

# HMUN 2020

Haarlem Model United Nations

**Student Officer:**

Layla Charki

**Issue:**

Addressing the impact of climate related disasters on international peace & security

**Forum:**

Security Council





## Definition of Key Terms

### **Climate change**

This term refers to a change in the statistical characteristics of the state of the atmosphere (i.e. weather) and related changes in oceans, land area's and icecaps that persists for longer periods of time. These periods are usually over 30 years long. Changes in the climate system have occurred for billions of years, due to natural causes. In the last few hundred years, the influence humans have on this system has grown.

### **Greenhouse gasses**

A greenhouse gas is any gas that has the ability to absorb heat energy and coming from earth's surface and reradiate the energy back to earth. In other words, greenhouse gasses trap warmth in the atmosphere and send it back to earth's surface. This contributes to the *greenhouse effect*, which is the rise of temperatures due to an increase in greenhouse gasses. Causing *global warming*.

### **Climate change adaptation**

"Adaptation means anticipating the adverse effects of climate change and taking appropriate action to prevent or minimize the damage they can cause, or taking advantage of opportunities that may arise. It has been shown that well planned, early adaptation action saves money and lives later." - European Commission

### **Transboundary water**

Transboundary water includes rivers, aquifers, lakes and basins shared by two or more countries. These transboundary waters support the livelihoods of many people across the world. Increasing water stress can lead to conflicts regarding transboundary water.

### **Climate refugees**

There is no official definition for the term climate refugee, but in most cases a climate refugee is defined as people who are forced to leave their home because of changes to their local environment. These changes compromise their livelihood or well-being.

### **Global North-South divide**

The Brandt line was developed in the 1980s. The line shows that earth is geographically split into relatively more developed and less developed countries. With the exception of Australia and New Zealand, most wealthy countries are located in the Northern hemisphere, while most poorer countries are located in the Southern hemisphere.

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Over time the view changed because this model was too simplistic. However, the inequality between most of the Northern and most of the Southern hemisphere is still prevalent.



## General Overview

## Natural climate change factors

Changes in the earth's atmosphere have occurred for millions of years. These changes are due to natural causes. Shifts in the composition of atmospheric gasses can lead to fluctuating temperatures. Greenhouse gasses, such as methane and carbon dioxide trap warmth in the atmosphere. Consequently, a rise in the amount of greenhouse gasses in the atmosphere lead to higher average temperatures. Luckily, these variations are usually balanced out by photosynthesis ( $\text{CO}_2 \rightarrow \text{O}_2$ ) and respiration processes ( $\text{O}_2 \rightarrow \text{CO}_2$ ).

In addition to the gradual variety in atmospheric composition, natural disasters cause more sudden changes in atmospheric composition. Plate tectonics for example, have been the cause of volcanic eruptions which lead to an acute release of carbon dioxide.

As stated before, an increase in  $\text{CO}_2$  particles leads to higher temperatures. This has many negative effects. For instance, higher temperatures lead to melting ice sheets. When these ice sheets melt sea levels rise, which can be catastrophic for land surfaces below or at sea level. Furthermore, melted ice caps further the issue of rise of carbon dioxide. This by reason of something named permafrost.

Permafrost is defined as rock, soil, ice or organic material that remains under a temperature of  $0^\circ\text{C}$  for more than two consecutive years. Most of the permafrost formed during glacial periods and endured the warmer interglacial periods.

Methane bubbles in thawed permafrost

The thickness of the permafrost layers ranges from one meter to over 1000 meters, but is in most cases over 100 meters. Carbon was stored in processes that took place over thousands of years. Microbes eat and digest carbon and produce carbon dioxide and methane.

These gasses often bubble up through soil and water, some of it escapes into the air. But if temperatures get higher the permafrost can thaw and methane is released to the atmosphere.



## Human induced climate change

Under normal circumstances the previously mentioned processes only lead to minor variations in climate. Taking years and years to create significant changes. However, In the past few hundred years the influence of humans has grown.

Human activities can influence climate by altering the composition of  $\text{CO}_2$  and other greenhouse gasses in the atmosphere, and by changing the reflectivity of land surfaces.

Human activity is increasing the concentration of greenhouse gasses. This happens in multiple ways; The first being the usage of fossil fuels. By burning coal, oil and gas that is formed from large amount of dead organic material containing carbon, carbon dioxide and nitrous oxide are emitted into the atmosphere.

As previously explained, respiration processes and photosynthesis balance each other out, but in recent years deforestation has been a growing problem. When forests are cut down this beneficial effect is lost and more importantly all carbon stored in the organic material is released into the atmosphere.

Furthermore, contributes the increasing livestock farming to the emission of greenhouse gasses, particularly methane that is produced in large amounts by cows and sheep. With the growing global population and the increasing issue of over consuming meat this continues to be one of the main factors in the expanding emission of greenhouse gasses. This growing amount of greenhouse gasses result in rising temperatures, global warming. The imbalance due to global warming leads to extreme weather conditions.

## **Results and impact of global warming**

Processes that lead to global warming are the cause of extreme weather conditions. The changes in our climate are not always easily noticeable, but one of the easiest visible consequences of the rising temperatures is an increase in the frequency and intensity of extreme weather event. Heat waves, droughts, storms and floods are among the weather events that occur more frequently and intensely. Sea level rise leads to more impacts of coastal storms and the warmer weather lowers the carrying capacity of area's by putting pressure on water supplies. This is only one situation, but extreme conditions such as these are noticeable around the world.

'Extreme event attribution' is the field of climate science research that emerged in the early 2000s. This field aims to explore the human footprint on extreme weather. Scientific analysis suggests that *"68% of all extreme weather events studied to date were made more likely or more severe by human-caused climate change."*<sup>1</sup>

Every country in the world will be affected by climate change. However, the impact will not be felt equally across the globe. This is not solely due to geographic location. To measure the impact of extreme weather conditions in a certain area, more factors need to be taken into account than geographic location. Developing countries will in most cases face more risk due to the socioeconomic position. These areas are often very poorly equipped to cope with environmental threats and are often in no position to handle such an event.

As Niall Smith, researcher on region's vulnerability for the global risk consulting firm Maplecroft says: *"The places with the least level of economic development are certainly in line to feel the impacts with the greatest degree, partially just due to their geographic fate — or their location — but more so based on the socio-economic and governance factors,"* Aside from an area's ability to recover, developing countries are also vulnerable because the livelihoods of the population depends for a large part on natural resources. If those resources are damaged their ability to sustain is severely hindered.

Haiti is one of the countries that has suffered greatly from extreme weather. On September 8<sup>th</sup> 2010 Haiti was hit by a severe earthquake. This island is geographically at a greater risk of hurricanes, and in 2016 and 2017 the country was hit by hurricane Matthew and hurricane Irma. The country is very poor. For that reason, it is incredibly challenging to recover from a catastrophe as this and prepare for future storms.



Earthquake in Haiti: Gone in 30 seconds, The Independent, 17 Jan. 2010

### **Impact on peace & security**

Climate change can influence areas directly as aforementioned, but it can also happen indirectly. The changing weather conditions and more sudden impacts in the form of e.g. storms, floods etc. lead to instability. It can lead to hunger and water crises, because the changing weather can cause the carrying capacity in an area to regress. Or because food and water supply is limited at the hand of a natural disaster. Rising air temperatures and heat waves, as well as increased spread of pathogens and create health risks. Moreover, is biodiversity is impacted due to for example acidification of oceans or due to limited adaptability of flora and fauna. Indirect consequences also include economic implications because of damage related to climate change.

Conflicts are more common in areas with limited water resources. In the Sahel and Sudan, it has heightened competition for forage and water recourses and land, leading to conflicts between farmers and herders. In Somalia droughts led to the

displacement of over two million people. This is not an isolated event. Large scale forced migration has taken place in, amongst other regions, Guatemala, Ethiopia, Asia and Southern Africa. Climate-related displacement in many cases led to local tensions, recruitment in armed groups, child exploitation and human trafficking. These events lead to national and international instability. Limiting the opportunities of governments worldwide to advance political, social and economic circumstances.

In conclusion, *“The effects of global warming on the world’s physical landscape often lead to geopolitical changes that threaten to destabilize already vulnerable regions, [...] The stresses on natural resources undermine the capacity of nations to govern themselves, and increase the chances of conflicts.”* Caitlin E. Werrell and Francesco Femia, UNESCO.

## **Adaptation**

The Security Council is aware of the adverse effects of climate change. What is necessary right now is adaptation. The larger goal is indeed to turn global warming around and to prevent further damage caused by climate change. However, shorter term solutions are needed as well, at this point. The world needs to adjust to the expected future state of the environment, with the aim to reduce vulnerability to the impacts of changing weather conditions. This is especially important for lower developed regions. Adaptation not only means protection against the possible effects. It also means to profit as much as possible from any potential benefit a changing climate can bring. For instance, growing season has become longer in some regions, this can be used to our benefit.

Issues relating to climate change are in most cases felt on a local scale. Communities have been working to find solutions for the problems they face. For example, the instalment of water-permeable roads and pavements to better handle floods and stormwater. Nonetheless climate change is a global issue and impacts that are often only felt on a local scale, should be addressed on a larger level.

## **Climate in relation to international politics**

We have discussed the direct and indirect impact of climate related disasters in relation to the effects it has on a region’s stability. However, another aspect that is important to elaborate on is the effect climate related disasters have on international politics.

Mass immigration due to a changing climate has already been mentioned in the preceding paragraphs. Mass immigration can lead to conflict in the involved region. However, the issue of these large groups of immigrants, known as *climate refugees*, lead to another problem. Migration itself is a natural affair. Logical and essential in an evolving world. Environmental migration does not happen only between

neighbouring states, but in many cases also to the global North. Which puts a strain on the already fragile relations between the Northern and Southern hemisphere.

The North/South divide is based on the socio-economic differences between nations on the northern hemisphere and southern hemisphere. The north regarded as the high-per-capita, industrialized economies and the south includes countries with higher levels of poverty.

This divide results in issues surrounding climate change as well. Many of the more developed countries on the northern hemisphere build their economy on industrialization. The industrialization in the 18<sup>th</sup> and 19<sup>th</sup> century was the beginning of one of mass emission of greenhouse gasses. This mass emission is a big contributor to the changes in our climate. It is now the aim to reduce climate change; Transforming the present energy system based on fossil fuels into one based on renewable energy sources is regarded as the main solution to the issue. In order for the energy transition to have the desired effect, it needs to be applied on all fronts. This is the stance of the countries in the northern hemisphere. Many countries in the southern hemisphere do not share this opinion. They find that they should be given the chance to build their economies in the way developed countries could, by the use of unrenewable energy sources. This puts a strain international stability. This should be kept in mind when addressing other problems relating this issue.

## Previous attempts to resolve the issue

The **United Nations Disaster Risk Reduction (UNDRR)** is the United Nations body focussed on the reduction of disaster risk. It oversees the implementation of the Sendai Framework for Disaster Risk Reduction, which is focusses on the post-2015 development agenda. This framework presents **concrete measures to take in order to protect development gains from the risk of disaster**. Before the implementation of the Sendai Framework, the Hyogo Framework for Action (HFA) 2005-2015, functioned in the same area. The HFA focusses on '**Building the Resilience of nations and Communities to Disasters**'. In dept summaries of both these frameworks can be found in the appendices.

Millions of people each year are displaced due to natural disasters and the impacts of climate change. The term that was mentioned before **climate refugees** is not a legal term, meaning that **climate change** or high risk of disaster due to climate change is **not acknowledged as a reason to qualify as refugee**. The 1951 UN convention relating to the status of refugees excludes climate migration from the convention.

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In 2018 the **UN Global Compact for Migration (GCM)** was adopted at a meeting in Marrakesh, Morocco. The GCM is an intergovernmentally negotiated agreement, overseen by the UN. It covers all sides of international migration.

This is the first a major migration policy that addresses migration due to climate change. The document states that climate change indeed can lead to migration and displacement and **suggests countries to work together to start planning for people who have to migrate due to climate change and natural disasters.**

Many other institutions and bodies aim to improve the situation surrounding climate change and the consequences climate related disasters have. The efforts mentioned above are not the only ones aiming to resolve the situation. However, they are important ones.

## Possible Solutions

- **Developing policies and institutions for climate change adaptation**

The challenges climate change brings need to be addressed by instating specific policies related to preparing for possible threats, fit for the regarding region.
- **Stimulating the improvement of hazard management in high risk regions**

Lots of high-risk regions are financially and politically in an unstable position. Meaning that preparation for and prevention of damage caused by climate change is not as well as it should be. In many cases this is due to a lack of funds and a lack of knowledge on the impact of climate change. Improved hazard management would improve measures that help regions cope with possible negative effects.
- **Efforts such as transboundary water-management**

Droughts occur more frequently and water resources are scarce in some region. This puts pressure on the region and its inhabitants. Conflicts relating water scarcity seem to occur more often. This can be on local scale, but the conflicts can also occur on international scale, for instance conflicts surrounding transboundary rivers or aquifers. UN Water aims to mediate between nations. However, since high pressure is put on water recourses in regions affected by climate change, mediation by UN Water is, in some cases, not adequate. The SC is able to provide solutions with more weight.
- **Educating citizens on measures to adapt to the changing climate in their respective regions**

One of the most important things in limiting the impacts of climate change is informing people of the changes they will face and how to cope with those changes. Effective measures to adapt are often found on a small scale in areas that are affected by these weather conditions. It is beneficial for many regions that important information and useful ideas such as these are shared between different regions. Not only is it advantageous to share information between nations. The information needs to be distributed throughout the countries as well. The citizens need to be educated on how to adapt to the changing climate.

## Appendix/Appendices

### Information on the Hyogo Framework for Action 2005-2015

<https://www.coastal-management.eu/governance/un-hyogo-framework-action>

### Sendai Framework for Disaster Risk Reduction 2015-2030 Chart

This chart gives a concise but clear summary of the goals, targets and expected outcomes the Sendai Framework has:

[https://www.unisdr.org/files/44983\\_sendaiframeworksimplifiedchart.pdf](https://www.unisdr.org/files/44983_sendaiframeworksimplifiedchart.pdf)

## Bibliography

- "1. What Is Climate Change?" *Australian Academy of Science*, [www.science.org.au/learning/general-audience/science-climate-change/1-what-is-climate-change](http://www.science.org.au/learning/general-audience/science-climate-change/1-what-is-climate-change).
- "Causes of Climate Change." *Climate Action - European Commission*, 28 June 2017, [ec.europa.eu/clima/change/causes\\_en](http://ec.europa.eu/clima/change/causes_en).
- "Climate Change Adaptation and Mitigation." *NASA*, NASA, 17 Oct. 2019, [climate.nasa.gov/solutions/adaptation-mitigation/](http://climate.nasa.gov/solutions/adaptation-mitigation/).
- "Climate Change Raises Conflict Concerns." *UNESCO*, 8 May 2018, [en.unesco.org/courier/2018-2/climate-change-raises-conflict-concerns](http://en.unesco.org/courier/2018-2/climate-change-raises-conflict-concerns).
- "Global Compact for Migration | Refugees and Migrants." *United Nations*, United Nations, [refugeesmigrants.un.org/migration-compact](http://refugeesmigrants.un.org/migration-compact).
- Lantuit, Hugues. "What Is Permafrost?" *International Permafrost Association*, 29 Mar. 2016, [ipa.arcticportal.org/publications/occasional-publications/what-is-permafrost](http://ipa.arcticportal.org/publications/occasional-publications/what-is-permafrost).
- Mann, Michael E. "Greenhouse Gas." *Encyclopædia Britannica*, Encyclopædia Britannica, Inc., 19 Mar. 2019, [www.britannica.com/science/greenhouse-gas](http://www.britannica.com/science/greenhouse-gas).
- "Mapped: How Climate Change Affects Extreme Weather around the World." *Carbon Brief*, 4 Apr. 2019, [www.carbonbrief.org/mapped-how-climate-change-affects-extreme-weather-around-the-world](http://www.carbonbrief.org/mapped-how-climate-change-affects-extreme-weather-around-the-world).
- Name. "Climate Refugees: What Is the Definition? How Is It Decided?" *Climate & Migration Coalition*, 3 Nov. 2017, [climatemigration.org.uk/climate-refugees-definition/](http://climatemigration.org.uk/climate-refugees-definition/).

“National Snow and Ice Data Center.” *Methane and Frozen Ground* |  
*National Snow and Ice Data Center*,  
[nsidc.org/cryosphere/frozenground/methane.html](https://nsidc.org/cryosphere/frozenground/methane.html).

“Security Council Open Debate on Addressing the Impact of Climate-Related Disasters on International Peace and Security, Under-Secretary-General Rosemary A. DiCarlo | Department of Political and Peacebuilding Affairs.”  
*United Nations*, United Nations, [dppa.un.org/en/security-council-open-debate-addressing-impact-of-climate-related-disasters-international-peace-and](https://dppa.un.org/en/security-council-open-debate-addressing-impact-of-climate-related-disasters-international-peace-and).

“UN Compact Recognizes Climate Change as Driver of Migration for First Time.”  
*Public Radio International*, [www.pri.org/stories/2018-12-11/un-compact-recognizes-climate-change-driver-migration-first-time](https://www.pri.org/stories/2018-12-11/un-compact-recognizes-climate-change-driver-migration-first-time).

UN-Water. “Transboundary Waters: UN-Water.” *UN*, [www.unwater.org/water-facts/transboundary-waters/](https://www.unwater.org/water-facts/transboundary-waters/).

“Unexpected Future Boost of Methane Possible from Arctic Permafrost – Climate Change: Vital Signs of the Planet.” *NASA*, NASA, 20 Aug. 2018,  
[climate.nasa.gov/news/2785/unexpected-future-boost-of-methane-possible-from-arctic-permafrost/](https://climate.nasa.gov/news/2785/unexpected-future-boost-of-methane-possible-from-arctic-permafrost/).

“What Is the SF?” *UNDRR*, [www.undrr.org/implementing-sendai-framework/what-sf](https://www.undrr.org/implementing-sendai-framework/what-sf).