

# Impact Of Climate Change On Geopolitics And International Relations

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## ABSTRACT

The effects of climate change and global warming on international relations in general, and international security in particular, are examined in this research paper. The paper looks at how climate change could affect international security in a variety of ways. In the recent decade, the role of climate change in geopolitics has shifted dramatically. Climate, from merely being on the sidelines has become an active shaper of geopolitics as a whole. The notion of climate change acting as a threat multiplier will also be explored in detail in this paper. From increased violence due to resource scarcity, to displacement of people because of natural disasters, all of these events impinge on international order and security and will be inspected closely.

The changing environment and the events leading up to that create a unique situation where we can look at climate change and geopolitics through the lens of science-backed policies for mitigation and adaptation and map out the impact of these changes on social and political systems of the society. The paper also explores some climate science literature and goes through recommended climate action practices.

Geopolitics is heavily influenced by the energy centers in the world and will change with global warming and the exhaustion of fossil fuels. This paper touches on these concerns and attempts at painting a picture of the world with new energy centers and trade routes. This paper above anything else aims at making this understanding part of the approach to an action plan for the future.

**Keywords:** Climate, climate change, geopolitics, international relations, environment

## INTRODUCTION

The human race has gone through the toughest of times with climate-altering geographical changes and still we have persevered. But today there's a lot of uncertainty regarding our species's future as social, economic, and political unrest are looming over our society coupled with geopolitical changes across the world. All of this is happening against a backdrop where we assume that the environment, which we all inhabit will remain constant and stable. This assumption couldn't be farther from the truth. The story of the Mayans has taught us that extreme weather occurrences are linked to famine, migration, damage, and violence (Saville, 2019). But there is a stark difference between that time and now; the

changes that occurred then were caused by a natural shift in climate, whereas now that change is caused due to human activity.

The early effects of climate change will vary depending on existing economic, political, and social institutions in different world regions. Though the long-term effects of the changing environment will entail the relocation of strategically important places globally, it will bring previously overlooked regions from the periphery to the heart of geopolitical developments.

### **The Development Paradox**

For most of our modern history, economic development had come at a cost of environmental degradation. Countries that are developed now had a brutal past of heavy industrialization, which contributed greatly to the climate change we face today. The fossil fuels that once fueled global prosperity and creativity are now its greatest threat. Industrialization and urbanization have had a disastrous impact on the world's natural capital (*The Geopolitical Implications of a Changing Climate*, 2020). It has caused a disproportionate impact on different countries, impacting poorer communities the most, who are the least contributors. Sea level rise, increased air and surface temperatures, and an increase in extreme weather patterns is creating a direct impact on biodiversity and human societies. Phenomenons like coastal submergence and coral bleaching have already caused adverse impacts on human health, agriculture, water and food security etc. These natural disasters have also caused large-scale migrations. According to the UNHCR report, since 2008, more than 26 million people per year have been displaced by natural catastrophes. With an increasing number of people finding their way into newer regions in search of better opportunities and livelihood, it has created a big challenge for governments to accommodate them. This isn't just an environmental issue anymore; it has become a security concern for many countries as well.

### **Environment as a Geopolitical Factor**

Environment is one of the most important geopolitical factors that influences the international relations of the countries and affects their foreign policies. All the changes that we are witnessing in the climate are affecting the environment which in turn is influencing Geopolitics. Geopolitics is the understanding of how geography affects global politics and International Relations. Traditionally, only the spatial distribution of land, water, and natural resources determined how a state exercised its power, and how that affects the politics and economy of the country. This traditional approach came from the view that separated nature from man. But now we understand that geopolitics encompasses not just the physical terrain, but also the climate, population, cultural areas, and natural resource access. This means that the environment is not an external factor, but rather it is affected by human activity and humans have been changing nature ever since they started interacting with it.

As climate change has moved into the mainstream political narrative and the top levels of government and global administration, it has rubbed off on one of the hallmarks of 'high politics,' namely security. Climate change and security have been linked in the political realm, with arguments made on numerous platforms and in venues like the UN Security Council.

## **Objectives of the Study**

The paper “Impact of Climate change on Geopolitics and International Relations” examines the implications of climate change on international security strategy. The research explores the effects of mild climate change in the short term to highlight the fact that even minor climate changes can have security policy implications. Thereafter the research takes on the broader perspective on huge shifts in the climate and its implications on geopolitics. A major concern is whether climate change produces new circumstances for international policymaking and, perhaps, new conflict patterns, or if it reinforces old ones. This notion is also explored effectively in this research paper.

The following hypotheses have been developed for the undertaking of this study and the research conducted will be done accordingly:

H<sub>1</sub> : Climate change is acting as a threat multiplier and compounding the existing problems

H<sub>2</sub> : Climate change is going to negatively affect international trade

H<sub>3</sub> : Climate change is going to create new centers of power by shaping energy powerhouses

## **Additional Research Questions**

In addition to researching the research topic, it is also important to bring sustainable development into the context. With climate on the global agenda, countries and leaders across the world have come together to discuss and promote the idea of sustainability. This translates into many different areas such as new economic partnerships, renewable energy exchanges, foreign policy of countries, etc. Taking these factors into consideration, below are some of the additional research questions.

- How cooperation for sustainability is going to influence the foreign policies of countries?
- What are the challenges that countries face in fulfilling the sustainable development goals

**Research Methodology**- For undertaking this paper secondary mode of conducting research has been used.

## **Literature review**

No longer does climate change present itself as one amongst many issues alongside poverty, trade, health, etc. It is not only an addition to the center of international politics but is beginning to structure many policies and relations in regard to economic interests and security. Therefore, it is absolutely crucial that world politics takes climate change into better consideration to develop upon the existing frameworks (Sending et al., 2020).

The development of global politics is to be significantly impacted by cases brought forth by climate change, like changing power dynamics due to fossil fuel phase down, and issues like migration and coastal submergence threatening territorial sovereignty. Ignoring climate change poses a huge risk in this field of study as it allows for the bypassing of an issue that will, in the upcoming decades, be a defining aspect of global affairs (Sending et al., 2020).

### **How climate change is experienced**

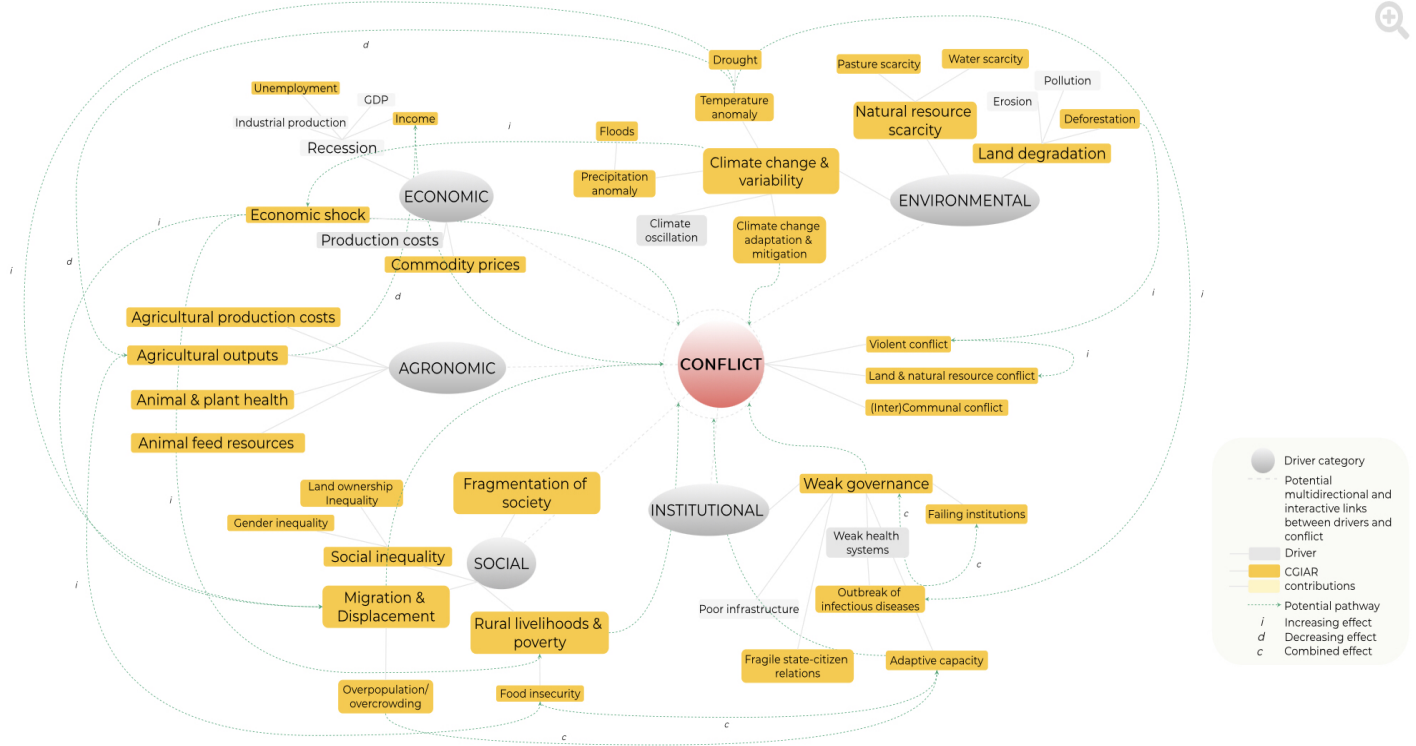
The environment is changing. The worldwide average temperature increased by around 1.8°F between 1901 and 2016. One or two degrees of climate and weather change can be dangerous. Climate change effects are genuine and observable that show how it is affecting the Earth. Changes in rainfall, for example, have resulted in greater floods, droughts, or heavy rain in many locations, as well as more frequent and severe heat waves. As a result of these changes, oceans have warmed and gotten more acidic, ice caps have melted, and sea levels have risen. These and other changes will undoubtedly pose difficulties to our society and environment as they grow more prominent in the next decades (*Impacts of Climate Change, 2022*).

### **Climate security**

Climate security as a concept talks about the climate-induced security risks that are either directly or indirectly linked to threats. Climate change acts as a threat multiplier and adds to the already existing tensions on food security and water security, thus creating competition for scarce resources (Barnett & Adger, 2007). This eventually leads to an increase in political instability pushing that region into conflict.

According to research by the European National Council on Peace and Order (ENCOP)(2002), disagreements over environmental degradation are more likely to lead to ethnic confrontations. This leads to migration flows in numbers of millions, which will adversely impact the country's relations with neighboring states. It may also potentially cause such impacts in the states which will be subject to receiving this migration flow (Haldén, 2007). This phenomenon has already been observed in the recent past in the case of the Middle East refugees that stirred conflict and divide between the European Union members, as well as in regard to the Rohingya refugees and the ASEAN member states. As large chunks of populations get permanently dislocated by climate change, such issues are bound to occur much more frequently than before, as well as on a larger scale (Sending et al., 2020).

Climbing security threat indicator



Source: CGIAR (Pacillo et al., 2022)

This climate security threat index by CGIAR indicates how changing climates, environmental degradation, food security, and the struggle to control a finite pool of natural resources are increasingly becoming a cause of conflicts between communities, armed groups, and even military forces. Climate change has been collectively identified as a severe threat to international peace in the 21st century. A report issued by the Global Challenges Foundation concluded that climate change has a high likelihood of ending human civilization (*Climate Change*, 2022). This concern is reflected in policy agendas, targeting security risks such as food and energy security, migration policy, and diplomatic relations. There has been an increasing recognition of climate-induced security risks on the policy front as 70% of international governments consider climate change to be a national security issue. But there is still a lack of understanding of the mechanisms and drivers of the conflict. Policies should target solving the root cause, like educating people about climate risks, and inducing climate-appropriate practices, rather than only mitigating the damage.

**Geopolitics of Energy**

Research from Chevalier (2009) claims that the world is experiencing a triple crisis: an energy crisis, a climate crisis, and an economic crisis. He claims that we are not dealing with three separate crises, but rather with a single energy crisis brought on by the increased uncertainty around energy. Globalization has never been more visible, for the better - growth, - or for the worst - the spread of catastrophes. Energy is being transferred throughout the



world, and greenhouse emissions have no boundaries. In response, country after country retreats into a narrow and frightened nationalism. (*Geopolitics of Climate Change*, n.d.).

Climate change also impacts the very basis of geopolitics, especially in economic terms. Oil was a major geopolitical driver and one of the main global commodities for well over a century, as can be seen through the Battle of Stalingrad (1942), the Iranian Revolution (1979), and the Gulf War (1991). Consequently, the reduction in the importance of oil and other such fossil fuels will have major consequences for global affairs (Sending et al., 2020). Countries whose foreign and aid policies as well as military stances have been held up by their vast petroleum revenues- such as Saudi Arabia, Russia, and Norway- will now be subject to new realities. The importance of military strategy of these countries will also diminish. In the meanwhile, countries that are rich in terms of renewable sources of energy and other such crucial materials for clean energy technologies would be finding both an enhancement in their foreign prowess as well as mounting external pressure from other nations. This can be seen in the cases of the Democratic Republic of Congo which is abundant in cobalt, and Bolivia, which finds itself in an abundance of lithium (Sending et al., 2020).

Additional countries may also obtain stronger standings in the international arena including those which control a substantial number of clean-tech patents. For example, as of current, Europe is heavily reliant on gas imports, mainly from Russia, but in the coming decades as gas is phased out Russia may lose its influence over Europe (Sending et al., 2020).

### **Impact of Climate Change on International Trade**

International commerce is expected to outperform global GDP growth in the coming years (GDP). While economies will increasingly rely on trade, trade patterns and specialization will be affected by climate change. Transport routes and infrastructure will be altered as sea levels rise and catastrophic events become more common. Changes in output and endowments will be caused by other forms of climatic impacts, such as those on agricultural and labor productivity. Changes in natural endowments or the efficiency with which inputs of production such as land, labor, and capital may be used are expected to have an influence on the production of goods and services as a result of climate change. Dellink, R. *et al.* (2017) Climate change has a particularly severe economic impact in Africa and Asia, where strong economic development rates are linked with rising trade reliance and significant climate change damages. According to a study, climate change damages to the agriculture sector have a substantial impact on regional competitiveness. The relative scale of regional damages compared to its trade partners is more important than the absolute quantity of regional losses. Countries may establish climate and trade policies that are linked and so avoid the worst climate damages at the lowest cost by understanding how climate impacts may influence their economy.

### **A Threat to Sovereignty**

Under international law, climate change calls into question an elemental principle of state sovereignty- territorial integrity. If Greenland's ice were to disappear, it would result in a sea level rise of around 6 meters. Simultaneously, the melting of Antarctica's ice would cause a sea level rise of approximately 60 meters. Countries like China, Bangladesh, Indonesia, and India would have to relocate millions of residents, while some other regions, such as some

South Pacific Island states are estimated to disappear in entirety. Changes in territories also impact the calculation of maritime claims and jurisdictions, and in the Anthropocene, such core assumptions to do with sovereignty can be seen to have an undermining effect by climate change. The concept of sovereignty in the aftermath of climate change will require new conceptual tools due to the fact that violations of sovereignty are characterized by external infringements or invasions. (Sending et al., 2020)

### **The Case of Kiribati**

A 33-island archipelago Kiribati is a low-lying Pacific Island nation that can be found just west of the International Date Line. 21 of these islands are inhabited with a total land area of 313 square miles. The islands are coral reef rings called atolls that enclose lagoons. Atolls are naturally low-lying and particularly susceptible to sea level rise and storm surges. (*Rising Sea Level in the Republic of Kiribati | Global Warming Effects*, n.d.).

The capital (Tarawa) and the majority of Kiribati's 112,000 population live on the atoll of Tarawa. From 1993 to 2003, annual sea-level rise averaged 0.12 inches (3.1 millimeters). Some of the country's deserted islets have already disappeared beneath the waves. Kiribati may become uninhabitable owing to coral bleaching brought on by global warming before it is completely submerged, though. If our heat-trapping emissions continue at the current rate, rising ocean waters might reduce Kiribati's land area, aggravate storm damage, and endanger its freshwater resources. Kiribati's people are in danger of losing their homes, country, and culture. Climate change may also jeopardize the Republic of Kiribati's sovereignty (*Kiribati, the First Country Rising Sea Levels Will Swallow up as a Result of Climate Change*, n.d.).

Scientists estimate that the probability of flooding in Pacific atoll countries would be 200 times higher by 2080 than it was at the turn of the century. Kiribati might lose around 34% of its 1998 GDP by 2050 if it does not adjust to climate change and sea-level rise.

Desalinizing seawater that intrudes into freshwater aquifers is one example of technological adaptation. Such measures, however, are unlikely to be implemented given that Kiribati and other low-lying island nations, like the Maldives and Tuvalu, are among the world's poorest. (*Rising Sea Level in the Republic of Kiribati | Global Warming Effects*, n.d.).

### **Changing Power Dynamics**

As of current, the equivalence between political and economical capital is fundamentally straightforward, as it is of no doubt that money can be converted into political influence. However, this stands only to an extent, as there are factors that affect this conversion, the main being reputation. For example, the very nature of the political regime in Saudi Arabia poses limitations to the political influence the nation is able to purchase. On the other hand, nations such as Canada and Norway, who are also oil exporters, enjoy their status with significant influence on the international front due to their substantial financial contributions to developmental aid as well as multilateralism of different forms. However, since the money used for such operations is obtained majorly from the production of oil and gas, the repetitional standing of such countries stands to be weakened as a new paradigm of increasing climate action takes hold. Indications of this happening can already be seen; Equinor- Norway's energy company (owned and operated by the state)- was reprimanded by UK's Advertising Standards Authority for insinuating that gas is a "low carbon" resource.

Additionally, in Australia, Equinor finds itself to be the subject of a civil society campaign to advocate against offshore oil drilling (Sending et al., 2020).

As the world develops to become a place where carbon footprints are major parameters to determine reputation, this brings into account questions pertaining to what will count as power and status in the near future. Apart from countries like Norway and Canada, it also poses questions relating to major world powers such as the United States. Would the escalating concerns about climate change perhaps in any way aggravate the already weakening reputation of the nation as a hegemonic party? Furthermore, if such changes pave way for international power changes simultaneously as economic and demographic powers also shifts (eastwards), what would that result in relation to the dynamics of power within countries themselves? (Sending et al., 2020)

### Debate on Sustainability

Keeping in mind the detrimental impacts that economic development had on the environment, a new concept of development comes in. According to Brundtland Commission (1987), "*Development that meets the need of present generation without compromising the ability of future generation to meet their own needs*" is called sustainable development. This concept has come a long way into the mainstream since it was first introduced. Keeping sustainability in mind, United Nations has introduced Sustainable Development Goals 2030. The idea is to reduce the detrimental impact of development on the environment while creating a more inclusive and sustainable world. It also reduces the dependence on fossil fuels and paves a path for renewable energy sources. But here the difference in technological capabilities of developed, developing, and third-world nations also matters a lot. This difference is the exact cause of debate on the issue of sustainability.

Majority of developed and highly industrialized nations are situated in the northern hemisphere, while on the other hand developing and third-world countries are located in the southern hemisphere. This is exactly what has created the north-south divide. Damage caused to the environment in one part of the world affects people living in another part. This difference in contribution and capability to mitigate brings in the concept of *Common but differentiated responsibilities*. The phrase was first used in UNFCCC, and it refers to the fact that every country has the responsibility of curbing the greenhouse gas emissions, but this varies depending on the historical contribution, adaptive capacity, and economic development. This provided room for cooperation among developed and developing nations through provisions like emissions trading laid out in the 'Kyoto Protocol'. This agreement could further be extended to areas such as energy security, conflict prevention, and development. (*What Is the Kyoto Protocol?* | UNFCCC, n.d.)

### Observations

It is clear from all the literature review that climate change does have a huge impact on geopolitics and international relations. From short-term instabilities to long-term changes, it spans into every sector. During the literature review, it was found that climate change is indeed acting as a threat multiplier and compounding the existing problems (Scheffran et al., 2012). This means that  $H_1$  is proven to be apt.

Poor communities are causing a negative cycle that hurts the environment because they are unaware of the incorrect and harmful techniques by which they exploit natural resources like forest timber and soil. Poor environment in turn leads to bad health and lower standards of



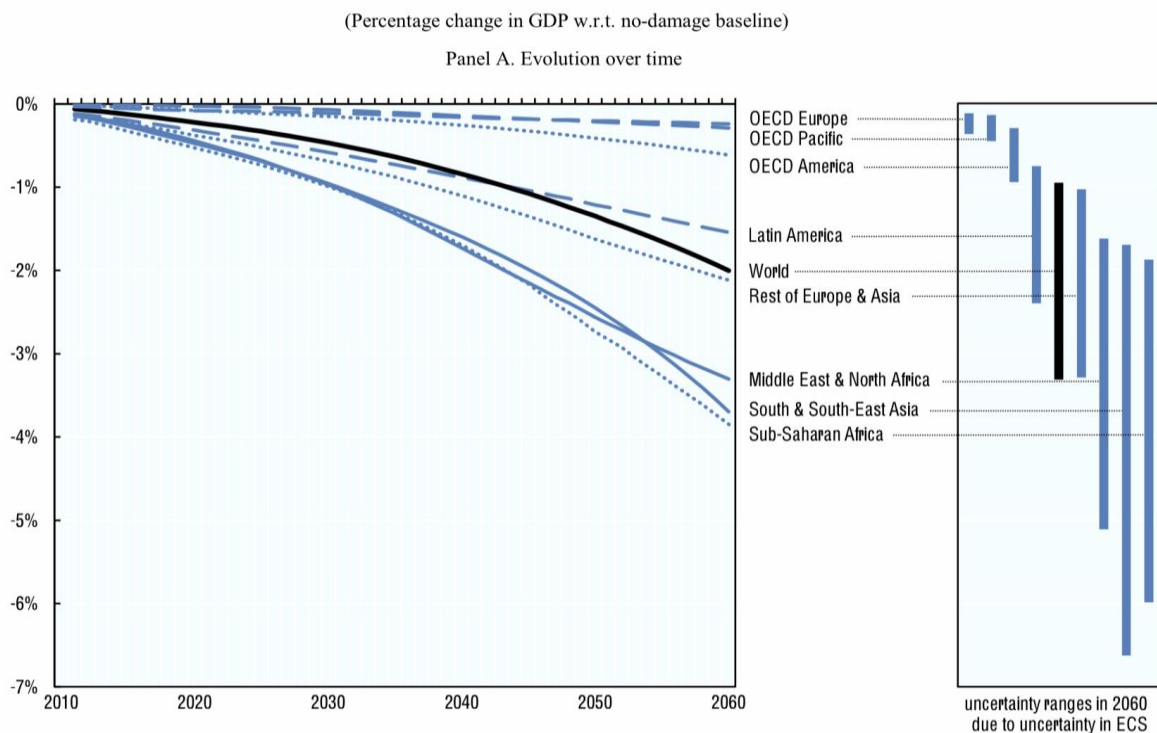
living. In a survey conducted by WWF-Europe from 2007 onwards, 76% reported that land use is one source for deforestation, at least in part because poor countries lack economic means to support conservation initiatives and measures aimed towards improving their forests and soils.

This lack of awareness, knowledge, and education creates yet another huge problem that hinders their upliftment from poverty. Due to a lack of education and birth control measures, women living in extreme poverty lack the resources to exercise birth control. This leads to a population explosion in impoverished regions. An increase in the global population puts more strain on the environment. Every person uses some of the resources in the ecosystem, and since so many babies are born in underdeveloped areas, the environmental costs are rising. High birth rates are partly due to high death rates in poor regions, high child mortality rates, and food insecurity. All of this bundles together to create a vicious cycle of population growth and resource scarcity.

H<sub>2</sub>: Climate change is going to negatively affect international trade

The second hypothesis was also found to be true. World GDP is expected to expand at a pace of 2.5 percent per year on average during the next half-century, with rates in many nations dropping in the previous 20 years. Through 2060, the trend GDP growth rate for the OECD region is predicted to be around 1.8 percent. Emerging economies will continue to expand faster than the OECD, but the difference will close as their income levels catch up to those of the OECD. Africa is predicted to be the primary source of global economic development by the middle of the century. As a result, large changes in nation or region proportions of global GDP will occur during the next 50 years. Dellink, R. *et al.* (2017)

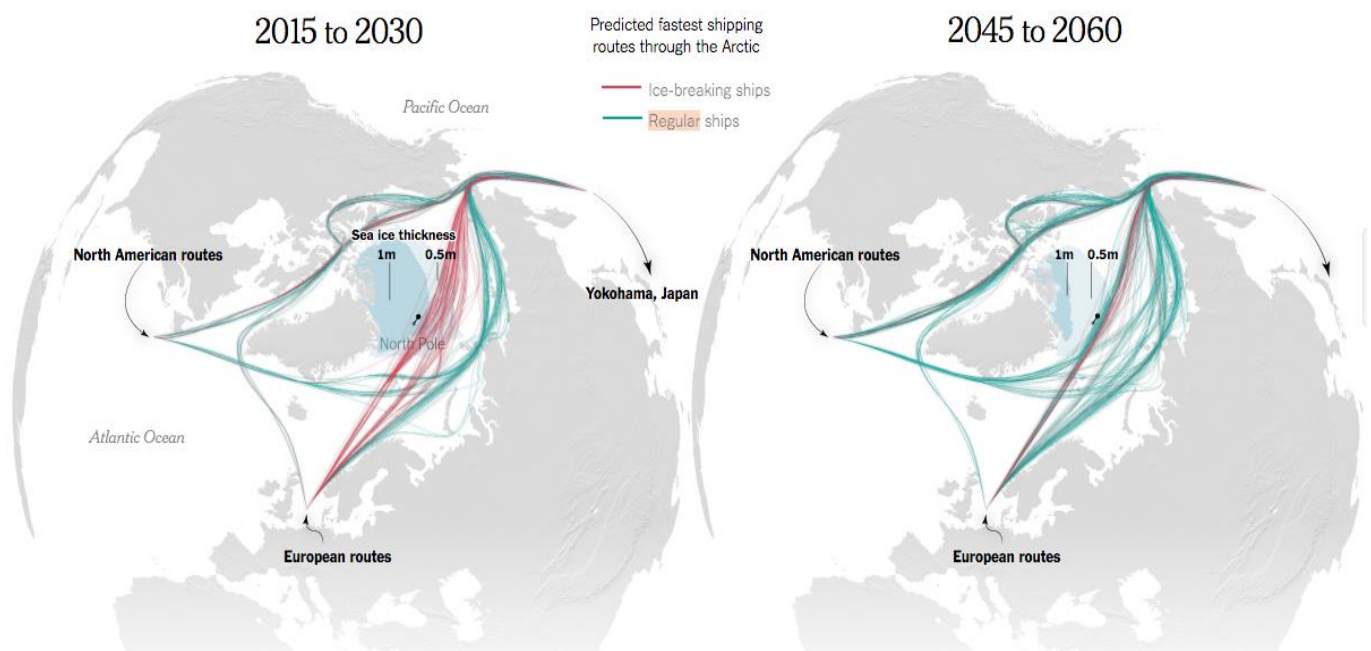
### Regional damages from selected climate change impacts in the climate damages scenario



Source: OECD (Dellink et al., 2017)

H<sub>3</sub> : Climate change is going to create new centers of power by shaping energy powerhouses. The third and last hypothesis was also found to fit right with the trajectory in which geopolitics is headed. Climate change is indeed creating opportunities unlike ever seen before for countries that had been on the periphery for far too long to get in the center of geopolitical developments. The figure below gives us an idea of how the world might look like with new trade routes and how that will change the power dynamics. These not only reflect the economic flow between countries but also give us a glimpse of the future hotbeds for

### New trade routes with melting arctic



Source: New York Times (PATEL & FOUNTAIN, 2017)

geopolitics. (Community, 2018)

### Speculating the Changes in International Norms and Coalitions

As new alliances take hold in efforts to curb climate change, a number of these are in the form of coalitions. Examples of such cases include the Climate and Clean Air Coalition, the Cartagena Dialogue, the Power Past Coal Alliance, the Renewables Club, the Carbon Neutrality Coalition, and the Friends of Fossil Fuel Subsidy Reform. Most of these coalitions are based on voluntary pacts as members coordinate their commitments in real-time social contexts and learn from each other. This is how climate change norms are formed but given it is very different from other coalitions on nuclear energy or human rights etc. it becomes a lot harder to determine what type of behavior and actions conform or deter from the norm. This thereby leaves room for hypocrisy and greenwashing. Examples of this include instances where nations or companies may, instead of exporting coals that have higher emissions, replace the activity by exporting gases that have lower emission rates, in the name of

combatting climate change. Or, in cases where to conform with the new climate norms, a state invests in renewable sources whilst simultaneously producing fossil fuels as a method of obtaining capital for the same (Sending et al., 2020).

Over a period of time, climate clubs may even emerge as forms of more aggressive coalitions. A climate club would be a form of alliance or trade bloc which would have a hard boundary against all states that are not a member. These non-members then would likely be subjected to various sanctions or other less-than-desirable factors relating to trade which would incentivize them to adhere to their rules and targets as well as eventually join the club. Another critical question to consider is whether climate clubs will spark counter-reactions in the form of counteralliances to oppose such international efforts to impose climate mitigation. Countries possessing vested interests in relation to large-scale coal consumption, oil exports, or the removal of rainforests for agricultural expansion are potential candidates for the formation of such aforementioned counter-alliances. (Sending et al., 2020).

## **CONCLUSIONS**

The world has come together to face the climate crisis we have today. But even after so much cooperation, there still are some challenges that hinders the progress. Given that climate change is creating more strain on our natural resources, there is an increase in competition between countries to acquire the energy reserves. With an increase in sea levels, new regions are also opening up which will likely create new trade routes. This will usher in a new race for regional dominance. Besides the likelihood of future problems, we face some great issues with existing systems.

Over time, the study of world politics has become increasingly pluralistic broadening both the historical perspectives and the geographical scope of the research in reference (Sending et al., 2020). Climate change provides a new focal point and challenges the existing discourse in International Affairs. Some territories may vanish, while vast portions of others may simply become uninhabitable, resulting in a complete shift of matters logic behind state security. Nonrenewable energy, which currently drives the global economy, will lose value, leaving many “stranded geopolitical assets.” (Sending et al., 2020)

## **Limitations**

The research study has some noticeable limitations. For the purpose of this research, secondary research design was chosen. This research type does not reflect the actual and updated data as it relies on previous studies and research. The data and stats that are added are not completely relevant as the research question posed for this research is fundamentally different from the sources. This is reflected in the form of skewed data and improper conclusions. Though while conducting research all the aforementioned factors have been taken into consideration to minimize the deviation from the actual observation.

## **Recommendations**

There is a non-willingness among big polluters and greenhouse gas emitting countries to curb GHGs emissions, as it would mean that they will have to change their development model.

From their perspective, this would be an unfavorable course of action as their objective is to squeeze as much profit as they can from a dying system of fossil fuel consumption. In addition, there is an exclusion of major developed countries from the discussions of climate action. Additionally, there are also world leaders who don't take climate change seriously. This was seen with Trump's move to withdraw from the Paris agreement. Politicians are also using it to further their political agenda as we have witnessed in the case of Biden's Campaign. The lack of seriousness of our politicians on climate change is threatening the very time frame for effective climate action. Furthermore, there is also the plight of developing countries as they demand new and additional financial resources to support climate change adaptation and mitigation. They require assistance in terms of technology as well. They can leapfrog all the damaging effects of fossil fuel consumption by incorporating renewable energy into their developmental process. This is only possible if we cooperate and share our technical expertise and knowledge to build a better future. It is in the interest of us all to use this opportunity to strengthen our international relations, and the time to act on climate is now.

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