

## **Social dimension, Impact of climate change and menace on the vulnerable groups.**

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### **INTRODUCTION**

An undeniable truth of life is change. from ushering in the industrial revolution to conquering outer space humanity has progressed a lot. Unfortunately, this progress is just one side of the coin. Our dramatic rise on the planet earth is not without problems. One such cost associated with rapid human activity is climate change. We have managed to alter climates, we live in more dramatical condition than the environment can keep up with. The average surface temperature across the globe increased by 0.6°C over the past century as per the Third Assessment of Intergovernmental Panel on Climate Change (IPCC 2001). These numbers have merely gone up. As per the World Meteorological Organisation's (WMO) State of Global Climate Report 2021, the past seven years have been the warmest on record.<sup>2</sup> From 0.6°C, the global temperature has increased to 1.11°C in 2021 as per the WMO's findings. One thing that can be said for certain is this alteration of climate and climate change is going to increase even more dramatically in the coming years.

Unfortunately, climate change is not a singular activity instead it's a global phenomenon that has altered our life support systems in ways unimaginable. Whether it is the gradual rise of global average sea level, increased frequency as well as the intensity of droughts, storms, wildfires, floods, and other climatic events, or even increase in perspiration, these changes we have brought upon ourselves are dramatic, to say the least. For us right now time is at a premium. The human-induced climatic changes have presented themselves as a variety of climate-related calamities. Whether it was the raging tsunami in Japan or the wildfires that ravaged Australia, humanity is paying for these changes quite dearly. The general human population is at risk. However, the risk of the vulnerable groups to climatic change is the greatest. They are the ones that are hit the worst. It is a major threat to the security, well-being and development of vulnerable groups. Therefore, the need of the hour is to fully understand the effects of climate change on the vulnerable groups and the steps that can be taken to address this situation. Time is at a premium and unless we make an effort right now the effect of climate change is bound to worsen. This paper aims to understand what vulnerability means, the global havoc caused by climate change and the need for constructive responses.

### **UNDERSTANDING VULNERABILITY**

A rudimentary understanding of climate is the average weather. Article 1, of The United Nations Framework Convention on Climate Change (UNFCCC), defines climate change as, "A change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods."<sup>3</sup>. As per the Third Assessment Report submitted by the IPCC,

<sup>2</sup> <https://public.wmo.int/en/media/press-release/state-of-climate-2021-extreme-events-and-major-impacts>

<sup>3</sup> [https://archive.ipcc.ch/pdf/special-reports/srex/SREX-Annex\\_Glossary.pdf](https://archive.ipcc.ch/pdf/special-reports/srex/SREX-Annex_Glossary.pdf)

vulnerability is defined<sup>4</sup> as, "The extent to which climate change may damage or harm a system; vulnerability is a function of not only the system's sensitivity but also its ability to adapt to new climatic conditions." To further understand this definition, understanding the meanings of sensitivity and adaptability are needed. Sensitivity is defined<sup>5</sup> in the same report, as, "The degree to which a system will respond to a change in climatic conditions (e.g., the extent of change in an ecosystem's composition structure and functioning including net primary productivity, are resulting from a given change in temperature or precipitation)." The definition of adaptability is also given here. Adaptability is referred to as, "The degree to which adjustments are possible, the practices, processes, or structures of systems to projected or actual changes of climate; adaptations can be spontaneous or planned, and can be carried out in response to or in anticipation of changes in conditions."

An inclusive definition of those who belong to what is classified as a vulnerable group includes social groups with limited resources, and a relatively higher risk for morbidity as well as premature mortality Flaskerud and Winslow, 1998<sup>6</sup>. This includes children and the aged, displays the population of persons with disabilities, those suffering from chronic illnesses, and ethnic minorities Eichler and Burke, 2006<sup>7</sup>.

When you combine all the definitions mentioned until now, one thing becomes extremely clear and that is the variability and sensitivity of human societies toward climatic change is not the same. There are different factors that shape this overall variability including preparedness, access to resources and wealth, knowledge and technology, institutional capabilities, and infrastructure. Our endowment of all these assets is incredibly varied and it paints a picture of staggering inequality. For instance, the vulnerability of developing and especially underdeveloped countries is exponentially high when compared to developed ones. These vulnerable regions are, therefore, at the greatest loss. They are also the most likely to bear the brunt of the negative effects of climate change. Now, this is just a broad understanding of how different human life is. However, this can be further broken down to an individual level. Certain communities, societies and groups of individuals are at a greater level of vulnerability than others.

#### CLIMATE CHANGE — A GLOBAL THREAT TO THE VULNERABLE

Climate change is a global threat no doubt but it is a bigger threat to the vulnerable population. Climate vulnerability, climate risk vulnerability, or climate change vulnerability are all terms that refer to the predisposition or propensity to be adversely affected by climate change in any form. This is not only applicable to natural systems or ecosystems but humans as well. Our ability to cope and adapt to plan a change as well as our sensitivity and susceptibility to harm the above-

<sup>4</sup><https://www.google.com/search?q=The+extent+to+which+climate+change+may+damage+or+harm+a+system%3B+vulnerability+is+a+function+of+not+only+the+system%E2%80%99s+sensitivity+but+also+its+ability+to+adapt+to+new+climatic+conditions.%27%27&oq=The+extent+to+which+climate+change+may+damage+or+harm+a+system%3B+vulnerability+is+a+function+of+not+only+the+system%E2%80%99s+sensitivity+but+also+its+ability+to+adapt+to+new+climatic+conditions.%27%27&aqs=chrome..69i57.2304joj7&sourceid=chrome&ie=UTF-8>

<sup>5</sup><https://www.google.com/search?q=IPCC%2C+vulnerability+is+defined&oq=IPCC%2C+vulnerability+is+defined&aqs=chrome..69i57j33i22i29i30.468joj7&sourceid=chrome&ie=UTF-8>

<sup>6</sup>[https://journals.lww.com/nursingresearchonline/Abstract/1998/03000/Conceptualizing\\_Vulnerable\\_Populations.5.aspx](https://journals.lww.com/nursingresearchonline/Abstract/1998/03000/Conceptualizing_Vulnerable_Populations.5.aspx)

<sup>7</sup> <https://link.springer.com/article/10.1007/BF03405218>

mentioned are all included in the concept of climate change vulnerability. Vulnerability is not constant but it is quite static within communities and across different societies, countries as well as regions. This keeps changing from time to time. billions of people across the globe are highly vulnerable to climate change as of 2021.

From unsustainable use of natural resources to unsustainable development coupled with inequity and wide marginalisation as well as historical and current patterns of equity in terms of governance or colonialism are all associated with vulnerability of certain individuals or groups of individuals of some communities.

These vulnerable groups are classified into two important categories based on the cause of vulnerability. They are economic vulnerability and geographical vulnerability. Neither is mutually exclusive and instead, they go hand in hand and fuel each other.

A rudimentary understanding of economic vulnerability is certain communities are economically vulnerable or ill-prepared to deal with the effects of climate change. they lack the required financial resources to deal with this. For instance, those living under or close to poverty are at a greater risk of loss of livelihood as well as lives to climate change than the wealthier sections of the society.

Similarly, some groups are more vulnerable to climate change due to their geographical location. For instance, those residing in areas that are vulnerable to climate change will be hard hit by its side effects such as natural disasters. The most common defining characteristics of vulnerable communities include food insecurity, scarcity of water, and a primarily ecosystem dependent lifestyle. For instance, rural communities that heavily rely on natural resources or agriculture for livelihood are the hardest hit by climate change. That said, vulnerability is not just restricted to all this.

The disadvantaged groups are the worst affected by climate change. To understand the full effect of this phenomenon on the vulnerable, understanding its association with poverty, indigenous peoples, and gender is needed.

## **Climate Change and Poverty**

Over the last couple of decades, progress has been steadily made to lift millions of households out of poverty. Unfortunately, all this progress can be undone within the next couple of years due to climate change and natural disasters caused by it. Some estimates believe there will be over 100 million people that will be pushed into poverty across the globe within the next decade. There are also concerns about rapidly reducing GDP per capita between the rich and the poor countries. There are three primary reasons why climate change and poverty are intricately interconnected. This link cannot be overlooked anymore.

Poorer countries, regions, and individuals are left greatly exposed to climate change and its impacts when compared to their wealthy counterparts. The second reason is they end up losing a greater share of their amassed wealth whenever a climate-related shock hits them. And finally, the resources at their disposal to cope with the negative effect of such climatic changes are extremely few. These factors not only leave the poor vulnerable but increase their poverty as well. This inequality crisis not just threatens their livelihood but economic growth while promoting inequality in society.

## Climate Change and The Indigenous Peoples

The effect of climate change is extremely disproportionate to the indigenous peoples across the world when compared to the non-indigenous ones. This effect is particularly noticed in association with the environmental health and wellbeing of these communities. A variety of indigenous communities are found around the world. One commonality between all of them is that their livelihoods are closely associated with the immediate environment and their access to natural resources. Climate change magnifies the difficulties faced by the indigenous communities. Whether it is economic or political marginalization, violation of human rights, unemployment, discrimination, or even loss of resources and land, they are one of the hardest hit.

For instance, rising temperatures due to an expansion of dunes and high-speed winds have resulted in the displacement of indigenous peoples of Africa's Kalahari desert. These factors that were described here are all the negative effects of climate change. Unfortunately, it resulted in a loss of vegetation which impacted their primary source of livelihood of theirs — cattle and goat farming practices. Now, these indigenous peoples are forced to live around government drilled wells for obtaining water and depend on the support the government offers for their survival. In this process, their basic right to survival itself was threatened.

Similarly, the indigenous people belonging to the Arctic region primarily depend on hunting walrus, polar bears, caribou, and seals along with herding reindeers and fishing for their livelihood. This is not just a means of their livelihood but also a part of their culture as well as social identity. The availability of these traditional food resources is not only lessening but the changes in weather conditions have become a serious challenge to their sense of food security too. This coupled with the rapidly melting ice caps in the Arctic region has threatened their livelihood and way of life. These stories are not restricted to just the communities discussed here. Instead, this is a tale that's repeated by all indigenous groups across the world. Climate change has threatened not just their livelihood but their lives in general.

## Climate Change and Gender

The effect of climate change is disparaged between men and women. This is due to the differences in the social construction of gender-related rules and regulations that exist in society. The scope of gender inequality has further increased with climate change. It is believed to have reduced the ability of women to become financially independent and has also harmed the social as well as political rights of women, especially in economies that rely heavily on agriculture. In most cases, this gender inequality renders women more vulnerable to the problematic effects of climate change. This is associated with gender roles, especially in the developing world. It refers to a scenario where women obtain their livelihood and sustenance by depending on the natural ecosystem. The constraints which reduce the access of women to social, physical education, political, traditional, and physical resources has magnified the burden of the effect of climate change and then. gender-based inequalities are also in existence in terms of causation as well as response to climate change.

## A Reason For Displacement

Apart from the effect on the disadvantaged groups that were discussed above, climate change also has a significant role to play in terms of displacement. Natural disasters caused by climate change are likely to worsen global poverty and hunger along with our access to natural resources. This, in turn, can stoke the fires of instability as well as violence. irrespective of the geographical

borders or the extreme weather event that has occurred those who are the worst hit are the ones least equipped to recover and adapt. Weather emergencies have forced more than 21.5 million people on average to move every year since 2010. This is massive global displacement. as per the United Nations High Commissioner for Refugees (UNHCR) Nations<sup>8</sup> a majority of refugees are usually from countries that are highly vulnerable yet least prepared to deal with the effect of climate change. These countries are also hosting a significant percentage of the population that's been displaced by either wars or conflict. For instance, Afghanistan has 34 provinces and most of them have been hit by at least one natural disaster or the other in the last three decades. This is an example of just one country. All this coupled with their long standing conflicts has resulted in the death and injury of thousands of lives over the years leaving millions displaced.

Population growth when coupled with recurring climate-related problems has increased the problems of food and water scarcity. These are reasons enough for displacement. Unfortunately, the ones displaced due to these problems are also amongst the most vulnerable. For instance, over 870,000 Rohingya refugees who fled violence and were fearing for their lives are now in Bangladesh and are exposed to distress associated with natural disasters such as flooding and cyclones that have become increasingly frequent.

Climate change can not only trigger displacement but also worsen the living conditions as well as hamper the return of those who are already displaced. Whether it is limited access to important resources such as drinking water or even crops and livestock that struggle to survive, these factors threaten the livelihoods of those affected. The Global Compact of Refugees that was affirmed by the UN General Assembly in 2018, recognizes that "Climate, environmental degradation and disasters increasingly interact with drivers of refugee movements."<sup>9</sup>

#### NEED OF THE HOUR — CONSTRUCTIVE RESPONSE

Taking into consideration all the environmental perturbations as well as the stressors of climate change is just one part of the equation. The need of the hour is to focus on making positive strides in the form of constructive responses to the global problem. For instance, the Kyoto Protocol has made significant inroads in terms of reducing emissions and incorporating changes to help secure this benefit in an economically efficient way. until now, most steps that have been adopted by nations are based on a no-regret, co-benefits, and a flexible approach to tackle the problem of climate change co-benefit approaches are designed such that they help reduce emissions without compromising on the desired benefits to be obtained. For instance, they involve practices that promote better land utilisation, fuel-efficient transport systems, promotion of energy efficiency and curbs to tackle air pollution. A no-regrets approach promotes emission reduction at negative

<sup>8</sup><https://news.un.org/en/story/2021/04/1090432#:~:text=Climate%20change%20is%20driving%20displacement,to%20flee%20even%20more%20vulnerable.&text=The%20country%20is%20also%20ranked,of%20people%20and%20displaced%20millions>

<sup>9</sup> <https://www.unhcr.org/climate-change-and-disasters.html>

costs. On the other hand, flexibility mechanisms are designed to ensure any interventions that are made to tackle this problem go on smoothly, are highly efficient and cause minimal social disruption. When all these efforts are put together, it helps create a global policy to stabilise the climate. However, this is one of those things that is easier said than done.

Unfortunately, it's no longer restricted to simply reducing emissions or dealing with global warming. These are important but this is not the only problem at hand. Instead, the strategies created for dealing with climate change must be based on the differential vulnerability of the human population. We need equitable risk management to tackle climate change. We also need a comprehensively detailed policy to fight climate change. Humanity needs to unite and protect its most vulnerable while fighting climate change. Some primary elements that require immediate focus are as follows.

### **Focus on Sustainability**

The past cannot be undone however, the present allows us to create a better future. Therefore, it is our collective responsibility to ameliorate vulnerabilities to climate change. This should be a part of a broader and global transition process to create a world that is more sustainable. Increased cooperation of resources, as well as adaptive capacity between the nations, will protect vulnerable societies in general. Doing this is needed to ensure the condition of the vulnerable populations doesn't decline any further. Focusing on wide-ranging socio-economic developmental programs along with steps taken for creating a sustainable future will create positive action.

### **Deal With Poverty And Inequalities**

Poverty is an evil by itself. Sustainable development is impossible if the basic needs of the societies are unmet. Extending an opportunity to all humans to fulfil their aspirations and need for a better life will bring us a step closer to fighting poverty and existing inequalities. A world riddled with poverty is prone to more ecological and climate-related catastrophes. By focusing on reducing existing inequalities and poverty whether, through financial, developmental or educational programs, commitment is needed. Greater funding by nations collectively for this cause is needed.

Some of the strong predictors of vulnerability to global climate change include lack of sufficient infrastructure, poor financial services, and insufficient healthcare and social protection. The poorer the communities, the greater is the effect of climate change on them. Therefore, we require the institutional, financial and technical resources which will help the highly vulnerable populations adapt to this ever-changing world.

### **Keep The Technology Flowing**

One point that cannot be overlooked is the need for global cooperation. One point that's been repeatedly harped on by all summits or committees formed to analyse the problem of climate change and its effect is the need to keep the technology flowing. It's about the transfer of required and helpful technologies from developed countries to developing nations. By broadening the technological resources and capabilities available at our disposal, we can undoubtedly promote social development at the grass-root level. By taking care of our vulnerable sections, we will be better equipped to deal with this problem.

## **Governance And Institutions**

We require a bottom-up approach to reduce vulnerability within economies. Developing a strong civil society by strengthening local institutions and governance will come in handy to achieve this objective. Focusing on the areas where the vulnerable reside can be achieved only through effective governance policies. Some individuals and groups of individuals have been grouped as minorities and catering to their basic needs is the responsibility of different governments and institutions. We require a system of governance that thoroughly articulates and addresses the needs of the vulnerable.

Climate change affects different economic sectors. It is complicated enough when it affects one sector but when it affects all, strategic planning is needed at the highest level possible. governments need to focus on managing the effect of climate change on a macro level and manage these risks. diversifying and modifying the existing economic structure can help achieve this goal.

## **Bridge The Knowledge Gap**

The access needed to knowledge and information associated with climate change is predominantly restricted to the wealthier nations. A lot can be done to ensure there is better participation of developing countries in adopting and implementing a global regime put in place to tackle climate change. Vulnerability in this context is mostly associated with what happens in particular places to certain people in specific local cultures. better education and social reforms are needed to ensure such populations are also educated about this problem. Active participation of those whose livelihoods, as well as wellbeing, are at stake is needed. New and better assessment procedures and techniques are needed to ensure the vulnerable groups are made resilient enough to survive the problems associated with climate change. After all, the right to life is the basic human right guaranteed to all humans regardless of our age, creed, sex, or any other demographical factor. securing this right becomes easier once we bridge the knowledge gap.

## **CONCLUSION**

the social dimensions of vulnerability to climate change can no longer be ignored. This is one problem that hasn't received sufficient attention in the past but focusing on it right now is the need of the hour. It is our collective responsibility to especially consider the effects of climate change on vulnerable groups. Not doing this increases the risk of excluding them from global adaptation processes which further worsens their existing vulnerability. A multifaceted approach at different levels is needed to address this problem. Most of the dimensions of human well being affected by climate-related hazards are inadequately addressed or captured by current approaches to dealing with climate change. Due to this, some groups are at a greater disadvantage.

It is the single biggest threat humanity is facing. When it comes to climate change, taking positive and constructive action is needed. Global conviction and commitment are needed to address this issue at the earliest and not allow it to worsen any further. After all, we have inherited the world we live in from our ancestors. It is our moral and ethical obligation to our future generations to ensure we don't leave behind a wasteland. The impacts of climate change are here and rapidly increasing. There is no silver bullet to deflect this problem. Instead, the focus must be shifted to proactive and robust actions taken right now to reduce the severity of the problem, especially for the vulnerable groups.