

# AKAMUN'24



## STUDY GUIDE

**Agenda Item:** The Escalating Challenge of  
Global Warming

# TABLE OF CONTENTS

- 1. Letter from the Chairboard**
- 2. Introduction to the Committee**
- 3. Introduction of the Agenda Item**
- 4. Key Vocabulary**
- 5. Main Causes of Global Warming**
- 6. Impacts of Global Warming**
- 7. Emerging Issues in the Climate Crisis**
  - a. The impact of microplastics
  - b. Accelerating ice melt
  - c. Collapse of ecosystem services
- 8. Historical Process and Key Milestones**
  - a. The Kyoto Protocol (1997)
  - b. The Paris Climate Agreement (2015)
  - c. Intergovernmental Panel on Climate Change (IPCC) reports
- 9. Major Stakeholders and Their Views**
  - a. The role of international non-governmental organizations (NGOs)
  - b. The private sector and investments in renewable energy
- 10. Questions a Resolution Should Address**
- 11. Bibliography**

# 1. Letter from the Chairboard

Esteemed AKAMUN Participants,

It is such an honor for us to be here, as your chairs in the UNEP Committee. First and foremost, congratulations to each of you for being part of this experience.

In this committee, we aim to go beyond identifying the causes of global warming and focus on crafting effective and actionable solutions. Our discussions will cover crucial subtopics such as reducing carbon emissions, addressing microplastic pollution, transitioning to renewable energy, and ensuring climate justice. We trust that all of you will represent your nation's interests while embracing the shared responsibility we have as global citizens.

To gain deeper insights and understand statistics and perspectives you may not be familiar with, we highly encourage you to read the study guide we have prepared prior to the conference.

Keep in mind that this is a collaborative effort. Let's support each other and make the most of mutual learning opportunities. Together, let's make this conference both enjoyable and productive. Wishing you success and hope you have a delightful conference.

Best regards,

Eylül Günay  
Under Secretary General & Chair

Mert Metin  
Co-Chair

## **2. Introduction to the Committee**

The United Nations Environment Program (UNEP), commonly referred to as UN Environment, was established in 1972 to oversee and coordinate environmental initiatives within the UN. It originated from the Stockholm Conference on the Human Environment and was officially formed on December 15 through the adoption of Resolution 2997. The first conference took place at the Palais des Nations in Geneva, but its official headquarters were later relocated to Nairobi, Kenya, following complete facility preparations. The organization initially had a staff of 300, including 100 professionals from various fields of study. The United States initially committed \$40 million, with the remaining \$60 million pledged by the other 57 member states.

The initial director of UNEP was Maurice Strong, a Canadian who was unanimously elected to the position and served from 1972 to 1975. Notably, the most successful director in the history of UNEP was Mostafa Kamal Tolba, an Egyptian who held the position from 1975 to 1992. Tolba played a crucial role in elevating environmental considerations to the forefront of global thinking and action. One of the committee's widely acclaimed achievements was the historic 1987 Montreal Protocol, an agreement aimed at protecting the ozone layer. This accord has facilitated the gradual recovery of the ozone hole in Antarctica, with expectations of full recovery by 2050 and 2070 (defined as a return to 1980 levels). The Montreal Protocol was one of the first universally ratified treaties, undergoing eight revisions.

UNEP strives to establish safeguard standards for its operations to ensure the trustworthiness of the UN Environment among member states and funders. Despite the complexity of its operations, the UN Environmental Programme is actively working to identify the complete life-cycle costs of its operational decisions and aims to operate more sustainably while continually enhancing efficiency as a reliable implementing/executing partner over time. Ultimately, UNEP seeks to minimize potential risks and harm while strengthening the capabilities and credibility of the UN Environment through robust partnerships within and outside the United Nations.

### 3. Introduction of the Agenda Item

Global warming is one of the greatest environmental threats humanity has ever faced. Since the Industrial Revolution, increasing greenhouse gas emissions have caused Earth's temperatures to rise rapidly. This phenomenon disrupts the planet's natural balance and creates irreversible consequences. As a result of human activities, the accumulation of gases such as carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), and nitrous oxide (N<sub>2</sub>O) in the atmosphere alters the energy balance, leading to a global temperature increase.

Global warming is not merely an environmental issue but also a social, economic, and political crisis. Understanding the scale of the problem and managing its impacts are crucial to ensuring that future generations have the opportunity to live in a sustainable world. Confronting this threat requires collective efforts from the international community.

### 4. Key Vocabulary

- **Greenhouse Gases:** Gases that trap heat in the Earth's atmosphere by allowing sunlight to reach the surface but preventing heat from escaping. Major greenhouse gases include carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), and nitrous oxide.
- **Carbon Footprint:** The total amount of greenhouse gases emitted directly or indirectly by an individual, organization, or activity. Reducing carbon footprints is a key goal in combating global warming.
- **Deforestation:** The clearing or destruction of forests. Deforestation contributes to global warming by reducing the number of trees that can absorb carbon dioxide from the atmosphere.
- **Ozone Layer:** A layer of ozone molecules in the Earth's stratosphere that protects life from harmful ultraviolet (UV) radiation. Global warming has been linked to the depletion of this protective layer.
- **Climate Resilience:** The ability of communities, ecosystems, and economies to adapt to and recover from the adverse impacts of climate change, such as extreme weather events, rising sea levels, and temperature fluctuations.

## **5. Main Causes of Global Warming**

### **Intensive Use of Fossil Fuels**

Fossil fuels, such as coal, oil, and natural gas, have been the cornerstone of modern industrialization, fueling energy production, transportation, and manufacturing for centuries. However, their intensive use has led to the most significant driver of global warming—greenhouse gas emissions. When burned, fossil fuels release carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), and nitrous oxide (N<sub>2</sub>O) into the atmosphere, trapping heat and leading to a gradual rise in global temperatures. These emissions have created an imbalanced carbon cycle, as the planet's natural carbon sinks, such as forests and oceans, cannot absorb the sheer volume of carbon produced by human activities. The over-reliance on fossil fuels not only exacerbates climate change but also leads to pollution, contributing to smog, respiratory illnesses, and ecological destruction. The continued burning of fossil fuels threatens to push the planet beyond critical temperature thresholds, making the transition to renewable energy sources essential to mitigate climate change.

### **Deforestation and Agricultural Practices**

Deforestation and certain agricultural practices have become major contributors to global warming. Forests play a critical role in absorbing CO<sub>2</sub>, acting as carbon sinks that help regulate the planet's carbon balance. However, widespread deforestation, driven by urbanization, logging, and agricultural expansion, has diminished the Earth's ability to absorb carbon. Moreover, when trees are cut down or burned, the carbon stored within them is released back into the atmosphere, further exacerbating global warming. Agricultural practices, particularly those involving livestock farming, contribute significantly to greenhouse gas emissions. The production of methane by ruminant animals, such as cattle, along with rice paddies that emit methane, are significant sources of this potent greenhouse gas. Additionally, the use of synthetic fertilizers and pesticides in agriculture releases nitrous oxide, another greenhouse gas. These practices not only degrade ecosystems but also accelerate the cycle of warming, contributing to changes in weather patterns, reduced agricultural productivity, and loss of biodiversity.

### **Industrial Activities and Greenhouse Gas Emissions**

The industrial sector is a major emitter of greenhouse gases, particularly CO<sub>2</sub> and methane. Manufacturing processes, especially those in heavy industries such as cement, steel, and chemical production, require large amounts of energy, much of which comes from burning fossil fuels. The emissions from these industries account for a significant portion of global greenhouse gases. In addition to CO<sub>2</sub>, many

industrial activities release other potent greenhouse gases, including methane, hydrofluorocarbons (HFCs), and perfluorocarbons (PFCs), all of which have a much higher heat-trapping ability than CO<sub>2</sub>. Furthermore, the widespread use of refrigeration and air conditioning units, which rely on HFCs, contributes heavily to global warming. The rapid growth of industrialization in developing countries, combined with a lack of stringent environmental regulations, has exacerbated the global climate crisis. As industries continue to grow and expand, it is crucial to invest in cleaner, more sustainable production processes that reduce emissions and minimize environmental impact.

## **6. Impacts of Global Warming**

### **Effects on Ecosystems and Biodiversity**

Global warming has profound effects on ecosystems and biodiversity. Rising temperatures and changing weather patterns disrupt natural habitats, making it increasingly difficult for species to adapt. Many species rely on specific temperature ranges, seasonal patterns, and ecosystems that are becoming increasingly unstable due to climate change. As temperatures rise, ecosystems such as coral reefs, which are highly sensitive to temperature fluctuations, are experiencing widespread bleaching and death. This, in turn, threatens the marine species that depend on these ecosystems. On land, shifting climate zones cause species to migrate or face extinction, as habitats become inhospitable. For example, polar bears and other Arctic species are losing their ice habitats as sea ice melts, while tropical rainforests face the risk of turning into savannas due to changing rainfall patterns. The loss of biodiversity not only affects the species themselves but also undermines the ecosystem services that nature provides, such as pollination, water purification, and soil fertility, which are vital for human survival.

### **Increase in Extreme Weather Events**

One of the most visible and damaging impacts of global warming is the increase in the frequency and intensity of extreme weather events. As global temperatures rise, the atmosphere becomes more energetic, leading to more intense storms, heatwaves, floods, and droughts. Hurricanes, typhoons, and cyclones are becoming more powerful, causing devastating impacts on communities, infrastructure, and economies. Rising temperatures also contribute to more frequent and severe heatwaves, which can lead to heat-related illnesses and fatalities, particularly among vulnerable populations such as the elderly and those with pre-existing health conditions. Additionally, the melting of glaciers and ice sheets is leading to more frequent flooding in coastal areas, while prolonged droughts are increasing the risk of wildfires and reducing water

availability. These extreme weather events are not only destroying lives and property but also putting immense strain on emergency response systems and local economies.

### **Rising Sea Levels and Impacts on Coastal Regions**

Rising sea levels, driven by the thermal expansion of seawater and the melting of polar ice caps, are one of the most significant and irreversible consequences of global warming. As the ice melts, it contributes to the volume of water in the oceans, while warmer waters themselves expand, further raising sea levels. This increase in sea levels poses a grave threat to coastal communities, particularly those in low-lying areas. Cities like New York, Miami, and Jakarta, as well as entire island nations such as the Maldives, face the risk of being submerged. Rising seas also lead to the intrusion of saltwater into freshwater sources, rendering water supplies undrinkable and causing extensive damage to agricultural lands. Coastal ecosystems, such as mangroves and wetlands, which serve as important buffers against storm surges and provide habitat for wildlife, are also being lost due to encroaching seawater. In addition to the direct impact on human settlements, rising sea levels threaten the economic stability of regions that rely on coastal industries, such as tourism and fishing.

### **Impacts on Agriculture, Water Security, and Public Health**

Global warming has significant implications for agriculture, water security, and public health. Changes in temperature and precipitation patterns are affecting crop yields, leading to reduced food production in some areas and greater food insecurity worldwide. For example, droughts in key agricultural regions, such as the American Midwest and Sub-Saharan Africa, are making it difficult to grow staple crops like corn, wheat, and rice. Conversely, excessive rainfall in other regions leads to flooding and soil erosion, further damaging crops. Additionally, warmer temperatures can increase the prevalence of pests and diseases that affect crops, livestock, and humans. Water scarcity is another growing issue, as global warming leads to reduced snowpack, earlier runoff, and more frequent droughts. This reduces the availability of freshwater for drinking, irrigation, and industrial use, threatening the livelihoods of billions of people. Public health is also at risk, as higher temperatures increase the incidence of heat-related illnesses and exacerbate respiratory problems due to increased air pollution. Climate change is also expanding the range of diseases carried by insects, such as malaria and dengue fever, putting more populations at risk.



## 7. Emerging Issues in the Climate Crisis

- a. The Impact of Microplastics:** Microplastics are small plastic particles, typically less than 5 millimeters in size, that originate from both the breakdown of larger plastic objects and the direct production of tiny plastic particles for use in products like cosmetics, cleaning agents, and textiles.

Primary Microplastics: Manufactured as small particles (e.g., microbeads in personal care products).

Secondary Microplastics: Result from the breakdown of larger plastics, such as bottles, bags, and fishing nets, over time due to weathering, UV radiation, and physical wear.

### Sources of Microplastics

- \* **Consumer Products:** Cosmetics, toiletries (e.g., exfoliating scrubs), cleaning products, and textiles (e.g., synthetic fibers).
- \* **Industrial Waste:** Improper disposal of plastic products and plastic production waste.
- \* **Degradation of Larger Plastics:** Plastic pollution in oceans, rivers, and landfills that breaks down into smaller particles.
- \* **Vehicle and Road Wear:** Tires and road markings contribute to microplastics, especially through wear and tear during driving.

- **Environmental Effects**

Microplastics pose a wide range of environmental challenges, affecting ecosystems on land, in freshwater bodies, and at sea.

- \* **Pollution of Waterways:** Microplastics can be carried into rivers, lakes, and oceans, where they pollute aquatic environments. These particles can settle in sediments, disrupting aquatic habitats and affecting organisms that rely on the ecosystem for survival.
- \* **Ingestion by Marine Life:** Marine organisms such as fish, shellfish, and plankton mistake microplastics for food. Ingesting these particles can cause physical harm, such as blockages or injuries to internal organs. In some cases, it leads to death. Moreover, smaller organisms that ingest microplastics become prey for larger animals, transferring the pollution up the food chain.
- \* **Harm to Wildlife and Biodiversity:** Microplastics affect biodiversity by contaminating the food sources of many species. The ingestion of plastics leads to malnutrition, poisoning, and reproductive issues in wildlife. For example, sea turtles, birds, and fish that consume plastic particles may suffer from digestive problems or other health complications that ultimately affect their survival.

\* **Bioaccumulation and Toxin Transfer:** Microplastics can absorb toxic chemicals from the surrounding environment, such as pesticides, heavy metals, and persistent organic pollutants (POPs). When animals ingest microplastics, these harmful chemicals are transferred into their systems, which can accumulate over time and harm the organism. The bioaccumulation of toxins through the food chain can have long-term ecological consequences, threatening the health of the entire ecosystems.

\* **Soil Contamination:** Microplastics are not confined to aquatic environments; they can also infiltrate the soil. In agriculture, microplastics can interfere with soil structure and microbial communities, which are vital for soil health and crop growth. The presence of microplastics in soil may lead to reduced water retention, poor nutrient absorption, and a decline in soil fertility, all of which can negatively affect agricultural productivity.

\* **Impact on Air Quality:** Microplastics are also found in the air, particularly in urban and industrial areas. Tiny plastic particles can become airborne through the breakdown of plastic items and dust. These airborne microplastics can settle on plant life and be inhaled by both animals and humans, contributing to further environmental and health issues.

- **Health Risks**

\* **Human Exposure:** Humans are exposed to microplastics through ingestion (eating contaminated food or drinking contaminated water) and inhalation (via airborne microplastics).

\* **Toxicity:** Microplastics can absorb harmful chemicals and toxins, such as heavy metals and pesticides, which may enter the human body when ingested or inhaled. These toxins can contribute to diseases and illnesses, including cancer, hormonal disruption, and neurological problems.

\* **Studies and Concerns:** Ongoing research is studying the long-term health impacts of microplastic exposure, but the evidence suggests that microplastics may accumulate in human organs, potentially contributing to health problems over time.

- **Economic Impacts**

\* **Environmental Cleanup Costs:** Microplastic pollution is expensive to clean up. Governments and organizations must invest in advanced technologies and methods to remove microplastics from water bodies, beaches, and other environments.

\* **Fisheries and Aquaculture:** Microplastics affect the health of marine species, which can lead to a decrease in fish populations and biodiversity. This negatively impacts fisheries, reducing fish catches and affecting food security.

\* **Tourism:** Polluted beaches and waterways can deter tourists, leading to lost revenue in tourism-dependent regions. This is especially significant in areas where natural beauty and clean environments are key attractions.

\* **Agriculture:** Microplastics in soils may affect crop growth and reduce agricultural productivity, threatening food supplies and increasing the cost of farming. The impact

on soil health may also lead to higher costs for farmers to maintain soil quality and fertility.

\* **Regulatory Costs:** As awareness of microplastics grows, governments may introduce more stringent regulations on plastic use and disposal. Compliance with these regulations may increase costs for industries that rely on plastic products.

\* **Public Health Expenditures:** With potential health risks associated with microplastics, healthcare systems may face rising costs related to treatment for illnesses linked to plastic exposure, further straining public finances.

### **b. Accelerating Ice Melt:**

The accelerated melting of glaciers and ice sheets is one of the most alarming consequences of global warming. As global temperatures rise, the rate of ice melt has significantly increased, particularly in the Arctic and Antarctic regions. This melting contributes directly to rising sea levels, which threatens coastal communities and ecosystems. The loss of ice also disrupts delicate ecological systems, including the habitats of polar species. Moreover, the melting of ice contributes to the albedo effect, as darker ocean water absorbs more heat than reflective ice, creating a feedback loop that accelerates further warming. The rapid loss of ice is a clear indicator of the urgent need for global action to limit warming and mitigate its effects on polar regions.

### **c. Collapse of Ecosystem Services:**

Ecosystem services, the benefits that humans derive from nature, are being disrupted by climate change. These services include pollination, water purification, soil fertility, and carbon sequestration, all of which are essential for human well-being. As global temperatures rise and ecosystems are altered, many of these services are becoming less reliable. For example, changing rainfall patterns and rising temperatures are affecting crop pollination

## **8. Historical Process and Key Milestones**

### **a. The Kyoto Protocol (1997)**

The Kyoto Protocol, adopted in December 1997, was a landmark international treaty that aimed to address global climate change by reducing greenhouse gas emissions. It was the first legally binding agreement under the United Nations Framework Convention on Climate Change (UNFCCC). The protocol set binding targets for developed countries to reduce their greenhouse gas emissions by an average of 5.2% below 1990 levels, to be achieved between 2008 and 2012. These targets recognized that developed nations, due to their historical emissions, had a greater responsibility for combating climate change. The agreement introduced mechanisms such as

emissions trading, clean development mechanisms (CDM), and joint implementation, which allowed countries to meet their targets through market-based approaches and investments in developing countries. However, the Kyoto Protocol faced significant challenges. The United States, one of the largest emitters at the time, withdrew from the protocol in 2001, citing concerns over economic impacts and the absence of binding commitments for developing countries. Additionally, while the protocol succeeded in setting emission reduction targets, it did not result in sufficient global reductions due to non-participation by some key countries. Despite its limitations, the Kyoto Protocol laid the groundwork for future climate negotiations and established the framework for international cooperation on climate action.

#### **b. The Paris Climate Agreement (2015)**

The Paris Climate Agreement, adopted in December 2015 at the 21st Conference of the Parties (COP21) to the UNFCCC, marked a significant turning point in the global fight against climate change. Unlike the Kyoto Protocol, which imposed binding targets on developed countries only, the Paris Agreement established a universal framework where all nations, both developed and developing, committed to taking action to combat global warming. The primary goal of the agreement is to limit the increase in global temperature to well below 2°C above pre-industrial levels, with efforts to limit it to 1.5°C. This ambitious target is based on the scientific consensus that keeping global warming below 2°C will prevent the most catastrophic impacts of climate change. The Paris Agreement introduced the concept of Nationally Determined Contributions (NDCs), where each country voluntarily sets its own climate goals, taking into account its national circumstances, capabilities, and levels of development. The agreement also emphasizes the importance of climate finance, with developed countries committing to mobilize \$100 billion per year to help developing countries mitigate and adapt to climate change. One of the key strengths of the Paris Agreement is its inclusive, bottom-up approach, where countries are encouraged to update and enhance their commitments over time, creating a dynamic process to increase ambition. While the Paris Agreement is not legally binding, it has successfully brought together nearly every country in a collective effort to address climate change, signaling a strong commitment to global action. Its success lies in the recognition that climate change is a global challenge that requires cooperation, adaptation, and innovation across all sectors of society.

#### **c. Intergovernmental Panel on Climate Change (IPCC) Reports**

The Intergovernmental Panel on Climate Change (IPCC), established in 1988 by the World Meteorological Organization (WMO) and the United Nations Environment Programme (UNEP), plays a crucial role in providing scientific evidence and assessments on climate change. The IPCC is composed of scientists, experts, and

policymakers from around the world, who assess the latest climate science, its impacts, and the potential solutions to address the climate crisis. The IPCC's comprehensive reports are widely regarded as the most authoritative sources on climate change science, providing policymakers with the data necessary to make informed decisions.

The IPCC's First Assessment Report (1990) marked the beginning of the scientific consensus on human-caused climate change. Over the years, the IPCC has released periodic assessments, with the Fifth Assessment Report (AR5), published in 2014, solidifying the understanding that human activities, particularly the burning of fossil fuels, are the dominant cause of global warming. The Special Report on Global Warming of 1.5°C (2018) underscored the urgent need to limit global warming to 1.5°C above pre-industrial levels to avoid severe climate impacts, including more frequent extreme weather events, rising sea levels, and loss of biodiversity. This report brought attention to the stark difference in impacts between a 1.5°C and 2°C increase, emphasizing that keeping warming below 1.5°C would significantly reduce the risks associated with climate change. The IPCC's reports are crucial in shaping climate policy, as they provide a clear, scientifically-backed understanding of the problem and its potential solutions. Their findings are regularly referenced in international negotiations, particularly in the UNFCCC process, and have been key in framing the global discourse on climate change mitigation and adaptation strategies.

These three milestones—the Kyoto Protocol, the Paris Agreement, and the work of the IPCC—have significantly shaped the international response to climate change. The Kyoto Protocol set the stage for legally binding emissions reductions, while the Paris Agreement brought nations together in a shared commitment to limit global warming. Meanwhile, the IPCC's reports continue to guide policy by providing the scientific evidence necessary for informed decision-making. Together, these efforts reflect the increasing recognition of the urgency of addressing climate change and the need for global cooperation to safeguard the planet's future.

## **9. Major Stakeholders and Their Views**

### **a. The Role of International Non-Governmental Organizations (NGOs)**

International non-governmental organizations (NGOs) play a pivotal role in the global climate change movement. NGOs such as Greenpeace, World Wildlife Fund (WWF), and 350.org are active advocates for stronger climate action and are critical in raising awareness about the impacts of climate change and environmental degradation. NGOs help bridge the gap between the public, governments, and the private sector,

often serving as voices for vulnerable communities, particularly those in developing countries or at the frontline of climate impacts, such as small island states and coastal communities.

These organizations also provide valuable scientific research, campaign for stronger policies, and mobilize grassroots movements for climate justice. They are instrumental in shaping public opinion on climate change, pressuring governments to take action, and pushing for ambitious international agreements like the Paris Climate Agreement. Furthermore, NGOs play an important role in monitoring the progress of climate commitments and holding governments and corporations accountable. Their influence in climate diplomacy and policy advocacy is essential, as they often advocate for more inclusive, equitable, and sustainable solutions that address both the environmental and social dimensions of climate change.

#### **b. The Private Sector and Investments in Renewable Energy**

The private sector has become an increasingly influential player in the fight against climate change, particularly through investments in renewable energy and sustainable technologies. As the global economy transitions toward decarbonization, businesses and corporations are recognizing the significant opportunities in clean energy, energy efficiency, and green technologies. Leading companies in sectors like energy, transportation, and technology are investing heavily in solar, wind, battery storage, and electric vehicles (EVs), as well as green infrastructure and carbon capture technologies. These investments are critical to scaling up solutions that can effectively reduce emissions and drive global climate goals.

Corporations are also beginning to set ambitious sustainability goals, committing to achieving net-zero emissions within certain timeframes. Many large companies now publish sustainability reports and are increasingly aligning their operations with the goals of the Paris Agreement. In addition, the private sector plays a critical role in climate finance by funding renewable energy projects, developing new technologies, and providing the capital needed for low-carbon innovation. Moreover, the growing trend of divestment from fossil fuels and investment in clean energy is reshaping financial markets, with investors seeking more sustainable, low-risk, and future-proof portfolios.

While the private sector has the potential to drive significant change, it also faces challenges. The need for regulatory frameworks, government incentives, and long-term policy stability is crucial to ensure that private sector investments align with global climate goals. Businesses must also address concerns over greenwashing, where companies might exaggerate their environmental credentials without implementing substantial change, undermining the integrity of climate efforts.

## 10. Questions a Resolution Should Address

- How can countries increase financial and technological support for developing countries to help them transition to low-carbon economies and adapt to climate impacts?
- What measures can be implemented to reduce emissions from the transportation and energy sectors, and how can these industries transition to sustainable alternatives?
- What role should carbon pricing mechanisms play in reducing greenhouse gas emissions, and how can they be made more effective globally?
- How can governments ensure that the transition to renewable energy does not disproportionately harm vulnerable communities or exacerbate inequalities?
- What innovative technologies and strategies can be employed to enhance carbon sequestration and restore ecosystems, such as reforestation and soil carbon storage?
- What measures can be taken to reduce plastic pollution, particularly microplastics, and prevent further damage to marine and terrestrial ecosystems?
- How can countries enhance cooperation on climate research and data sharing to improve climate forecasting and better understand regional impacts of climate change?
- What role should the private sector play in driving the transition to a green economy, and how can governments incentivize sustainable practices in businesses?

## 11. Bibliography

<https://www.unep.org/>

<https://unfccc.int/>

<https://www.worldwildlife.org/initiatives/climate>

<https://www.theguardian.com/environment/climate-change>

<https://www.iea.org/topics/carbon-capture-utilisation-and-storage>

<https://www.nature.org/en-us/what-we-do/our-insights/perspectives/climate-change-why-it-matters/>

<https://www.cdp.net/en>

<https://www.climaterealityproject.org/>

<https://www.greenpeace.org/international/>

<https://www.worldwildlife.org/initiatives/climate>

<https://www.climatebonds.net/>











