

Forum: General Assembly 2

Issue: Protection of global climate for present and future generations

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Introduction

As Ban Ki-moon, the 8th Secretary General of the United Nations, so aptly put it, “the present generation is the last one that will have the ability to mitigate the worst impacts of climate change”. The consequences of inaction and failure to uphold what he terms as “our moral and historical responsibilities” will be undoubtedly severe.

Recognised as one of the major challenges of our time, climate change imposes external negative impacts on both global societies as well the environment. This has occurred increasingly over the past century in varied forms; from changing weather patterns that significantly impact agriculture and food production, to the steadily increasing sea levels which could potentially result in catastrophic flooding of low-lying land forms. With its severe negative impacts on all regions of the world, the global scope of the effects of climate change and its large scale current and future impacts, there is a dire need for actions to be taken to prevent this dystopian future becoming a reality.

While greenhouse gases, such as carbon dioxide, methane and nitrous oxide, are a natural occurrence that are in fact one of the means of sustenance of life on earth through their withholding of heat from the sun’s rays to make earth inhabitable, their increased concentrations have been scientifically linked universally with the rise of global temperatures on earth; a phenomenon termed as global warming.

The industrial activities, such as clear-felling forests, certain farming methods and combusting fossil fuels, on which the basis of modern civilisation exists has created a negative externality on global temperatures, increasing atmospheric carbon dioxide levels from 280 parts per million to 400 parts per million in the last 150 years. Although natural influences on increasing global temperatures have been identified, the Fifth Assessment Report of the Intergovernmental Panel on Climate Change, an international body of over 1300 scientific experts, arrived at the conclusion that the possibility of human activities having caused warming of the planet or ‘global warming’ over the past half century is over 95 per cent, a value that even disbelievers of the human impact on global warming, cannot trivialise.

Since the culmination of the Industrial Revolution in the 18th century, global human populations, economies and standards of living have been growing and as a direct result of this, a cumulative growth in the levels of greenhouse gases has also been established. With mean global temperatures rising steadily, so too is the threat of climate change increasing and humankind finds itself once more on the brink of catastrophic environmental disasters. As put by Barack Obama, the 44th President of the United States, “There is one issue that will define the contours of this century more dramatically than any other and that is the urgent threat of a changing climate.”

Definition of Key Terms

Greenhouse gases

Greenhouse gases can be defined as any gases that contribute to the greenhouse effect by absorbing infrared radiation. Common examples of greenhouse gases are carbon dioxide and chlorofluorocarbons.

Global warming

Global warming refers to the phenomenon of gradual increases in the temperature of the earth's atmosphere attributed generally to the greenhouse effect. The greenhouse effect has been established as being caused predominantly by increased levels of greenhouse gases such as carbon dioxide, CFCs and other pollutants.

Climate change

Climate change is the periodic modification of the Earth's climate and climate patterns, caused by internal atmospheric changes as well as interactions between the atmosphere and various other geologic, chemical, biological, and geographic factors within the Earth system. The phenomenon is generally accepted as being apparent from the mid to late 20th century due to the increased levels of combustion of fossil fuels, producing greenhouse gases.

Sustainability

Sustainability is the concept of the ability to develop at a steady rate through means that utilise resources that are renewable and do not damage the environment. Sustainable development is that which can support the “...needs of the present without compromising the ability of future generations to meet their own needs” according to the International Institute for Sustainable Development (IISD).

Intended Nationally Determined Contributions (INDCs)

When the Paris Accord was adopted at the U.N. Framework Convention on Climate Change (UNFCCC) Conference of the Parties (COP21) in December 2015, the countries involved made public declarations of commitments to post 2020 climate actions known as their Intended Nationally Determined Contributions (INDCs) in order to achieve the long terms goals of the Paris Agreement: to sustain global temperatures at well below 2°C, to make efforts to limit the increase to 1.5°C and to achieve net zero emissions in the second half of this century.

Background Information

Global climate change and its implications

2016 was documented as the hottest year ever recorded by the Environmental Defence Fund. With global temperatures rising steadily, the impacts of climate change are apparent in most fields from weather patterns to increasing sea levels which threaten the existence of low lying geographical regions.

Threat to agriculture and food production

The impact of global climate change is being suffered adversely by farmers and agrarian communities and economies due to unpredictability of weather patterns and water supplies. Climate change is creating the increasing likelihood of crops being attacked by weeds, diseases and pests, thus reducing yields. This could seriously impact global food production threatening food security internationally, as has been the case with Somalia where the decrease in rainfall has resulted in widespread famine leaving 6 million people facing shortage of food and drinkable water.

Impact on global health

Increasing of global atmospheric temperatures has been associated with the formation of ground level ozone, more commonly known as smog, especially in areas with higher levels of air pollution caused by factors such as combustion of impure fossil fuels. Smog has severe negative impacts on health through the irritation of lung tissue and has been known to trigger asthma attacks. Climate change is also responsible for a higher mortality rate due to extreme summer heat during heatwaves. The warming of freshwater bodies also encourages growth of disease causing agents such as bacteria, increasing the possibility of water contamination.

Impact on natural biodiversity

The acidification and expansion of oceans are caused by dissolving increasing amounts of carbon dioxide produced through the greenhouse effect. Approximately a third of carbon dioxide

emissions are absorbed by oceans, affecting the pH of the water. The temperature of oceans is also steadily rising due to the absorption of 90 percent of extra heat in the climate. This absorption of heat is causing oceans to expand. This is affecting coral populations, stripping them of their vivid colours, the most recent example of which is the bleaching of the Great Barrier reef of which 22 per cent is now classified as dead.

Responsibility to future generations

According to Ban Ki-moon, the 8th Secretary General of the United Nations, “We have a profound responsibility to protect the fragile web of life on this Earth for this generation and those that will follow. Future generations will judge us harshly if we fail to uphold our moral and historical responsibilities.” According to the UN Convention on the Rights of the Child (CRC), children as well as the generations to come deserve to live in a world that is healthier, more equitable, and which offers a sustainable future. Hence, the impact on future generations should be a central consideration to all negotiations and policy making decisions according to United Nations Children's Fund (UNICEF). The United Nations has recognised the need for climate change responses to initiate and implement long term sustainable solutions as a responsibility to present and future generations.

While the debate on climate change and its causes rages on, the influence of human activities in exacerbating the climate change crisis the world is currently facing is undeniable. Although there are several natural causes that are affecting increasing global temperatures, the Fifth Assessment Report of the Intergovernmental Panel on Climate Change established that humans are responsible for over 95 per cent of the global warming over the past half century alone, a value that even disbelievers of the human impact on global warming, cannot trivialise. However, there are many sceptics that deny the existence of global warming (trend sceptics), who claim that ‘global warming’ is simply a measurement error caused by urbanisation around weather stations, while others refuse to accept human activities as the cause for the trends noticed (attribution sceptics), claiming the increase in atmospheric carbon dioxide to be anthropogenic.

The only countries who have not signed the recent Paris Climate Change Accord are Syria, Nicaragua and the United States. While the former two remain to do this out of reservations over the agreement rather than the issue, the United States has denied implementing any climate change policies that they deem as hindering employment. Since most measures towards reducing global warming and preventing climate change involves reducing the production and combustion of fossil fuels, the United States refuses to move towards alternate fuel sources.

Major Countries and Organizations Involved

France

France has committed to phasing out coal power and increasing the renewable capacity of France by double by 2030. In addition, France has also proposed trade sanctions against countries in the EU that do not comply with the bloc's environmental standards. France's efforts in enabling the Paris Accord which was a major development in global policies on climate change, received great acclaim internationally. Additionally, France is also encouraging scientific research into methods of further reducing greenhouse gas emissions through government funded grants for both national and international researchers.

Sweden

Since their establishment of an environmental protection agency in 1967, Sweden was the first country to host a UN conference on the environment which ultimately led to the creation of the United Nations Environmental Programme, the leading global environmental authority till date. With the majority of their national energy supply coming from renewables and thorough legislation that aims at further reducing greenhouse gas emissions, Sweden accounts for less than 0.2 per cent of total global emissions. Despite their low contributions to climate change, Sweden has invested in development of increasingly efficient policies to further reduce the impact of climate change through extensive scientific research amongst other means.

China

Greenhouse gas emission levels in China have been a concern for many years; China has been the world's largest emitter of greenhouse gases since 2006 according to the Centre for Climate and Energy Solutions. After they ratified the 2009 Copenhagen Accord, China aimed to reduce emission intensity by 40-45 percent from 2005 levels by 2020. In Beijing in November 2014, China committed to a goal of reducing carbon intensity 60-65 percent below 2005 levels by 2030. In addition to this, China aimed at peaking greenhouse gas emissions by the same time and also to develop non-fossil sources of energy as at least 20% of total energy consumption. These goals were included into its intended nationally determined contribution (INDC) as part of the Paris Accords in 2015.

United Nations Framework Convention on Climate Change (UNFCCC)

The UNFCCC was formed by the efforts of countries in 1992 to collaboratively participate in an international treaty as a framework for international cooperation to fight climate change. This was aimed at by limiting average global temperature increases and its resultant effect on climate change and to mitigate the effects of climate change that were irreversible and had already caused damage. The secretariat of the UNFCCC is concerned with the support of institutions involved in international climate change negotiations, with special attention to the Conference of Parties and its subsidiary bodies.

Intergovernmental Panel on Climate Change (IPCC)

The IPCC is an international organisation concerned with the assessment of climate change, established by the United Nations Environment Programme (UNEP) and the World Meteorological Organization (WMO) in 1988. The aim of this organisation is to present clear scientific viewpoints on the status quo and the knowledge of climate change and its potential environmental and socio-economic impacts on the world. 195 countries are currently members of the IPCC.

Timeline of Events

Date	Description of event
12 th February 1979	1 st World Climate Conference takes place in Geneva.
1988	Establishment of the Intergovernmental Panel on Climate Change (IPCC)
1992	The United Nations Framework Convention on Climate Change (UNFCCC) is signed at the Earth Summit in Rio.
1994	The UNFCCC is implemented.
11 th December 1997	Kyoto Protocol which legally binds developed countries to emission reduction targets is adopted at the 3 rd Conference of the Parties
2001	Adoption of the Marrakesh Accords at the 7 th Conference of the Parties establishing rules for implementation of Kyoto Protocol and additional funding and planning agencies to create a technology transfer framework.
2005	Kyoto Protocol comes into action.
2007	The IPCC's Fourth Assessment Report is published.
2009	Drafting of Copenhagen Accord at the 15 th Conference of the Parties in Copenhagen
2012	Ratification of the Doha Amendment to the Kyoto Protocol establishing the 2 nd commitment period of the Kyoto Protocol
1 st December 2014	Lima Climate Change Conference occurs (20 th Conference of the Parties)
4 th November 2016	The Paris Agreement enters into force after being ratified by 55 Parties to the Convention.

Relevant UN Treaties and Events

- Protection of global climate for present and future generations of mankind, 6 December 1988 (A/RES/43/53)
- Protection of global climate for present and future generations of mankind, 22 December 1989 (A/RES/44/207)

- Protection of global climate for present and future generations of mankind, 22 December 1992 (A/RES/47/195)
- Kyoto Protocol to the United Nations Framework Convention on Climate Change, 11 December 1997

Previous Attempts to solve the Issue

The Cancun Agreements of the 2010 United Nations Climate Change Conference were a key step in accelerating the global response to climate change in the long run. Through the adoption of these agreements, the aim was to develop comprehensive plans in protecting developing nations from the adverse climate impacts in order to ensure their sustainable future. This was also the largest collective effort to reduce greenhouse gas emissions in a manner that was mutually accountable.

The Durban Platform for Enhanced Action was drafted and ratified in 2011 through which governments identified and acknowledged the need for a fresh universal, legal agreement concerning climate change beyond 2020 in the implementation of which all member nations should be involved in order to be able to reap the benefits of the success together.

Goal 13 of the Sustainable Development Goals of 2012 was created to take urgent action to combat climate change and its impacts. Its main targets are to integrate measures to prevent climate change as part of a nations policies and planning as well as to improve education and awareness of climate change mitigation, adaptation, impact reduction and early warning. Goal 13 aims at promoting measures to increase the efficacy of climate change related planning and management in developing nations with a special focus on women, youth and local and marginalized communities.

The most recent action on combatting climate change, the Paris Climate Change Accords led to nations such as France committing to a ban on the sale of fossil fuel (petrol and diesel) powered vehicles by 2040 in order to achieve the terms of the accord. Such declarations have also been made by India who has announced to achieve the same by 2032 and Holland who plans to implement the ban by 2035. These commitments by nations to eliminate a significant source of greenhouse gas emissions have been a significant step forward towards reducing global climate change. These measures have been supported by the Green Climate Fund (GCF) which aims at assisting in the adaptation and mitigation initiatives in countering climate change in developing countries. The Green Climate Fund aims to raise \$100 billion a year by 2020.

Possible Solutions

Promotion of renewable energy and biofuels

Renewable energy has the potential to become one of the most effective tools against climate change since the cost improvements and growth over the past decade. With prices decreasing, renewable energy is becoming increasingly competitive with fossil fuels. The benefits of investing in renewable energy are apparent in countries such as Sweden which has become a leading investor in clean energy technologies, including biofuels, smart grids and carbon capture and storage. The effective implementation in renewable energy or clean energy technologies through investment by governments and NGOs could positively impact the climate change situation by reducing the rate of production of greenhouse gases.

Reduction of carbon dioxide emissions from cars

Shifting from motor vehicles fuelled by fossil fuels such as diesel and petroleum, towards for example, electricity powered vehicles could be the factor that tips the scale of the global climate change crisis. The results of the Paris Climate Change accord resulted in member nations committing to this transition from fossil fuel powered motor vehicles towards more sustainable sources such as hydro-electricity or solar powered electricity through their INDCs. This shift could entail significant reduction of carbon dioxide emissions, especially in countries where private transport is more commonly used for transportation.

Recovery of gases from landfills

There is a scientific consensus that waste disposal operations such as landfilling, incineration without energy recovery and other treatment operations, such as composting, causes generation of greenhouse gases. Hence, diverting the amount of waste disposal in landfills to energy recovering facilities where they can be used in energy generation from waste. As a result, greenhouse gas emissions from landfills would automatically decrease while the amount of fossil fuels used in energy generation would also decrease due to the new energy source.

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