

HASALMUN'24

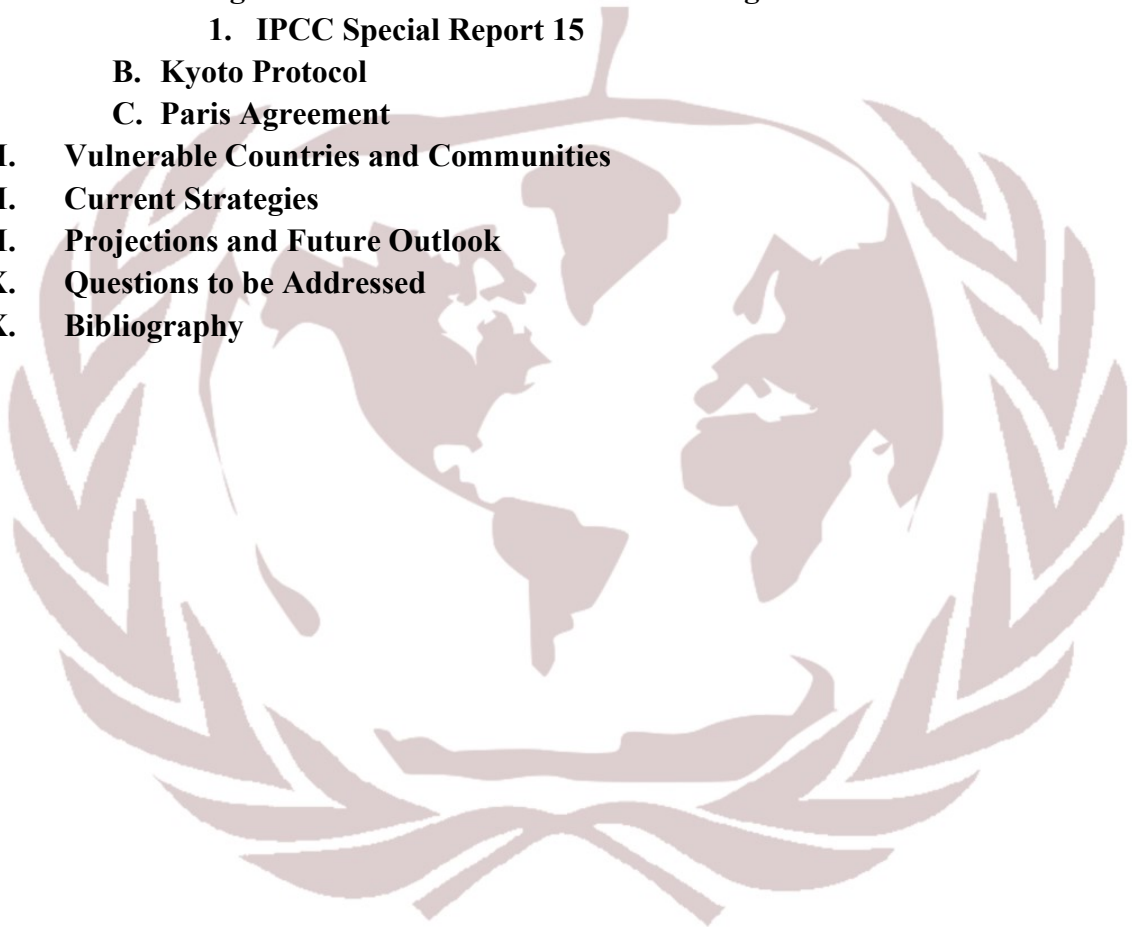


**United Nations
Framework Convention on
Climate Change
Study Guide**

"Youth will shape the world"

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I. Letter from the Secretary-General

Dear delegates,

It is my utmost pleasure and honour to welcome you all to the 11th annual session of Hüseyin Avni Sözen Model United Nations Conference. I, Haktan Keskin, consider it a priceless and flattering opportunity to serve as the Secretary-General in HASALMUN'24, a platform for dialogue, collaboration, and innovative problem-solving on pressing global issues.

It is my desire to create an environment in which you will find the chance to put your negotiation and critical thinking abilities into action and have a greater awareness of societal issues. As we convene in the spirit of cooperation this May, I kindly urge each and every one of you to listen with an open heart and leave room for understanding while respecting differing viewpoints. I believe it is through constructive debate that we can work towards finding viable solutions to the challenges we are facing today. What will be expected of you is to exhibit an unmatched sense of collaboration, think outside the box, and step into the shoes of bureaucrats during the conference

I would like to express my most heartfelt gratitude to any and every one of you attending our conference. Finally, I wish you the best of luck in your committee, and I hope that we were successful in generating the finest possible conference for you. With our guidance and assistance, you will be expected to complete the work that we began.

Once again, I welcome you all to the 11th edition of Hüseyin Avni Sözen Model United Nations Conference. We cannot wait to meet you!

All the best,
Haktan Keskin

II. Letter from the Under-Secretary-General

Dear Delegates,

As the new generation we have a great responsibility to find solutions for problems towering us, and it starts by talking upon them. Thank you for being a part of a worthy conversation. I hope you leave this conference with broadened perspectives, great experiences and shared memories. I am happy to serve as you Under-Secretary-General, please do not hesitate to reach out if you have any questions. I would like to thank HASALMUN'24 team for welcoming me. Further I would like to thank the dear Secretary-General Haktan and the entire academic team for inviting and trusting me now as a member of their team.

All the best,

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III. Introduction to United Nations Framework Convention on Climate Change (UNFCCC)

The United Nations Framework Convention of Climate Change (UNFCCC) is a United Nations (UN) multilateral treaty responsible for international negotiations regarding climate change urgencies. It was first drafted and signed in 1992 by 154 states at the United Nations Conference on Environment and Development (UNCED), informally known as the Earth Summit, held in Rio de Janeiro. The convention's main objective is "*stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic (human-caused) interference with the climate system*" as explained in Article 2. The main governing body of the UNFCCC is the Conference of the Parties (COP), which meets annually to review progress, negotiate agreements, and make decisions on matters related to climate change. The COP has adopted several landmark agreements, including the Kyoto Protocol and the Paris Agreement. The first Conference of the Parties was held in Berlin, Germany, in 1995. 28th COP was held at the end of 2023 in Dubai, United Arab Emirates. It included the first Global Stocktake, where States assessed the progress made towards the goals set in the Paris Agreement and charted a course of action. COP29 will be held in Baku, Azerbaijan, in November 2024. The UNFCCC imposes responsibilities to each member state, in accordance to the the treaty's common goals.

There are three categories of signatory states: developed countries (Annex I), developed countries with special financial responsibilities (Annex II), and developing countries (Annex III).

Annex I countries are ought to adopt national policies and take corresponding measures to limit their emissions of greenhouse gases. These countries are also classified into two sub categories; industrialized countries and countries in transition to a market economy.

Despite UNFCCC's efforts, signatory countries have been incompetent in adhering to their individual commitments. Therefore both the treaty and member states have been subjected to criticism. Today UNFCCC consists of 198 member states, with its main focus being implementing The Paris Agreement, adopted in 2016.

IV. Introduction to the Agenda Item

Every problem surrounding water is inextricably linked to climate change. Global sea level rise (SLR) is an increase in the level of the earth's oceans caused by the effects of global warming. As sea levels rise we observe many concerning changes in our environment. These changes not only diversely effect nature, but such events change the course of human life entirely.

A. Causes of Sea Level Rise

Sea level rise is caused primarily by two factors: Melting ice sheets and glaciers, and the expansion of seawater as it warms, known as thermal expansion. As greenhouse gasses, primarily carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O), are released into the air, more heat gets trapped in the Earth's atmosphere. The trapped heat results in an increase in global temperatures, contributing to elements yielding sea level rise.

The oceans store more than 90% of the extra heat added to Earth's climate system. As this heat is absorbed, oceans' temperatures rise causing water to expand. This expansion is one of the main causes of sea levels rising globally. Between 1993 and 2018, thermal expansion of water was estimated to have accounted for 42% of sea level rise.

The second main factor in sea level rise is the melting ice. A notable amount of Earth's freshwater is frozen, present in glaciers around the globe. Two main ice sheets are the Antarctic and Greenland glaciers, storing most of Earth's fresh water.

1. Antarctic Ice Sheet

The large volume of ice on the Antarctic continent stores around 60% of the world's fresh water. The contribution of these glaciers to global sea levels has accelerated since the beginning of the 21st century. Currently, the continent is experiencing loss from glaciers located in the East and West. The world's largest potential source of sea level rise is the East Antarctic Ice Sheet (EAIS). It is 2.2 km thick on average and holds enough ice to raise global sea levels by 53.3 m. Though recent researches suggest mass gain in the EAIS, the loss of ice in the glaciers is significant, visible in the decline in structural support. West Antarctica ice sheet (WAIS) is substantially more vulnerable compared to EAIS. Temperatures in the area have increased a notable amount, unlike the East or the Antarctic Peninsula. The increase rate recorded to be between 0.08 °C and 0.96°C per decade, in years between 1976 and 2012. Satellite observations recorded a substantial increase in WAIS melting from 1992 to 2017, resulting in a sea level rise of 7.6 - 3.9 mm in the Antarctic Sea.

2. Greenland Ice Sheet

Most of Greenland is made up of the Greenland ice sheet and isolated glaciers, reaching up to 3 km in diameter. The average annual ice loss in Greenland more than doubled in the early 21st century compared to the 20th century. Between the years 1997 and 2012 Greenland ice sheet contributed an estimated 0.7 mm in sea level rise per year, this number increased to approximately 0.68 mm between the years 2012 and 2017.

Total ice loss from the Greenland ice sheet between 1992 and 2018 amounted to 3,902 gigatons (Gt) of ice. This is equivalent to a contribution of 10.8 mm in sea level rise. The

observed rate of melting is at the higher end of predictions from past Intergovernmental Panel on Climate Change (IPCC) assessments.

B. Consequences of Sea Level Rise

Rising seas threaten a series of natural disasters, such as coastal erosion, flooding and land loss. Further, rising sea levels danger many aspects of society globally and locally. Tidal floodings have become fairly common recently mainly due to rising sea levels.

1. Impacts on Nature

Tidal flooding occurs when sea level rise combines with local factors to push water levels above the normal high tide mark. With climate change, tidal floodings are not only impacted by natural tidal forces but are also triggered by minor changes in local climates.

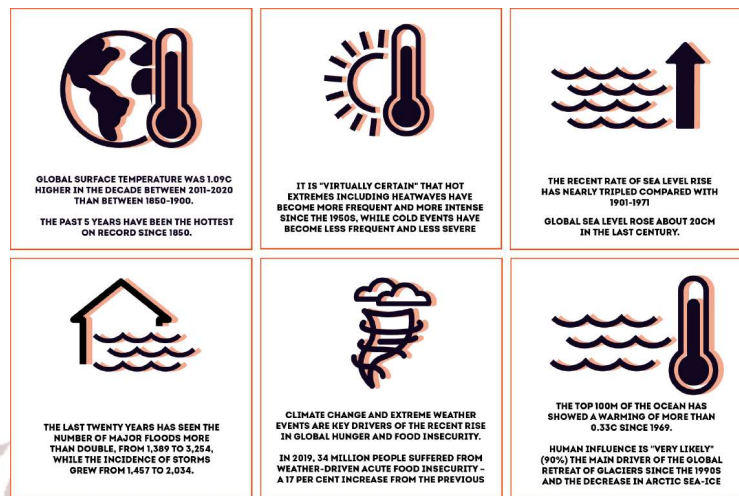
Low-lying regions especially are susceptible to tidal flooding, with increased risk of inundation during storms and high tides. Coastal erosion is the loss or displacement of land, or the long-term removal of sediment and rocks along the coastline, caused by tides, currents, winds and other natural occurrences. Though coastal erosion is a natural process, it has recently accelerated due to rising sea levels, at an unnatural rate. Because of erosion, many coastal habitats are at risk, threatening the existence of various species.

One other result of sea level rise is saltwater intrusion. This phenomenon occurs due to saline (salted) water movements in coastal areas, resulting in the contamination of freshwater and most importantly drinking water sources.

2. Impacts on Human Life

All natural consequences of sea level rise have an impact on human life. Rising sea levels can lead to loss of life and loss of property and land, as well as notable impacts on economies, agriculture and resources. The projections on SLR estimates 150 million people to be effected by 2050, at various degrees. With SLR'S effect on coastal areas, low-lying regions and communities are susceptible to major displacements. Approximately 10 per cent of the world's population live in coastal areas that are less than 10 metres above sea level. Two thirds of the world's cities with over five million people are located in these low-lying coastal areas and about 600 million people live directly on coastal regions around the world. UN Secretary-General António Guterres, in 2023 have claimed that SLR risk will cause migrations on a "biblical scale". As coastal and low-lying regions experience displacements and migrations, many social, economical and cultural problems are bound to occur.

With the loss of coastal lands, many countries are predicted to experience considerable amount of loss in agricultural and aquacultural productions, which could result in food insecurities, economical predicaments and overall disruption in communities.



C. Changing Currents

The oceans play a vital role in Earth's climate. The oceans help regulate Earth's temperature, absorbs carbon dioxide (CO₂) from the atmosphere, and fuels the water cycle. As the concentration of carbon dioxide rises in the atmosphere from human actions, global air and ocean temperatures heat up. With irregularities of temperature and salinity in the oceans, the natural cycle of currents are disturbed, resulting in changes in our climate as a result.

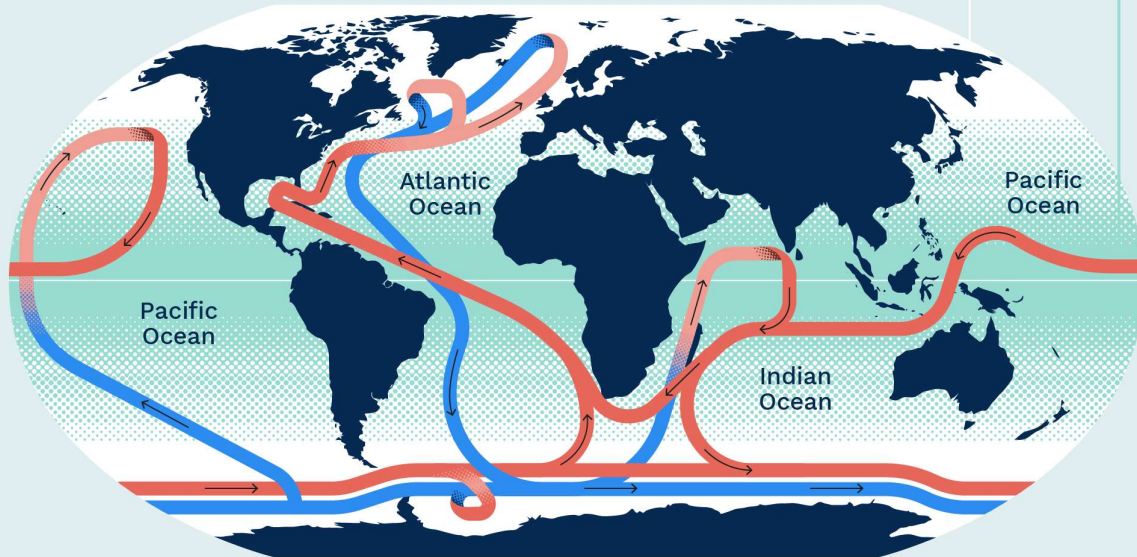
The Atlantic Ocean's currents play an especially important role in our global climate. The movement of water north and south throughout the Atlantic might be weakening due to climate change, which could become a problem. The irregularities and the possible ditruciton of the Atlantic currents can cause irreversible damage to our climate and create shifts in weather and water cycles.

With our climate's vulnerable state today, the predicted catastrophes triggered by changing currents pose a great threat to many nations around the globe. Island nations and low-lying regions are at risk of disturbance and destruction while developing countries with frail infrastructures are in need of assistance against possible scenarios.



Melting polar ice is weakening ocean currents

Meltwater makes seawater less salty, and therefore lighter and slower to sink



Source: NASA

The great ocean conveyor belt

V. Legal Frameworks and International Agreements

A. Intergovernmental Panel on Climate Change (IPCC)

The Intergovernmental Panel on Climate Change (IPCC) is an intergovernmental body of the United Nations, established in 1988 by World Meteorological Organization (WMO) and United Nations Environment Programme (UNEP). Its primary task is to prepare a comprehensive review and recommendations with respect to the state of knowledge of the science of climate change; the social and economic impact of climate change, and potential response strategies. There are 195 member states currently governing the IPCC and three working groups and an additional task force, responsible for conducting the scientific researches. Since 1988, the IPCC has had six assessment cycles and delivered six Assessment Reports (AR), the most comprehensive scientific reports about climate change produced worldwide. IPCC reports play a crucial role in the annual climate negotiations held by the UNFCCC. IPCC assessments are objective, open and transparent; covering all the information relevant to scientific comprehension of climate change. IPCC reports are neutral regarding policy recommendations. However, they may address the objective factors relevant to enacting policies. The IPCC's most recent report is the Sixth Assessment Report (AR6), completed in March 2023. During the sixth assessment cycle between 2018-2019, the IPCC produced three

special reports, one of these reports being The Special Report on Global Warming of 1.5°C (SR15) published in 2018.

1. Special Report on Global Warming of 1.5°C (SR15)

The Special Report on Global Warming of 1.5 °C (SR15) was published by the IPCC on 8 October 2018. The report includes over 6,000 scientific references by 91 authors from 40 different countries. The report's main statement tackles the idea of an 1.5°C rise in global temperatures instead of the previously affirmed 2°C . It is explained in the report that global warming would likely rise to 1.5 °C above pre-industrial levels (defined as being the average during 1850–1900) between 2030 and 2052 if warming continues at the 2018 rate. With global warming reaching a 1.5 °C rise, the risk against health, livelihoods, food resources, water supplies and economies will reach a critical point across the globe. SR15 suggests *"Limiting global warming to 1.5°C, compared with 2°C, could reduce the number of people both exposed to climate-related risks and susceptible to poverty by up to several hundred million by 2050."* IPCC SR15 discusses the sea level rise and its relation to global warming. The global sea level is projected to rise approximately 0.26 - 0.77 m by the year 2100 for 1.5 °C global warming. *"Sea level rise will continue beyond 2100 even if global warming is limited to 1.5 °C. Irreversible instabilities could be triggered in Antarctica and Greenland ice sheet, resulting in multi-metre rise in sea level."*

B. Kyoto Protocol

The Kyoto Protocol is an international treaty signed in 1997, as an extension of UNFCCC. The Protocol was adopted in 2005, and currently there are 192 parties involved. The Protocol's primary object is to legally bind Annex I States to their previous commitments in reducing their emission of greenhouse gases (GHGs). The Protocol's first commitment period started in 2008 and ended in 2012. All 36 countries that fully participated in the first commitment period complied with the Protocol. In order to meet the objectives of the Protocol, Annex I Parties are required to prepare policies and measures for the reduction of greenhouse gases in their respective countries. In addition, they are required to increase the absorption of these gases and utilize all mechanisms available, such as joint implementation, the clean development mechanism and emissions trading.

The Protocol additionally introduced three flexible mechanisms to help Annex I Parties meet their emissions reduction targets more cost-effectively: Emission Trading, Clean Development Mechanism and Joint Implementation

Emission Trading: The mechanism which allows Annex I Parties to buy and sell emissions allowances or credits among themselves.

Clean Development Mechanism: The mechanism which permits Annex I Parties to invest in emission reduction projects in developing countries and receive certified emission reduction credits for the emissions reductions achieved.

Joint Implementation: The mechanism that allows Annex I Parties to implement emission reduction projects in other Annex I countries and receive emission reduction units for the reductions achieved.

Even though the 36 developed countries reduced their emissions, the global emissions increased by 32% from 1990 to 2010. In Doha, Qatar, on 8 December 2012, the Doha Amendment was adopted for a second commitment period, starting in 2013 and lasting until 2020.

C. Paris Agreement

The Paris Agreement is a legally-binding international treaty on climate change, adopted by 146 countries in 2015. The Treaty entered the force on November 4th 2016. The Treaty covers problems related to climate change mitigation, adaptation and finance. As of 2023, 195 members of UNFCCC are parties to the agreement. The Agreement's main goal is to hold "the increase in the global average temperature to well below 2°C above pre-industrial levels" and pursue efforts "to limit the temperature increase to 1.5°C above pre-industrial levels." To achieve the primary goal of temperature, the greenhouse gas emission is ought to be reduced drastically and promptly. To stay below 1.5 °C of global warming, emissions need to be cut by roughly 50% by 2030. The Paris Agreement aims for adaptation against climate change effects and mobilization of finances. Under the agreement, each state must determine, plan, and regularly report on its contributions towards the common goal. No mechanism forces a country to set specific emissions targets, but each target should go beyond previous targets. In contrast to the Kyoto Protocol, the distinction between developed and developing countries is not projected, meaning each state must submit their own plan towards emission reduction. Each country must determine its own contribution to the cause, explained as nationally determined contributions (NDCs). While the NDCs themselves are not binding, the procedures surrounding them are. These procedures include the obligation to prepare, communicate and maintain their NDCs. Under the Paris Agreement, countries must increase their ambition every five years. To facilitate this, the agreement established the global stocktake, which assesses progress, with the first evaluation in 2023.

Article 6 of the Paris Agreement contains some of the key provisions. It mainly outlines the primary cooperative approaches states might act upon in order to achieve the common ambition.

Paris Agreement to this day stands to be one of the most crucial international collaborations on combating climate change, however it is clear to see that certain states haven't been complying to their previous ambitions.

Under former president Trump's administration, United States withdrawing from the agreement in 2019, to later rejoin during Biden's administration. While, states such as Türkiye, Iran and Iraq contiuing to hold their uncertain status on the Agreement still to this day.

VI. Vulnerable Countries and Communities

With the rising sea levels and changing currents, some countries and communities are at higher risk of hardship. These states and communities are in need of urgent and precise solutions against impending catastrophes.

China

China stands to be one of the most vulnerable countries to SLR due to its extensive coastlines and dense population. Sea levels on China's coastlines has reached a new peak in the past five years. In 2022, China's coastal sea levels were 94 millimeters higher than the projected normal average, making it the highest since records began in 1980. China's sea levels have increased by an average of 3.5 mm annually since the year 1980, and an average of 4.0 mm per year since 1993, which is higher than the global rate over the same period. About 45% of China's population of around 1.4 billion and more than half of the country's economic output comes from coastal regions.

The densely populated Pearl River Delta region and the Yangtze River Delta region are particularly vulnerable to coastal erosion and land loss due to their low-lying topography and high population. With high sea levels, low-lying cities are particularly under the threat of floodings. One of the biggest cities in China, Shanghai experiences a significant amount of flooding resulting in damage in infrastructure and human lives. Shanghai has been sinking rapidly due to SLR. During the past three decades, the sea level in Shanghai has risen 115 mm, which is much higher than the global average rate. Without timely adaptation measures, catastrophic flooding could overwhelm the city by the end of this century. Under this scenario, more than 4,200 km/square of the city could be flooded with an average depth of 1.2 metres. Since Shanghai and moany other cities in China are highly susceptible to coastal floodings, authorities might consider a movable barrier system and high-rise seawalls.

Bangladesh

The average elevation of Bangladesh is nine metres above sea level and most of its urban population is settled in the low-lying coastal areas. Located on the slope of the Himalayas, Bangladesh experiences extensive and heavy rainfall, the annual average rainfall ranges between 2,000 and 5,000mm, with maximum rainfall usually recorded in the month of July at about 520mm. With such heavy rainfall combined with the effects of climate change, Bangladesh is susceptible to harsh floodings and erosion. Severe floodings effect everything from transportation to education and medical services and further displacing and risking many people's lives. Climate experts predict that by 2050, rising sea levels will submerge some 17% of Bangladesh's land and displace about 20 million people nationwide. Rising sea levels not

only destroy homes and livelihoods but they also contribute to higher water and soil salinity. This saltwater incursion leaves millions with little to drink or eat. With SLR's effect on daily life, many Bangladeshis have no choice but to migrate. A 2007 World Bank report estimated that 300,000 to 400,000 migrants arrive in Dhaka each year, with salinity intrusion considered a major factor for why so many are fleeing the country's coastal belt.

Low-income Bangladeshis are usually the ones most exposed to the risk associated with floods, as their capacity to respond to natural and human-induced disasters is low making the extremely vulnerable.

Bangladesh is heavily reliant on international support for its relief work as the readiness and resources of local rescue teams and the government are scarce. Bangladesh's Prime Minister Sheikh Hasina also addressed plans to build regional infrastructure to make urban areas more resilient to extreme weather events, from building elevated roads to implementing measures that would maintain the depth of the rivers. This, however, will require the support of the international community.

Netherlands

Since the early settlements in the region, Dutch people have built ways to prevent floodings in the country as most of the are lies below the sea level. Presently, about one quarter of the Netherlands' total territory still lies below sea level. With the use of dikes, dunes and pipes, Netherlands was able to establish security in low-lying areas. However with the global warming and the rise of sea levels, The Netherlands today faces a great threat of flooding and even land-loss. Recent studies expect the sea level to rise by 20 to 110 centimetres by 2100. With such high risks the Dutch State continues to reinforce their infrastructure and research on the topic.

Vietnam

Vietnam is often presented as one of the countries that are most vulnerable to climate change. Between the years 1993-2018 sea levels in the area has rose with an average rate of 3.6 mm per year. Nationwide, over 50 million people are bound to face challenges due to rising sea levels. The Mekong River delta is one of the largest deltas in the world, currently home to 17 million people and supplying more than half of Vietnam's rice production. The region is facing several threats, some arise from ongoing climate change, and others from human activities in the state or upstreams. The average altitude in the Delta is about 80 cm above sea level, with the current projections the area is under major threat.

The Mekong Delta's vulnerability is an especially significant problem due to its economic vitality. Agricultural products of the delta makes up nearly 15% of Vietnam's GDP. For that Vietnam's crisis with SLR is not only important to nature but it is inherently connected to country's people and its economy. Unfortunately at the level of the Mekong region, local adaptation decisions are insufficient. The recent Mekong River Commission initiative called

“proactive regional planning” could play an integrative role, via joint mitigation investment projects and adaptation measures between states and sectors. Adaptation to the inevitable impacts of climate change is thus a matter of development strategy for Vietnam, in parallel with its own ambitious contribution to the necessary emission reduction efforts announced at COP26.

Indonesia

Indonesia is one of the world’s most densely populated countries and the largest archipelagic nation, comprising over 17,000 islands. With the majority of these islands sitting only one meter above sea level, coastal areas in many parts of the country are being threatened by rising sea levels. Human activities such as deforestation, landscape reclamation, and the illegal extraction of groundwater around the nation aggravate the threat of floods and other natural catastrophes. Experts predict that before 2050, thousands of small islands and millions of houses in coastal areas across Indonesia will disappear due to rising sea levels caused by climate change. By that year, a third of the capital Jakarta, which has been described as the world’s most rapidly sinking city, could be submerged.

The village of Simonet, in Pekalongan, Central Java, is already struggling with tidal flooding and land subsidence, which is bringing the coastline closer to residential areas. While some islanders leave their houses, other choose to stay in their hometowns despite all threats. At Cemarajaya, about 100 kilometres from Jakarta on the northern coast of West Java, more than 300 households have been displaced in the last 16 years by coastal erosion. The coastline has retreated by around 2 km since 2016, allowing the ocean to engulf thousands of hectares of land.



Egypt

Sea levels have been rising by 3.2mm annually since 2012 in Egypt, threatening to flood and erode the Nile Delta. Over the past 30 years, temperatures in Egypt have increased by 0.4 degrees Celsius per decade, perpetuating the effects of global warming in the area. Because of the arid climate, 95% of Egyptians live on less than 6 per cent of the land, mostly around the Nile. With less than 1.8 cubic kilometres of rain annually, Egyptians depend on the Nile as their primary water source. As a consequence of SLR and rising temperatures, Egypt (mainly the Nile Delta) is susceptible to extreme salinity. Salinity is already affecting 15% of the Delta's best arable land, according to the United Nations Food and Agriculture Organization. As a result of the increasing amount of salt in soil and water Egypt's agricultural practises are facing many hardships, deteriorating the already vulnerable produce sources. For Egypt, agriculture is economically vital. Approximately 55 per cent of the country's labour force is involved in various agricultural activities.

By 2030, it is expected that 45 million Egyptians will be seriously threatened by rising sea levels. Rising levels of water threaten densely populated areas around The Nile, while other coastal cities also share such threats.

Pacific Islands

Sea levels in the South-West Pacific are rising faster than the global average, threatening low-lying islands. The World Meteorological Organization (WMO) has stated in their 2022 report that in South-West Pacific, sea levels have been rising 4 mm annually in some areas, fairly above the global rate. This rise in sea levels threatens island nations, such as the Solomon Islands, Fiji and Papua New Guinea. Their unique geographies and limited land mass make them especially susceptible to even the slightest increase in sea level, threatening their very existence and the livelihoods of their residents.

Many nations in the Pacific have a maximum elevation of only 2 to 3 metres above sea level and lack meteorological and oceanographic forecasting ability making them unable to prevent floods and high currents. With altering water and weather systems, islanders are also salinity further damaging their environment and water resources.

In 2022, the South-West Pacific experienced 35 recorded natural disasters that killed more than 700 people, with floods accounting for over 70% of these incidents. These events impacted over 8 million individuals, inflicting an economic toll on many nations. In the Philippines and Fiji, storms were the predominant reason for the high death toll and the many affected individuals.

Since many of the island nations are highly dependant on oceans for aquaculture, agriculture and water resources, it is crucial to mitigate the effects of SLR and abnormal currents in the area. With the changing currents in the oceans, many aquatic ecosystems are under threat of extinction, also heavily burdening the nations along the Pacific. It is estimated

that 90% of the coral reefs in the Pacific Island region could suffer severe degradation, which will have a devastating effect on the marine species that depend upon these ecosystems. The small island states of the Pacific are only responsible for 0.03% of global greenhouse gas emissions, but they are disproportionately facing many of the threats of climate change head-on.

VII. Current Strategies

While the UN works towards mitigating the effects of climate change through joint ambitions, many nations are developing local strategies in order to relieve the threats. Not only combating the effects but adapting the way of life today will benefit states and communities greatly. Large-scale measures to adapt to SLR will only be needed from 2050 onwards, but it is critical to account for these future measures in the decisions we are making today. Investments in housing, agriculture, and the energy transition should be compatible with the adaptation measures needed in the future. This ensures future measures can be implemented when needed, reducing damages, loss of life, and expenses for future generations. Climate expert Marjolijn Haasnoot suggests *“Even with decreasing CO2 emissions and limited global warming, sea-level rise will continue for decades. Large-scale measures to adapt to sea level rise will be required sooner or later.”*

A new study suggests over twenty keys for adapting. These include structural and nature-based flood defences, integrated river management, and land-use changes. Calculating and researching the best options for each nation is a must, as every country experiences the effects of global warming at a different rate.

At this point global collaboration is a must, with previous initiatives and agreements at hand each nation has a great responsibility in mitigating the burden of global warming.

VIII. Projections and Future Outlook

While precise predictions are challenging due to uncertainties in future emissions trajectories and Earth system processes, scientific research and modelling efforts provide estimates of potential sea level rise under different scenarios. However, recent studies and research efforts have suggested that previous sea level rise projections may have underestimated the contributions from ice sheet melt and ice dynamics.

1. Special Report on the Ocean and Cryosphere in a Changing Climate

The IPCC in their 2019 Special Report on the Ocean and Cryosphere in a Changing Climate (SROCC), under a high-emission scenario, projects global sea levels to rise by 0.52 to 0.98 meters by the end of the 21st century. SLR at the end of the century is projected to be faster

under all scenarios, including those compatible with achieving the long-term temperature goal set out in the Paris Agreement.

Thermal expansion, ocean dynamics and land ice loss contributions will generate about $\pm 30\%$ of increase around the global SLR. While many regions are expected to experience higher numbers due to local factors.

The expected impacts of SLR on coastal ecosystems over the course of the century include habitat loss, loss of functionality and biodiversity and migration. Not only life under water is expected to be changing, but ecosystems along coasts and low-lying habitant species are under the treat in the upcoming decades.

IX. Questions to Be Adressed

1. How can UNFCCC reinforce international collaborations in order to comply with previous ambitions?
2. What can be done by UNFCCC to further combat the effects of climate change?
3. What is UNFCCC's role in assisting nations towards adaptation?
4. How can UNFCCC foster vulnerable communities?

Dear delegates, this document draws the guidelines for our sessions however you are highly encouraged to do further research on the agenda item. It is suggested that you read through IPCC's *AR6* and *Special Report on Ocean and Cryosphere in a Changing Climate (SROCC)* (provided below), as these documents are most recent and reliable we have available at this time.

[IPCC AR6 \(WATER\)](#)

[IPCC SROCC](#)

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