



Protecting islands endangered by climate change

United Nations Framework Convention on Climate Change



Empowering Future Generations: Cultivating Global
Literacy and Enlightenment



Forum: UNFCCC

Issue: protecting island nations endangered by climate change

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Introduction

We as a species are facing a pinnacle moment for our development; do we keep producing at maximum efficiency and profit or do we finally make it our collective goal to reduce our carbon emissions. In the words of Luis Rodolfo Abinader Corona, President of the Dominican Republic, we are in a “triple planetary” crisis. The three main global issues in our modern world are: climate change, biodiversity loss and pollution. We are all obliged to do our utmost best to keep our earth liveable for our future generations as we are already feeling the fierce adverse effects of our actions. In this research report we will go in depth about the first of the planetary crises, climate change but we will also briefly touch upon the other two crises as these do share many resemblances.

Climate change has already brought disastrous effects with it, for island nations the main issue is the rising sea level. This is due to the melting of the ice caps, which is in turn due to the increased global temperature. In short, we started our own climate problem and it is now our obligation to find constructive solutions that will stand the test of time.

Definition of Key Terms

Climate change

When we talk about climate change we are talking about the long term shifts in global temperatures. These changes do occur naturally but humans have sped up this process astronomically. Since the eighteenth century the average global temperature has risen 1,2 degrees celsius, higher than any time in the last 100,000 years. This is due to fossil fuels. When we use fossil fuels we emit greenhouse gases, these gases create a coating around our atmosphere, trapping more of the heat than usual and thus raising the temperatures.

Converging winds

As air warms up it also rises, this creates an open pocket of air at the surface. This open pocket gets filled by rising air from a different area, creating a circular motion of air influx. This is a natural process and is one of the driving forces for the creation of tropical storms



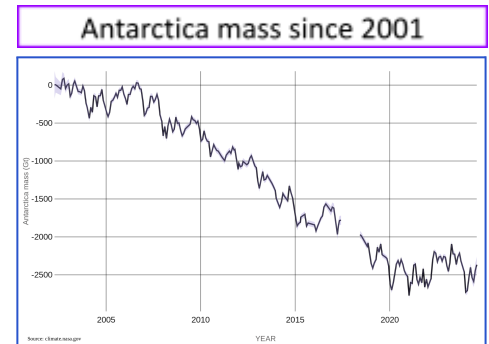
General Overview

Island nations are being affected by climate change in numerous ways. Firstly, of course, the rising sea levels. With the global temperature rising, more ice caps are melting, this is in turn adding more water into our oceans. To put this into perspective, Antarctica and Greenland are losing a combined total of 420 billion tons of ice mass yearly.

Secondly, due to the extreme weather conditions. Because our global temperatures are rising, the water temperature is also rising. The hotter the water is, the higher the chance of a tropical hurricane or cyclone. This is because warm water contains more energy. When the surface water is warm, the converging winds will use this heat energy to warm up, warm air rises up and then gets replaced by colder air. This cycle keeps repeating and this is the first crucial step to creating a hurricane. The heat energy will eventually deplete as more cold water enters the atmosphere. This is why warm water increases the chance of a storm. Additionally, warm water condensates more, this warm air in turn also heats up the atmosphere, speeding up the process of air replenishment even more. These two factors combined with air convergence are the reason why there are more tropical storms in warmer areas. Due to climate change the frequency of these storms is increasing dramatically. Tropical storms are an immense issue for island nations because of the winds reaching anywhere between 60 and 120 kilometres an hour. The infrastructure of most island nations does not meet the standards to withstand the huge power of such a storm. It is also very costly for nations to have to rebuild the damage that the storm may have brought.

Furthermore, island nations on average have a relatively low GDP, due to many different factors such as; lack of natural resources, the fact that many are former colonies and their small size. This means that the damages and thus the cost of rebuilding is felt even harder in island nations than elsewhere. The costs also increase, taking into consideration that the resources needed probably have to be imported. The damages are also putting most island nations' main economic source in distress, since most of them rely on tourism for a large part of their economy. The rising threat of tropical storms is making island nations less popular to visit.

The situation is becoming so worrying that the island nations have made an alliance called the Small island developing states (SIDS). This group contains 38 United Nations Member States and twenty non-UN Member States. These islands are located all across the globe and the total population is approximately 65 million. While still being completely different nations, they do share some common factors that could become more of an issue in the future. All these nations have weak economies that rely on tourism, agriculture and their natural beauty. This natural beauty is also being threatened due to climate change. The loss





of biodiversity is a major consequence of climate change. Due to the rising temperatures, the climate in which animals now live is no longer suitable and could lead to extinction or local extinction on the islands.

In 2015, as a response to the alarming temperatures, the Paris Agreement was introduced as a possible solution. The Agreement is a legally binding treaty and has been signed by 196 Member States, its primary goal is to limit our global temperatures to 2°C higher than before the Industrial Revolution and to aim for no higher than 1,5°C. However with the recent developments and critical side effects that we are already feeling, many are issuing the need to limit it to 1,5°C. For these goals to be met we have to reduce our greenhouse gas emissions by 43% by 2030. The Paris Agreement is a very unique treaty as it is one of the few that has managed to achieve full multilateral cooperation. Every country was required to make their nationally determined contributions (NDCs). These NDCs will keep becoming stricter until we have made the full transition towards renewable energy. Each country's NDC does not only state their measures to reduce greenhouse gas emission but also how to adapt to our changing climate. For a more long term solution nations are required to publish long-term low greenhouse gas emission development strategies (LT-LEDS), these measures are not mandatory but do show nations' plans and long term commitments. We still have a long way to go to meet our 2030 goals but we also have made a lot of progress. Since the implication of the Paris Agreement there has been a bloom in low-carbon markets. Companies have also started making their own climate plans, further contributing to the nation's compliance. On the contrary many oil and gas licences are still being sold at exorbitant prices.



Major Parties Involved

The Small Island Developing States (SIDS)

This is an alliance of island nations calling out for immediate measures to combat climate change. This organisation is crucial in moving us in the right way. These island nations, that mostly stay quiet on the international stage, come together to tell us first hand the effects of climate change. Climate change hits island nations harder because of the fact that, due to their small land mass, they have to import many goods. If they are losing their main source of income, having to pay high costs in rebuilding the infrastructure and if they have to spend immense amounts to import items, the situation becomes very bleak for island nations. This group of nations is crucial for enlightening us on the issues that smaller countries face, it is our duty to listen to these nations and to cooperate with their terms.

The United States of America

The United States is one of the main countries contributing to climate change. In 2023 they imported and exported a combined total of more than six trillion dollars. This is worrying because all these products come with their own sizable carbon footprint. 17,7% of the American GDP is also in the industrial sector, the most harmful to our environment. The industrial sector often works with high temperature ovens in creating metal products, even though this is crucial to our infrastructure, it is detrimental to our environment. The United States is slowly making efforts towards greener energy, as it is now, 60 percent of their total energy consumption is through fossil fuels with the US department of energy expecting domestic solar energy to increase by 75%. Subsidies for clean energy deployment have become a major component of US federal energy and climate policy. After a surge in spending under the American Recovery and Reinvestment Act of 2009, they are an even larger component but now face increased scrutiny. This is because many people feel these subsidies could be more cost-effective. Furthermore, with president Trump being reelected there also begs the question if they will remain in the Paris Agreement. In Trump's previous term he had expressed interest in withdrawing from the Agreement. This could hurt already existing climate measures as such a decision by such a powerful nation could lead to many others also withdrawing themselves from the Agreement.

The People's Republic of China

China has the largest CO₂ emission of any country among the UNFCCC. They import and export a combined total of 6.7 trillion, they are however the main producer and supplier of clean technology. Nevertheless China's industrial sector is nearly twice as large as the USA's. Not only is a large part of their economy based on export, their population is also one of the largest in the world. The average GDP per capita is rising, leading to more imports, further harming the environment.



Timeline of Events

1760	Start of the industrial revolution
1987	SIDS first mentioned in the Brundtland report
1992	UNFCCC formed
1994	Barbados Programme of Action
2015	Paris Agreement along with the Sustainable Development Goals (SDGs) adopted
2016	Paris Agreement entered into force
2024	Request for an advisory opinion by the ICJ on: Obligations of States in respect of Climate Change



Previous attempts to solve the issue

The establishment of the UNFCCC

The establishment of the UNFCCC was the first milestone for global multilateralism on climate change. During the Earth Summit, where the UNFCCC was created, our vulnerability was recognised for the first time. The risks for SIDS were discussed and the urge to address greenhouse gas emissions was finally emphasised. The main goals of the UNFCCC are to combat greenhouse gases and to make adaptation measures. These measures could include the building of dams or measures of protection against tropical storms. There are also measures to combat coral bleaching, which is of particular interest to SIDS. The Global Environment Facility (GEF) and Green Climate Fund (GCF) were founded. The GEF funds climate initiatives and focuses on the greater issues that climate change brings with it, such as biodiversity loss. The GCF focusses on climate adaptation and mitigation. The UNFCCC also created the Paris Agreement in 2015.

The Barbados Programme of Action (BPOA)

This was the first conference debating the specific needs of the SIDS, during this eleven day conference 14 points were discussed and plans were made for the future of our islands. A few of these points are; climate change and sea-level rise, human resource development and energy resources and tourism resources.

Possible solutions

Funding green alternatives

Greenhouse gases are predominantly used now because there are little affordable alternatives. Many developed nations do not have the space to facilitate green energy while simultaneously reducing their greenhouse gas emissions. Therefore it could be a possibility for developed nations that rely mostly on fossil fuels to switch to nuclear energy. Nuclear energy is a very costfull startup but in the long run it leads to more energy yields for less. Nuclear power plants also take up a lot less space. Developed countries do however need to take into account the nuclear waste, but with adequate measures the risks of such waste could be completely mitigated. For developing nations that are less reliant on fossil fuels it is a better option to focus on green energy initiatives, as these are less costly and lead to more technological advancements in the field.

Sharing information focussed on climate adaptation

Some dangers of climate change are already irreversible. It is therefore our responsibility to work with our changing environment and to adapt to it. This could be done by reducing nations' reliance on tourism and building dams. It could also be a possibility to create an



organisation that foresees and regulates these adaptation measures, ensuring that nations receive constructive advice on how to keep their nations safe. This organisation would work as an advisor for each individual situation, it would not fund these measures as that is the purpose of the GCF.

Useful documents

unfccc.int

sdgs.un.org

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