030: ensuring global access to modern energy sources, doubling universal energy efficiency, and increasing the percentage of renewable energy usage worldwide.
- **A General Assembly Resolution on February 16, 2011**, declared 2012 the "International Year of Sustainable Energy."
- **The UN Rio+20 Conference on Sustainable Development** resulted in the signing of "The Future We Want," urging members to address goals such as universal access to energy services and increased production of renewable energy.
- **A General Assembly Resolution on December 21, 2012**, declared the years 2014-2024 the "Decade of Sustainable Energy for All."

At present, numerous alliances have been formed to address the challenges of climate change, with one of the most significant being the Paris Agreement. This legally binding document was

adopted by 196 parties and formulated at COP21 in Paris, France, on November 4th, 2016, under the official name of the United Nations Framework Convention on Climate Change (UNFCCC). The UNFCCC has been actively engaged in climate-related initiatives for several years, striving to make a positive impact. Additionally, the European Union initiated the Global Climate Change Alliance (GCCA) with the aim of collaborating with less affluent nations to support them in the global fight against climate change.

b. Points that a Resolution Should Cover

- How can we address the disparities in access to energy among countries and regions?
- How can we strengthen economic policies of developing countries?
- What kind of ways can be used to facilitate a gradual transition in challenging sectors?
- How can we devise financing mechanisms for developing countries during the transition period?
- What kind of methods can be explored to boost the demand for renewable energy sources in total final energy consumption?
- What measures can be employed to encourage the adoption of renewable energy?
- What is the most effective way to put these renewable energy forms into practice?
- In what ways can we enhance the affordability and feasibility of renewable energy?
- When should member states initiate the transition from fossil fuels to renewable energy, and what is the proposed timeline?

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