

SONKALMUN'26 UNEP

Study Guide

Agenda Item:

Achieving multilateral cooperation between countries in tackling climate change and encouraging states transition to green energy.

Under-Secretary
General: Arzella Kabişen



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1.Letter From the Secretary General

Dear Delegates

It's my ultimate pleasure to welcome you as the secretary general of the very first edition of ŞÖNKALMUN. We as the ŞÖNKALMUN'26 Team are very thrilled to see our participants in our conference since each and every member of this team showed an extraordinary effort to organize the best potential conference. All our efforts are aimed at providing our participants with an enjoyable time. We can't wait to see the result of our unbelievable effort, sleepless nights, tears and unbelievable team work.

In ŞÖNKALMUN we expect our delegates to speak up, raise their voice for those who can't, examine and carry the problems of the others. This is not just an event. We are aiming to raise awareness about our global problems. The agenda items of this year were selected with great care and attention to detail for give our delegates to opportunity of speak about the problems we need to be worried about. We highly encourage our delegates to defend their ideas and not afraid of express themselves. No matter your country or your role everyone's ideas are important and worth to listen. In events like this it's true that everyone have their own ideas and everyone try to support their ideas but it doesn't mean that they are judging your ideas. Mun is about collaborate with communities and find common solutions. Remember the problems you talk about in this committees are real problems in daily life.

In order to achieve the conference's objectives, the delegates' contributions are just as important as our own efforts. This conference will be meaningful when you actively participate, share your ideas, and strive to gain something from the experience. My words are not sufficient to tell you how excited we are to see you in our event. We are planning these 3 days for a long time to give you an unforgettable experience. The friendships we've formed here, the debating skills we've developed, and the diplomatic solutions you've found form the core of these events. Speaking for all the ŞÖNKALMUN team I want to thank all of you for not leaving us alone in our journey.

Best Regards
Asya Kökce
Secretary-General

2.Letter From the Under-Secretary General

My dear delegates,

It is going to be extremely delightful to see you all in UNEP at SONKALMUN'26. My name is Arzella Kabişen and I will be your Under-Secretary General in this conference and I promise to assist you as much as I can in the three exciting days we are going to spend.

Being the Under-Secretary General for this committee is so meaningful to me. Climate change is an issue that every living being faces the negative impact of. Even through the social media trends like the Wilson, lo siento rooster or with the little punch hugging the monkey toy the effects of climate change is visible in every area of life. Climate change is not an issue that only one country will face the impacts of nor it is not an issue that is caused by only one country, even if some are more responsible for this issue.

Even though I literally don't know any of you while writing this i am 100% sure that you all will work as hard as you can in the three days we will spend with debates, strategy, and collaborations with other member states

I believe that this study guide is enough for you to understand this agenda item if you have any questions about the conference or the committee feel free to mail me any time

kabisenarzella2@gmail.com

MAKE UNEP GREAT AGAIN



best wishes,
Arzella Kabişen.

3.Introduction to UNEP



The United Nations Environment Programme as known as UNEP was founded in 1972 and ever since it is well known for being world's best level voice on environmental issues. After the UN Conference on the Human Environment in Stockholm, Sweden, UNEP was founded shortly to guide and coordinate environmental activities in the United Nations. Right now UNEP has 193 member states uniting to stop our planet from dying and help humanity live with nature and decrease unsustainable consumption and production. UNEP's first elected executive director was Maurice Strong. UNEP headquarters is located in Nairobi, Kenya and this headquarter is the only UN headquarter that is located in the global south. This decision was made because of the lack of attention to the global south and this decision played a crucial role in the environment movement in the world.

For the question "What does UNEP even do?" The answer would be analyzing and finding solutions to climate change, nature and biodiversity loss, and pollution and waste as known as the triple planetary crisis. UNEP hosts dozens of Multilateral Environmental Agreements and Conventions. UNEP plays a big key role in shaping global efforts on the environmental crisis. One of the most known current projects that UNEP supports deeply is the 17 Sustainable Development Goals(SDGs) that were adopted by all of the United Nations member states. SDGs brought developing and developed countries together to ensure that by 2030 all people enjoy peace and prosperity. Unfortunately most of the side effects of the environmental crisis are seen by the minority groups such as the poor, women and people of color. That is one of the reasons that UNEP supports all of the 17 goals because if countries do not work together, the human race is not going to be able to reverse

these negative effects in our daily life. In SONKALMUN'26 we will focus more on fighting climate change and clean energy transformation.

4. Agenda Item Introduction

Climate change can be due to natural events like volcanic eruptions, tectonic plate movements, variations of earth orbit and solar activity changes but ever since the 1800s climate change has been affecting our planet more than usual. This time it is not natural, it is because of human actions that produce greenhouse emissions which act like a blanket around the earth, causing the sun heat to be trapped and increase temperatures. The average temperature of the earth surface is now 1.42 ° C more than the 1800s due to the industrial revolution and the increasing use of fossil fuels. The planet earth is the warmest it has ever been in 100,000 years. Gas emissions are released by simple daily life actions like driving your car, electricity production, agriculture, coal for heating buildings and many more. So many countries are heavily dependent on using fossil fuels and it is awfully hard for countries to transform to renewable energy by themselves due to financial difficulties. Member states need to work together to transform to renewable energy because the earth isn't dying but the living things are due to climate change and humans are the only ones who are responsible. In earth's system everything works together when the temperature rises; droughts, increase in sea levels, melting polar ice, severe fires and the decline of biodiversity happens. Climate change affects all of the living things on the earth but some experience it more than the others. At the poles because of the increasing polar ice melting animals like polar bears, penguins, seals, arctic foxes and ext. are suffering intensely. Their homes are melting and unlike fossil fuels they don't have any alternatives to live on. Member states have to take action together to fix this horrible issue that affects everyone. Every human is responsible for climate action but some countries have way more effect in this situation. While the first 6 countries are responsible for more than half of green gas emissions, the least 45 developed countries are only responsible for 3 per cent of global gas emissions. Some member states need to take more action but all of the humans need to work as a whole to combat this issue because even though we have a hard challenge in front of us the solution is simple. Even though the transformation to climate change might be financially hard in the long term, using clean energy is way more affordable. Unlike fossil fuels, clean energy like solar energy, wind energy and many more are actually infinite and many countries can produce their own and stop being dependent on other countries for energy. Certain fossil fuels are more common in some countries than others and that causes countries who don't have much fossil fuels to be dependent on countries who have and in case of any wars that can be used as an advantage. Switching to clean energy is a must for the planet earth due to the lack of other planets we can live on. The cost might be too high for some member states in the short term but in the long term no amount of money is enough to go back in time and save the future. In SONKALMUN'26 member states will work together to solve this issue immediately by switching to clean energy and support cooperations on working together to combat climate change and the effects of it that affect every living thing in earth because no country can mitigate its impact alone and it is every single living humans responsibility to find solutions. There is not only one country who does all of the bad impacts on climate change that affects the planet earth and there shouldn't be only one country working to solve it by themselves.

5. Terminology

5.1 Climate

Climate is the average of weather conditions for a particular location over a long period of time usually 30 years or more that represents overall weather conditions of an area.

5.2 Global Warming

Global warming is the increase of a planet's average temperature in recent decades. The reasoning for global warming can be due to natural processes and human actions. The global warming that is happening now is mostly due to human actions.

5.3 Climate Change

Climate change is the long-term changes in a planet's temperatures and weather patterns. Climate change can be due to natural causes like sun activities, volcanic eruptions and tectonic plate movement but it can also be because of human actions like the green gas emissions. Climate change affects the biodiversity, ecosystems, waters and land of the planets that experience climate change.

5.4 Fossil Fuels

Fossil fuels are non-renewable energy sources that formed over millions of years from decayed organic materials like pre-historic plants and animals because of that they are limited. They are used for electricity generation, transformation, industrial manufacturing, heating, generative AI (Artificial Intelligence) and when fossil fuels are burned they release CO₂ and 90% of global CO₂ is caused by fossil fuels.

5.5 Renewable Energy

Renewable energy is the type of energy that is generated from natural sources like the sun, wind, water and many more. Renewable energy can't be consumed away because renewable energy is created by natural processes which means renewable energy is technically unlimited. It is known as the alternative to fossil fuels due to the fact that renewable energy does not harm the environment and it is not specific to some countries because renewable energy can be generated everywhere in the world so it makes countries less dependent on others.

5.6 Climate Crisis

Climate crisis is the important consequences that are caused or are likely to be caused by the planet's change in climate. The increasing temperatures are already affecting human society and biodiversity but scientists are predicting that if the temperature of earth rises beyond 1.5 °C earth will reach its tipping point and it will cause irreversible changes to the planet. If no action is taken it is guessed that many cities like New York, Shanghai, Abu Dhabi, Osaka, Rio de Janeiro and so many more cities will be under water.

5.7 Climate Change Mitigation

Climate change mitigation is the actions taken by businesses, people or member states governments to reduce or prevent green gas emissions that are released by human actions. Mitigation actions include using clean energy, using energy efficiently, practicing regenerative agriculture and protecting critical ecosystems. One of the challenges climate change mitigation actions face are the world's dependency on fossil energy resources and the lack of international cooperation.

5.8 Climate Change Adaptation

Climate change adaptation is the actions that are taken to reduce vulnerability to the current or future consequences of climate change such as water and food shortage, sea-level rise, extreme weather conditions, and biodiversity loss. Local communities and countries should work together to adapt to climate change with actions such as building plant crops that are resilient to drought, improving water storage, relocating buildings that are in the risk of flooding and many more. These actions need to be taken both by small communities and at the national level because just one of them happening is not enough.

5.9 Climate Security

Climate security is the effects of the climate crisis on peace and security on vulnerable regions. The impact of climate crisis can cause food and water shortage, livelihood insecurity, and with competition over natural sources this might cause tensions and conflicts even more in these areas. If the world continues not taking action on climate change it can push an estimated 130 million people more into poverty. Climate change's impact affects women and people in conflict zones even more.

5.10 Carbon Footprint

Carbon footprint is the estimated volume of green gas emissions in the atmosphere. An individual's carbon footprint is based on many basic things they do to survive such as how often they eat meat, their usage of water and electricity and other energies, how they go from one place to other and many more. The average person's estimated carbon footprint is calculated as 4.8 tons each year but to decrease the rising temperatures one person's carbon footprint should be lowered to 2 tons for a year by 2050.

5.11 Greenhouse Effect

Greenhouse effect is the greenhouse gases such as carbon dioxide, methane, nitrous oxide, and fluorinated gases trapping the heat from the sun in the earth's atmosphere making the earth's temperature stay at the normal levels. The earth is supposed to have greenhouse gases effect but in the last century due to excessive use of fossil fuels that led to increasing greenhouse gas emissions the planet earth is getting warmer and warmer each day and it is messing the earth heat balance

5.12 Regenerative Agriculture

Regenerative agriculture is the solutions that are making farming work with balance with nature and focus on the health of ecosystems and soils. Regenerative agriculture practices are against the

industrial agriculture practices that destroy habitats, cause biodiversity loss, and climate change. Industrial farming encourages clearing forest to grow crops to feed livestock, using artificial fertilisers, and using pesticides. These actions directly affect the weather patterns and are responsible for a big percentage of greenhouse gas emissions.

5.12 Reforestation

Reforestation is replanting trees that have been affected by natural events such as wildfires, droughts, and insect infestations and by human actions such as agricultural cleaning, deforestation to build other buildings, and mining. This action helps protect endangered species, prevents soil erosion, acts as a carbon sink, and helps protect the climate from the climate crisis.

5.13 Afforestation

Afforestation is the act of turning non-forest areas to forests by planting trees. This action is important because in the process of afforestation, deforestation is lessened, newly planted trees act like a carbon sink and the area that was not getting used becomes a forest, and this action creates new opportunities for the local people. This action also helps protect endangered species, prevents soil erosion, acts as a carbon sink, and helps protect the climate from climate crisis just like reforestation.

5.14 Carbon Sink

Carbon sink is the action of absorbing more carbon dioxide than releasing in the atmosphere. The most efficient carbon sinks in nature are forests, oceans, and the soil. The trees in the forest consume more carbon dioxide than they release by the natural process called photosynthesis. Soils absorb the carbon dioxide stored in dead plants by a process called decomposition. Oceans marine ecosystems also absorb carbon dioxide from the atmosphere.

5.15 Net Zero

Net zero is a state that greenhouse gases that go to the atmosphere are balanced by the removal of these gases. The Paris agreement heavily encourages reaching this goal because reaching net zero means the stop to global warming.

5.16 Circular Economy

Circular economy is the type of an economy model that minimizes and reduces waste and pollution, and promotes the usage of natural sources sustainably. Most of the used materials for products are not recycled to use again and only 7.2 percent of used materials are reused. This problem creates unnecessary pollution. Circular economy plays a critical role in pollution, climate change and biodiversity loss.

5.17 Green Jobs

Green jobs are the type of jobs that help protect the environment and address climate change. Green jobs help increase energy efficiency, reduce waste and pollution, protect ecosystems, and limit carbon gas emissions

6. Background

6.1 The Establishment of United Nations Environment Programme

The United Nations Environment Programme (UNEP) was established after the United Nations Conference on Human Environment 1972 due to the need of an UN entity dedicated to the environmental problems. The United Nations General Assembly picked Maurice Strong as the first executive director of the United Nations Environment Programme.

In 1973, Kenya's first president opened the UNEP's first headquarters at the Kenyatta International Convention Centre.

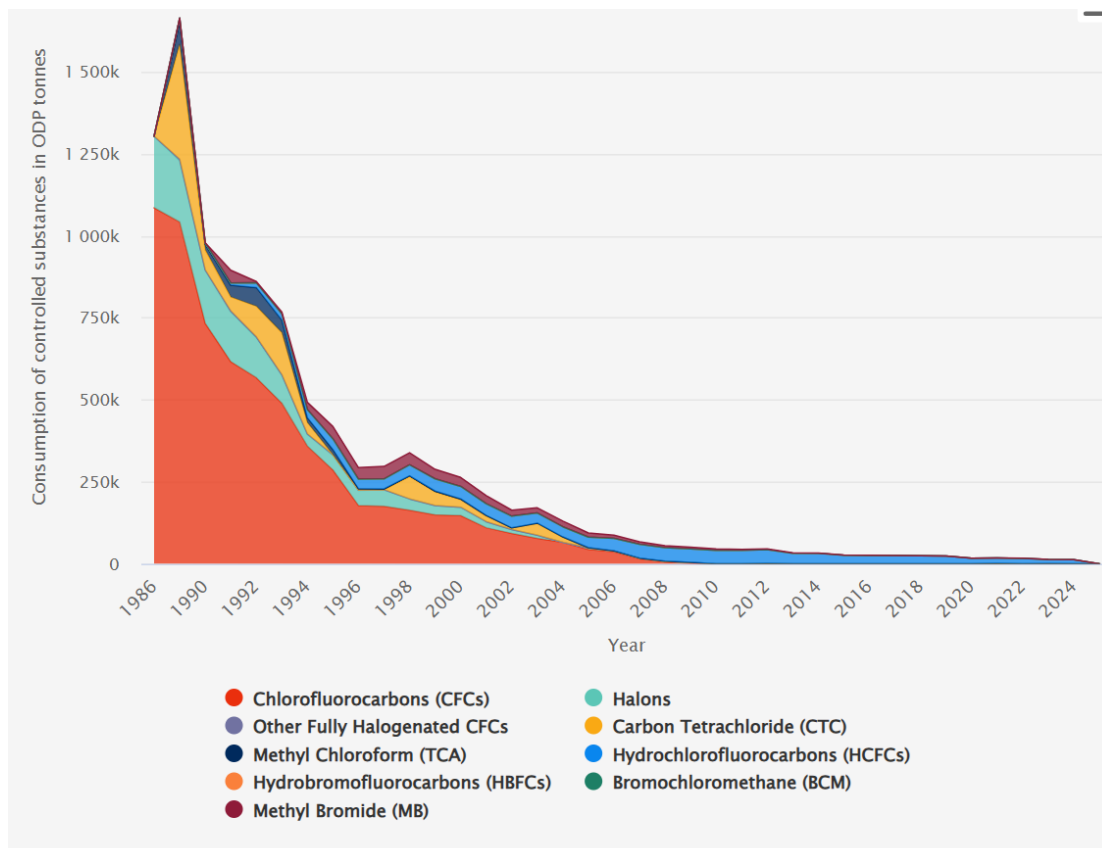
He held his role as the executive director of UNEP between 1972-1975 at Nairobi, Kenya. His work left a big legacy for global environmental actions and the United Nations Environment Programme. The headquarters being in Kenya was a really good choice because there was a lack of United Nations headquarters in the global south and that is actually a big issue for the south. Ever since its establishment UNEP is working to combat climate change, nature and biodiversity loss, and pollution and waste as known as the triple planetary crisis. UNEP officially has 193 member states working together to address environmental issues such as restoring the ozone layer, international agreements, and protecting the endangered animal and plant species. UNEP is known as the highest decision making body in environmental issues.



6.2 Montreal Protocol

The Montreal Protocol on Substances that Deplete the Ozone Layer was officially adopted by the United Nations with 197 member states signing it. This protocol has been eliminating the consumption and the production of materials that deplete the ozone layer and according to data ever since the Montreal Protocol got adopted by the United Nations, the usage of materials that negatively affect the ozone layer has significantly decreased over the years. The United States of America is known as the leader of this treaty and has been guiding it with success ever since 1987.

Ozone layer is one of the layers of earth's atmosphere that absorbs sun's ultraviolet radiation and protects the planet earth. If the ozone layer did not protect the earth from the sun's ultraviolet lights all of the living beings in the earth would have been in danger. The damage on the ozone layer causes the ultraviolet radiation to get absorbed poorly. The whole purpose of the Montreal Protocol is to protect the planet earth from ultraviolet radiation.



6.3 UN Framework Conventions on Climate Change (UNFCCC)

United Nations Framework Conventions on Climate Change was adopted by the United Nations headquarters in 1992. With the ultimate goal of UNFCCC being limiting dangerous human interaction with the climate system UNFCCC has 198 member states under their treaty. UNFCCC works to coordinate international responses to climate change. Even though UNFCCC does not have the right to make decisions on topics such as peace and security, UNFCCC highly acknowledges that climate crises affect vulnerable places and can increase conflicts. UNFCCC has led to adoption of the kyoto protocol in 1997 which is about setting emission reduction targets, and UNFCCC heavily supports the Paris Agreement which is about reducing the global warming rates.

6.4 Kyoto Protocol

The Kyoto Protocol was adopted by United Nations 192 member states in 1997, aiming industrialized countries and economies to transform to limit and reduce greenhouse gases emissions in accordance with targets that were decided by member states. Kyoto Protocol holds developed countries more responsible than the others because Kyoto Protocol recognizes the fact that they have more percentage of greenhouse gas emissions released than others. In 2012 the Doha Amendment was made by 147 member states for a second commitment period.

6.5 REDD+

REDD+ is countries effort to Reduce Emissions from Deforestation and forest Degradation, and foster conservation, sustainable management of forests, and enhancement of forest carbon stocks.

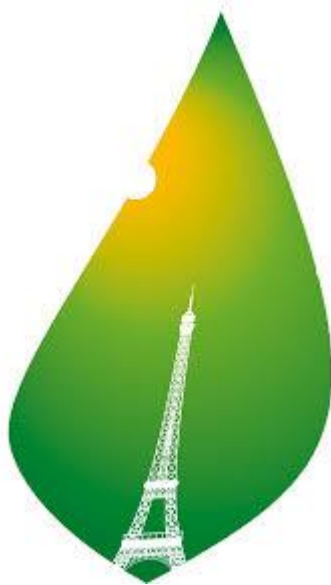
Deforestation and forest degradation are responsible for %15 of global gas emissions and combating these two issues is known as one of the most cost-efficient ways to reduce greenhouse gas emissions. Trees are known for being carbon sinks and due to that combating deforestation and forest degradation plays a critical role in decreasing the greenhouse gas emissions which results in the global warming effects getting lessened. This action also keeps the water sources safe and prevents flooding, reduces run-off, controls soil erosion, reduces river siltation, protects fisheries and investments in hydropower facilities, preserves biodiversity and preserves cultures and traditions. These are some of the reasons why REDD+ is important.

6.6 Conference of Parties (COP)

Conference of Parties is a convention that has been organized by United Nations Framework Conventions on Climate Change since 1995. One of the key missions of the Conference of Parties is to review progress made by other countries, emission reductions, and global collaborations. At the 21'st Conference of Parties, the Paris Agreement was made. Unless the parties decide on the opposite, Conference of Parties take place at different locations to find solutions to climate crisis and change.

The 31'st Conference of Parties is going to take place in Antalya, Türkiye to unite again to combat climate change.

6.7 Paris Agreement



At the 21'st Conference of Parties world leaders made the historic breakthrough, the Paris Agreement.

The Paris Agreement guides 195 member states in a long term plan that includes; holding the increasing global temperature well below 2°C above pre industrial levels pursue efforts to limit it to 1.5°C above pre-industrial levels, reviewing member states progress on their commitments on cutting the greenhouse gas emissions every five years. For the question why specifically 1.5? The answer is because even by 0.1 change in earth temperature 1.5 is believed to be the tipping point. When these tipping points get crossed more people get exposed to extreme heat, higher sea levels, polar ice melting more, diseases getting spread, and species get extinct. This agreement provides a sustainable and clear goal for countries to work on together and avoid these consequences. The Paris Agreement marks the

beginning of the shift to goal Net-Zero emissions.

It works with a system called nationality determined contribution or as known as NDC. Every five years every country who signed the Paris Agreement has to create their own updated national climate action plans that are called Nationally Determined Contributions. Countries work together as a whole to communicate their own plans and their planned actions to reach the 2030 goals faster.

6.8 Sustainable Development Goals



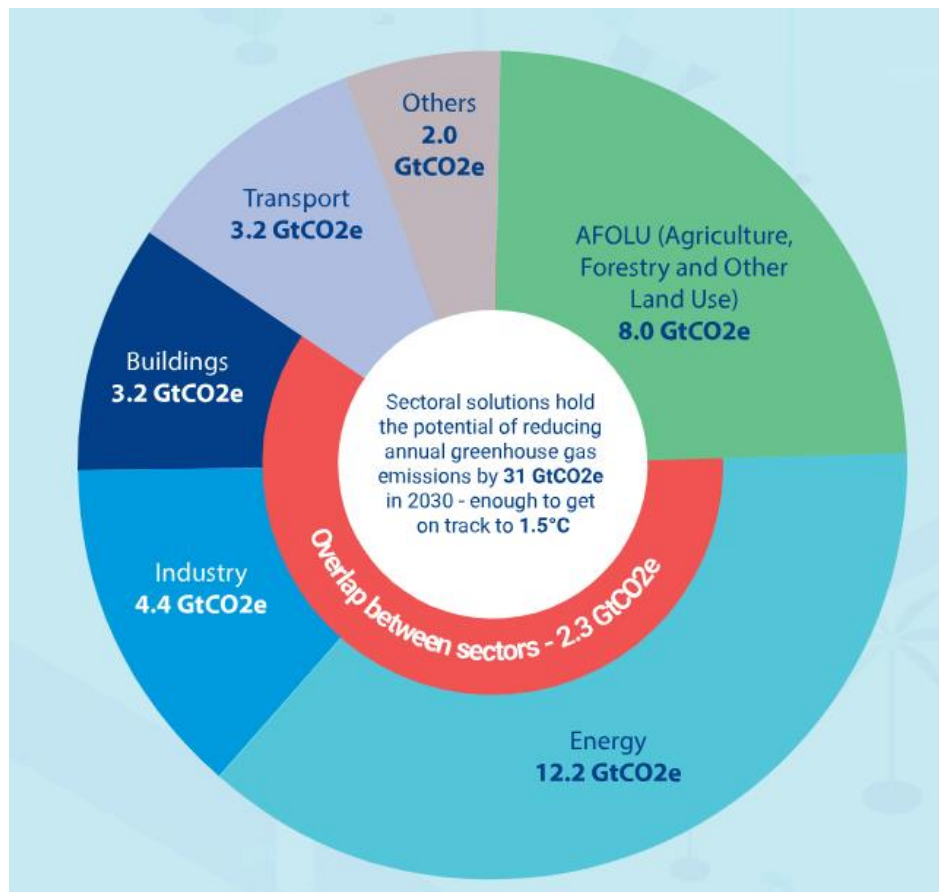
17 Sustainable Development Goals were adopted by many world leaders for the agenda 2030 in 2015 at the Sustainable Development Summit. There are 17 different areas in this goal list, all of them being another important goal for the planet earth, acknowledging many challenges humans face. Climate crisis, nature and biodiversity loss, and pollution and waste is making the planet reach its tipping point. The food humans consume, the air they breathe, the water they drink, and even the materials and the resources are at risk. Sustainable Development Goals aims to get rid of poverty, reduce inequality, and build a better and safer society by making long term plans on every single one of the goals and making it sustainable to reach these goals.

People who are women, who are old, and who are in vulnerable regions such as conflict regions are more likely to face the effects of climate change. If humans don't change their actions, the next generations will pay for them because the planet earth can not reach the Sustainable Development Goal without action. For all of the reasonings above United Nations Environment Programme supports and works to achieve as much of these goals possible. This year's agenda item will focus more on clean water and sanitation(goal 6), affordable and clean energy (goal 7) responsible consumption and production(goal 12), climate action (goal 13) , and partnership for goals (goal 17). It is important for delegates to work with alignment to the sustainable development goals due to the fact Sustainable Development Goals aim to reduce environmental change and its effect on the planet, and try to solve the societal issues that humans face in their everyday lives.

These types of actions are important because they have connections between them, for example when an area with gender inequality faces the negative effects of climate change it is usually the women who faces more of the negative side of its consequences. UNEP action fosters the environmental dimension of sustainable development and leads to development both on the societal side and the economic side. Sustainable Development Goals are one of the examples to that.

7. The Reasons For Climate Change

Greenhouse gas emissions are the biggest reason for the current global warming. Due to the greenhouse effect the planet earth gets warmer everyday and this causes significant climate change. The sector that releases the most greenhouse gases is the energy sector by releasing 15.1 gigatonnes of



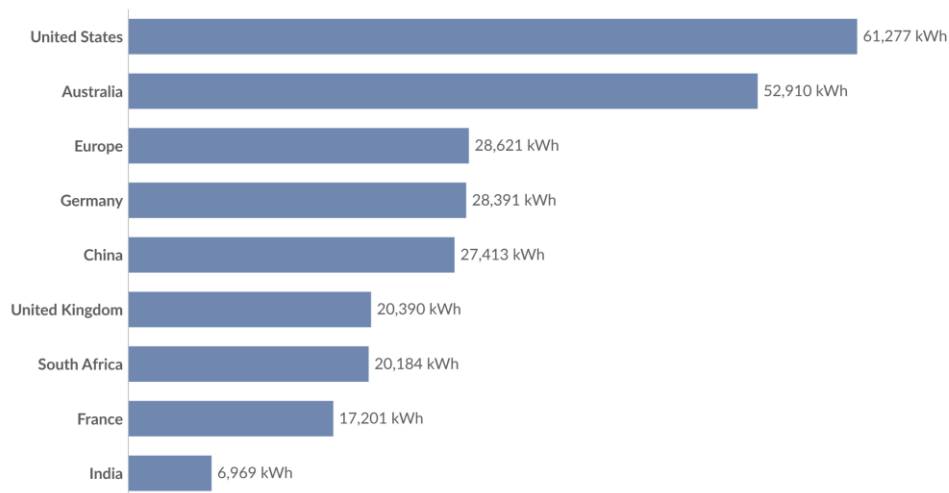
GtCO₂ which is 36 per cent of the total greenhouse gases. including generation of electricity, the heating of buildings and all of the global energy supply system. Agriculture, forestry and other land use comes as the second with 8 gigatonnes of GtCO₂. Agriculture, forestry and other land use is the main contributor to climate change but also a key contributor to combatting climate change because they improve air quality, reduce biodiversity loss and many more things for the climate change. But the industrial agriculture practices harm the earth by deforestation, wrong usage of energy and water, and ext. Industry comes as the third with 4.4 gigatonnes of GtCO₂. which is 4 per cent of the total greenhouse gases. Industries heavily rely on fossil fuels. To get high temperatures they burn tons of fossil fuels like coals, oils, and gases which releases high amounts of greenhouse gases that act like a blanket around the planet earth. These are three sectors that affect climate change negatively the most. Even though the statistics are horrible, these can be reversed by our actions because we have the power to do it now but we might not be able to do it in the future. That is the reason why countries should work together as a whole, from the young to the governments. Member states can find replacement for fossil fueled energies or industrial agriculture or current transportation but they can not find alternatives to the planet earth. If the right actions are taken 31GtCO₂ can be reduced and it will positively affect climate change.

8. Fossil Fuels Usage

8.1 Fossil Fuel Types and Usage Areas

Fossil fuel consumption per capita, 2024

Fossil fuel consumption per capita is measured as the average annual consumption of energy from coal, oil and gas, in kilowatt-hours¹ per person.



Data source: Energy Institute - Statistical Review of World Energy (2025); Population based on various sources (2024)
OurWorldinData.org/energy | CC BY

1. Watt-hour A watt-hour is the energy one watt of power delivers for one hour. Since one watt equals one joule per second, a watt-hour equals 3600 joules of energy.
Metric prefixes are used for multiples of the unit, usually:
• kilowatt-hours (kWh), or a thousand watt-hours;
• Megawatt-hours (MWh), or a million watt-hours;
• Gigawatt-hours (GWh), or a billion watt-hours;
• Terawatt-hours (TWh), or a trillion watt-hours.

Fossil fuels are the type of energy which is sourced over millions of years from decayed organic materials like pre-historic plants and animals. This thing makes fossil fuels limited and non-renewable energy. Many countries these days are heavily dependent on fossil fuels for energy and fossil fuels can be used for many sectors

in the world. Fossil fuels like petroleum can be used to make industrial materials such as plastics for most of daily life products, polyester for clothes, pesticides and fake fertilisers for industrial agriculture, gasoline, diesel, kerosene, jet fuels, lubricants, solvents, paint, synthetic rubber, and many more petrochemicals. Petroleum rich countries have a significant economic advantage and those which are not petroleum rich are dependent on them for daily life products. Coal is one of the other main fossil fuels that get used by humans. Coal provides 28% of the world's primary energy and 34% of the world's electricity. Coal can also be used to generate heating. In industrial production, high temperatures are needed in the process and fossil fuels like coal are the number one choice. For example coal is used to make steel. Coal is used for heating with coal burning and releasing greenhouse gases. Coal is used to generate electricity that creates high pressure steam that makes turbines drive. In some developed countries that is the primary reason why coal is used. Natural gas is the other popular type of fossil fuels. It is used to heat buildings like schools, houses, hotels, hospitals and many more buildings. Natural gas is the most preferred type of fuel in heating buildings. Natural gas is also used for cooking, lighting, ventilation, and space cooling. Natural gas is considered a more “innocent” way of fossil fuels because when it is burned natural gas produces way less amounts of greenhouse gases than oils and coal. However it is still highly dangerous and should not be used as an energy source.

8.2 Pros and Cons of Fossil Fuels

Even though fossil fuels have so much negative impact on the environment there are also reasons why it is still getting used for centuries. Getting rid of fossil fuels completely is unrealistic because of the fact that it is the most commonly used energy source on the planet. For the cons of the usage of fossil fuels the first would be the fact that they are not renewable. Because they



are millions of years old, decayed dead animals or plants, they are very limited and can not be produced again if the planet runs out of them. Scientists are guessing that if humans continue using fossil fuels irresponsibly; humans will run out of oil in 47 years, natural gas in 52 years, and coal in 133 years. In the long term if energy sources that won't be gone for good are needed, fossil fuels are not the answer. Fossil fuels are also known for having horrible effects on the environment.

Greenhouse effect is the action that causes global warming caused by extreme amounts of greenhouse gas emissions in the atmosphere. Greenhouse gases get released into the atmosphere when fossil fuels get burned for energy. Ever since the industrial revolution, the usage of fossil fuels has increased significantly and due to that the global warming has reached alarming points. Every time fossil fuels get used the planet gets worse. Global warming isn't only the earth's surface getting warmer, when global warming happens results such as biodiversity loss, extreme droughts, sea-levels rising, polar ice melting, and floods also happen often. Also when used non-carefully, fossil fuels can create terrible situations such as massive explosions that affect both humans and nature. Fossil fuels are more common in some areas than in others and because of that countries with high fossil fuels have a significant amount of authority on those who don't. That creates dependency on certain countries. For the positive sides of fossil fuels the first one would be that it is easier to transport and store. Fossil fuels can be stored for unlimited time and be used when needed and that is highly beneficial for member states. Fossil fuels have been used by the whole earth for centuries and due to that the fossil fuels infrastructure is extremely developed and open to producing energy at high levels. Most of the technological systems are made for fossil fuel use and it would be expensive to transform. That makes it cheaper than renewable in the short-term. It has high energy density meaning that fossil fuels produce way more energy for the amount that was used. It is also reliable in terms of stability. When the conditions are not right the efficiency of renewable energy drops to nearly half of its full potential but with fossil fuels there is no such thing as right conditions even if the sun doesn't shine enough, wind doesn't blow strong fossil energy continues to give high energy to their consumers.

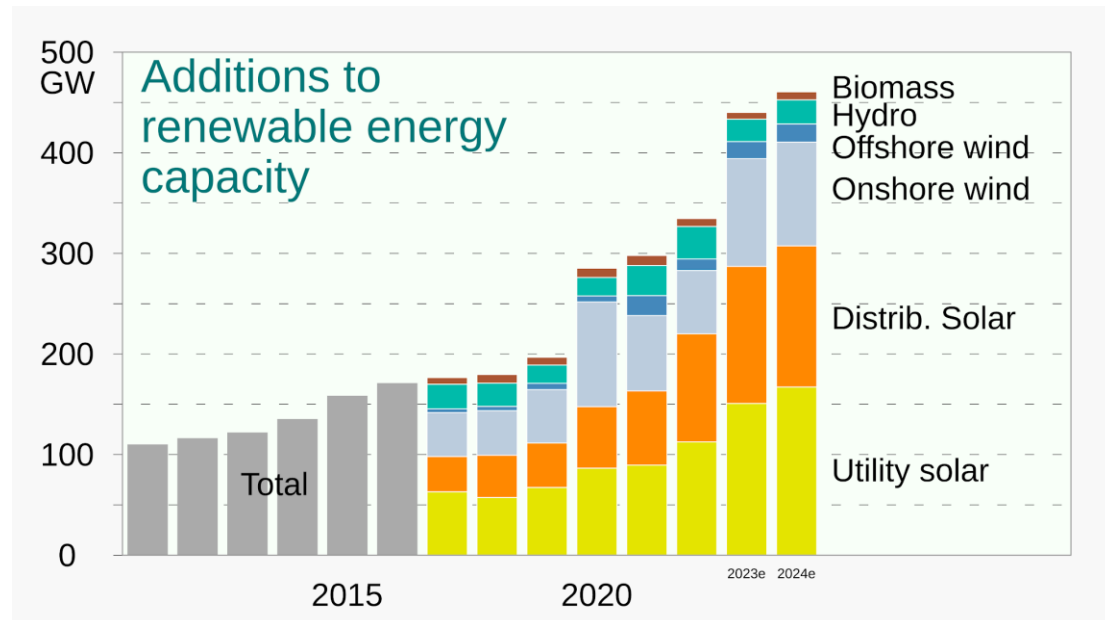
Fossil fuels have their own cons and pros and that is the reason even though it is bad for the environment it is used commonly because the pros of fossil fuels can not be ignored.

No country can transform to renewable energy in a short time because the current industry is heavily dependent and built on fossil fuels.

9. The Usage of Renewable Energies

9.1 Renewable Energy Types

Renewable energy is the type of energy that is produced by natural sources such as biomass, sunlight, wind, waves and many more. Renewable energy is considered infinite because technically it cannot be run out due to the fact that it is produced from natural sources. Countries are slowly starting to use renewable energy because of the climate crisis but the majority of the earth is not using renewable energy due to the fact that it is still a new technology. There are many types of renewable energies but some of them stand out more.



The first thing that comes to mind of people is often solar energy. Unlike the myths solar energy can be produced even on cloudy days and the rate the earth catches the solar energy is 10,000 times faster than how fast humans consume energy. Even if some countries can harness more solar energy than others, solar energy still can be produced at significant amounts. Solar energy can produce affordable, sometimes the cheapest, electricity in the world.

Wind energy is harnessing the kinetic energy of moving air by using large air turbines located onshore or offshore. Wind energy is not a new technology, it has been used for more than 1000 years but in recent years it has been developing significantly to maximize the efficiency of the energy that is produced. Though unlike solar energy the wind energy can not be harnessed everywhere, only in places that have strong winds.

Geothermal energy is the type of energy that uses the accessible earth thermal heat from geothermal reservoirs and they can be used to generate electricity, direct heating and cooling systems, and use directly to heat buildings or industrial processes. Geothermal energy is reliable and has been getting consumed for over 100 years.

Hydropower is the kind of renewable energy that produces energy from water moving up to down. Hydropower can be generated from reservoirs and rivers. They often have three purposes: providing clean water, flood control, and energy supply. Currently hydropower is the largest renewable supplier in the electricity sector.

Ocean power uses kinetic and thermal energy of seawater to produce heat or electricity. Currently it is in the early stage but it is estimated that in the future ocean power will be important.

Bioenergy is produced from biomass for heat and power production, and agricultural crops for liquid biofuels. Energy created by burning biomass creates greenhouse gases but it is still lower than burning fossil fuels, and it should be used limitedly.

9.2 The Pros and Cons of Renewable Energy

Renewable energy is produced from natural sources so it is technically unlimited and has way less harmful effect on the environment unlike fossil fuels. Renewable energies are seen as eco-friendly alternatives to fossil fuels. Renewable energy is promoted as a kind of energy that is perfect and has no flaws, but like everything on earth, renewable energy has its pros and cons. Setting up renewable energy systems requires a significant amount of upfront investment that might make it too expensive for member states. It is less consistent than fossil fuels because renewable energies rely on natural events that humans don't have control over, making it unpredictable. Due to the fact that renewable energy is unsteady it is really important to store the left over energy but the current technology is limited on storing renewable energy and is expensive. That causes the excess energy to be wasted. Renewable energy farms require lots of land use. For example, solar energy needs large open spaces for efficient energy production. Certain renewable energies are specific to certain areas, this can cause uneven distribution over renewable energy around the world but they have another renewable energy for their regions. Even though it is not completely carbon-free it is still much cleaner than fossil fuels for the environment. Most of the current infrastructures are made for fossil energy usage and because of that making them compatible with clean energy is very expensive. Fossil fuels are known to be very efficient in getting much more energy from small amounts but renewable energy is not as efficient as fossil energy in this area. The lifespan of renewable technologies is really high but not unlimited and will need replacement after some time and that will create unnecessary waste in the environment. For the pros of renewable energy the first one would be the unlimited and sustainable energy. Unlike fossil fuels, renewable energy sources are natural such as sun, wind, ocean and many more, making them unlimited for use. They are clean alternatives of fossil fuels that don't harm the environment poorly by releasing greenhouse gases. The usage of renewable energy leads to clean air, clean water, and reducing lung and cardiovascular diseases which leads to public health getting better



than before. Usage of renewable energy decreases dependency on other countries for power and increases energy security. Investing in renewable energies allows countries to produce their own electricity and gain their independence on power. Even though the initial investments are expensive in the long term, using renewable energy is much cheaper than using fossil fuels. The maintenance of renewable energy technologies are minimal to none, they are very easy to maintain. The renewable energy that one region can produce is based on their region's settings. For example, a place with a big ocean can use ocean power while a sunny

region can produce solar power. There is not only one condition for renewable energies, they vary.

In summary even though renewable energies have their flaws the pros are way more important for the environment. Member states need to work together to invest in the transformation to renewable energies for the environment.

10. The Importance of Cooperation

It is really important for member states to work in cooperation to tackle climate change and its horrible outcome because no country can cause all of the climate change but also no country can tackle climate change by themselves. In the past international cooperations have shown that by



working with each other it is possible to reach a world which is not suffering every second. For example after the Montreal protocol countries have decreased their usage of ozone layer harming products. All countries need to show dedication and action in their words.

For a safer, cleaner, and healthier environment countries have worked together in the past and they still can do it in the current situation.

11. Financial Problems

Many developing countries avoid transformation to renewable energy due to the fact that it is extremely expensive to make investments on renewable energy at first. Not all of the countries have the chance to transform to renewable energy due to these financial issues. There are funds around the world to encourage developing countries to transform to renewable energies but they are not enough. In the world there are some countries that are heavily dependent on fossil fuel trades and if they stop their fossil fuel export to the world it will affect their economies, making transformation to renewable energies harder and more unsustainable for them. In SONKALMUN'26 delegates are also expected to find solutions for countries that face these.

12. Questions to be answered

1. How can countries whose main money source is the trade of fossil fuels transform to renewable energy while maintaining their economies?
2. How can member states reach the net zero goal by 2050?
3. How can member states who are not economically ready to invest in renewable energies transform to renewable energy?
4. What can be done to decrease the negative impacts of climate change on minorities?
5. How can member states protect biodiversity and reduce the loss of biodiversity due to climate change?
6. What can member states do about environmental laws to protect the environment and reduce climate change's negative impacts?
7. How can member states transform their industrial agriculture practices to decrease greenhouse gas emissions?
8. What can member states do to reduce the effects of greenhouse gases?
9. How can carbon sinks get used to reduce greenhouse gas emissions?
10. How can member states encourage big corporations to transform to more eco-friendly actions?

13. Bibliography

<https://www.un.org/en/climatechange/what-is-climate-change>

<https://climatepromise.undp.org/news-and-stories/climate-dictionary-everyday-guide-climate-change>

<https://www.unep.org/who-we-are/frequently-asked-questions>

<https://wmo.int/topics/climate>

<https://education.nationalgeographic.org/resource/global-warming/>

<https://www.energy.gov/fossil>

<https://www.un.org/en/un75/climate-crisis-race-we-can-win>

<https://climatepromise.undp.org/news-and-stories/what-climate-change-mitigation-and-why-it-urgent>

<https://climatepromise.undp.org/news-and-stories/what-climate-change-adaptation-and-why-it-crucial>

<https://climatepromise.undp.org/news-and-stories/what-climate-security-and-why-it-important>

<https://science.nasa.gov/climate-change/faq/what-is-the-greenhouse-effect/>

<https://www.wwf.org.uk/food/farming/regenerative-agriculture>

<https://ec.europa.eu/sustainable-finance-taxonomy/activities/activity/261/view>

<https://education.nationalgeographic.org/resource/carbon-sources-and-sinks/>

<https://netzeroclimate.org/what-is-net-zero-2/>

.

<https://www.unep.org/interactive/sectoral-solution-climate-change/>

<https://www.un.org/climatesecuritymechanism/en/united-nations-framework-convention-climate-change-unfccc-and-climate-peace-and-security>

<https://unfccc.int/process-and-meetings/the-kyoto-protocol>

[https://www.forestcarbonpartnership.org/what-redd,](https://www.forestcarbonpartnership.org/what-redd)

<https://www.cbd.int/cop>

<https://www.youtube.com/watch?v=BJQz0ZeVFUM>

<https://www.youtube.com/watch?v=jzptPcPLCnA>

<https://www.un.org/en/climatechange/paris-agreement>

<https://espace-mondial-atlas.sciencespo.fr/en/topic-resources/article-5A06-EN-fossil-fuels.html>

<https://www.ngsa.org/residential-and-commercial-uses-of-natural-gas/>

<https://www.globalbioenergy.org/fossil-fuels-advantages-and-disadvantages/>

<https://www.un.org/en/climatechange/what-is-renewable-energy>

<https://www.globalbioenergy.org/advantages-and-disadvantages-of-renewable-energy/>