



The Climate Change Impacts: “There is no Planet-B”

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Abstract

In present world there are people who deny the real climate science although they face climate change impacts. Every day, every single seconds the climate change plays devastation role on the planet putting the future earth on crisis. Although, the scientific steps were taken to control the global warming responsible for climate change, we still need prevention theory to halt future effects. The subsequent impacts have been affecting areas like Ecosystem, Livelihood, food, International relation, Security, Economy, life. Hence Addressing its unpredictable impacts and Adaptation policies are the inevitable task for the global community. Moreover, paramount for the future developing countries, urban and Island communities who will be facing more vulnerable in future. So this article will be discussing few impacts and future possible impact of Climate change consequences.

Introduction

“Global warming”, “Climate change” and “catastrophe” are the ubiquitous threat for the 21st Century. Once the physicist Dr. Stephen hawking quoted “human should leave the earth in 600 years” otherwise there would be great loss for the human Community. Although, his statement seems quite afraid and astonishing but if we consider the recent climate change and its impact across the world we may have to agree with his assumption. One of the distressing news in recent time is the ‘global climate’ has changed dramatically with uncontrolled growth. The global average temperature has increased due to the anthropogenic emission of CO₂ into the atmosphere. The concentration of main greenhouse gas CO₂ in the atmosphere has now reached unprecedented levels (~409 ppm) [1]. Due to the fact, last two decades of 21st century faced frequent disasters fueled by global warming. Several billion dollars of economy lost and millions of people around the world have been killed due to severe climate change impact. Notably, South Korea had experienced historical summer in 2018 for the first time in 111 years. The summer temperature has reached over 40°C and 42 people have been killed due to the dangerous heat wave across the nation [2]. It was not the only case in Korea, even in japan and other continents in Asia had faced the same vulnerability by heat wave [3,4].

The number of flood and wildfire in the American continents have also increased in recent times which severely damaged the local biodiversity and livelihood. According to California department of forestry and fire production the year 2018 is most destructive wildfire season on record. The total number of 7,983 fires burned around 1,824,505 acres of forest. The fires have caused more than \$2.975 billion in damages including \$1.366 billion in fire suppression costs [5,6]. Moreover, number of climate change catastrophe impacts in southern India have also increased. In 2015, Chennai one of the south Indian city have faced severe flood and killing more than 200 people.

Also, Southern Indian state Kerala has faced historical flood in 2018 due to unusually high rainfall during the monsoon season. More than 400 people had been killed and caused \$2.7bn worth of damages. The recent “Gaja” cyclone and subsequent heavy rain created havoc in Tamil Nadu’s Cauvery delta districts and Puducherry. Cyclone “Gaja” made its landfall with wind speeds of 120km per hour, leaving behind a huge trail of destruction in the districts of Nagapattinam, Thanjavur, Tiruvarur, Pudukottai, Dindigul, Trichy, Karur, Sivagangai, Ramanathapuram, Cuddalore in Tamil Nadu and Karaikal in the Union territory of Puducherry, India [7]. According to Tamilnadu state government estimates, 170,454 trees and 39,938 electric poles were uprooted, while over 100 cattle and 600 goats were killed by the cyclone. The number of draught has also increased across the world. Notably Africa’s ‘cap town’ the first ever city leading to “Zero water” putting life crisis for civilizations [8]. sea level increment was devastated issue for the Kiribati and many other pacific Island communities. Recently, due to heavy typhoon one of the Japanese Uninhabitable Island has been submerged.

Last IPCC climate change conference held in south Korea has delivered a dramatic and extraordinarily serious warning. Highlighting the urgency to reach the targets mentioned in the Paris agreement quicker than planned. As per the Paris Agreement, the participant countries signed a deal to keep global temperatures between 1.5°C and 2°C [9]. According to the report limiting the global warming to 1.5°C would need far reaching and unprecedented changes from all the society. So now, the Science and Humanities policies are the only key to address future Climate change vulnerability.

Future impacts by Climate change

- Agriculture, Food Security, Biodiversity
- Wildfire, flood, displacement
- Insecurity of Water, food, Air
- Ocean acidification, tropical disease
- Technology and Transport crisis
- Global Economy destruction
- International relation and peace
- Sea level increment
- Global war (3rd)
- Deadly heat wave, heavy rain
- Birth rate and population
- Political party’s agenda

Agriculture and livelihood

The impacts of climate change on agriculture and ecosystem is major crucial and which should be highly addressed. Since every living species on earth depends on “food-chain”, without the contributions of

other external organism we cannot even breath. loss of any species directly or indirectly affect entire biodiversity system. If there is no water there may not be much possibility for crop cultivations, then there will be crisis for food and its security. If there is crisis for food there would be more poverty which would cause killing trillions of people who live below the poverty line. The vulnerability of climate change on water management cause water demand and affects water cycles. Water resources are essential for agriculture, energy conversion, manufacturing, and drinking. Countries like India mainly depends on rain water and water bodies for the rice and other crops production. During 18th centuries it was said that people in south India were mainly depended on the rain water for cultivating rice and additionally had harvested thrice in a year. The food was eaten by the people and other parts of the paddy had been given to the animals. The animals were frequently supporting for the agriculture and cultivating performances.

This is how the biodiversity, ecosystem, livelihood was maintained in those days. But now the scenario is entirely different, the amount of rain fall has productively shortened sometimes facing heavy rain, heavy draught damaging the cultivation [10]. It has been much complicated issue across south India especially crop cultivating areas. Due to the insufficient water for agriculture many has left cultivating rice, the economical poverty of the Indian farmers provoked them to face mental health issues. The report suggests that over 60,000 Indian farmers have been committed suicide because of low crop yield, and drought. also agricultural depended animals have lost their live [11]. The continues drought killed many of the soil worms, flies, plants disturbed many habitats. Moreover, the recent research by Matthew RS, Samuel SM [12] suggested that anthropogenic CO₂ not only lead to global warming also affects the nutrition of crop. Based on their assumption of population and future elevated CO₂ could cause 175 million people to be zinc deficient and 122 million people to be protein deficient. If it continues further, after 50 or 60 years the food for living community on earth will be diminished. The same issue would increase serious loss of human society across the earth. So agricultural adaptation for the food cultivation and food security is outstanding policies for the millions of diversities.

Economy and transportation

Economy and Transportation crisis are the very distinct issue we are facing by climate change. As mentioned above heat waves, hurricanes, floods, wildfires, Cyclones, always vanish the global Economy. Every year billions of dollars of damages arise making the poor countries even more devastation. In a recent report by Keith Wade [13], Chief Economist and Strategist and Marcus Jennings, Economist clearly stated the impact of global warming on the global economy. Based on the World Bank report, highly vulnerable regions in the emerging world are Sub-Saharan Africa, South and South East Asian Continents. In South Asia, Indian cities such as Kolkata and Mumbai will face increased flooding, warming temperatures and intense cyclones. Loss of snow melt from the Himalayas will also reduce the flow of water into the Indus Ganges and Brahmaputra basins. Meanwhile in South East Asia, Vietnam's Mekong Delta, which produces most of the country's rice, is especially vulnerable to rising sea levels. For Sub Saharan Africa, food security will be a major challenge due to droughts and shifts in rainfall. The prediction would directly have impact on people Economy who depends on agriculture.

Consequences of climate change affects from a normal road, submarine to spacecraft. To be noted, the incident happened in Australia arose considerable challenging for future roadways. Due to

the high temperature in Australia, India [14] and UK the normal roads were melted and some of the heavy vehicles (trucks) were stucked on the road [15,16]. The reason is very clear; many of the highways and rural roads were made up of using "Asphalt" chemicals. These asphalts are side products produced from the refineries which are having ability to melt as the temperature reaches beyond. Since the summer temperature reaches close to the melting point cause deformation of the Asphalt. So here is the challenging task for future asphalts roads across the globe during high heat wave. The governments frequently use the same "Asphalt" chemicals to build road ways which may lead to big trouble if the temperature of road increases. Because if the transportation blocked due to the inconveniency there will be huge traffic could lead to loss of Economy and human live. Since snowing has been increasing every year in the cold countries the transport adaptation for those countries could be very difficult in upcoming years. The unstoppable heavy snowing increased number of accidents and damages. Carrying high boiling point chemicals and even fuels may be much difficult if temperature of air increases.

Intra and International Peace

As long as, the vulnerability of climate change increases it would directly affect the availability, the quality, quantity and access to available natural resources. Notably water, land, forests, food, habitat. When the supply cannot meet required demand will lead to instability and even violent conflict where there are no adequate management institutions or dispute resolution mechanisms in place. In the worst case, natural resource competition can contribute to regional instability or civil conflicts. Climate change increases the human insecurity of people who dependent on natural resources for their livelihoods. Because of insecurity the affected people will plan to seek out alternative, illegal sources of income, which in turn can also drive conflict. Due to the lack of available resource the victims would provoke the government to address the migration. If there is not proper policy for the migration and people will get anger which would affect political and international relationship. So the future of any political government is entirely depends on how the current government address the climate change impacts.

As mentioned in the impact on Agricultural and farmer's livelihood sharing the resources would be the major issue. When one particular region affected by climate change whereas other region being safe would also influence the conflict. The higher temperature will provoke global migration. Policies to address issues related to climate induced international migration would be more efficient if focused on the agriculture dependent countries. Since the rising temperature affects the livelihood of farmers they will seek to migrate to other places for living and finding the future [17].

Conclusion and Summary

Impact of climate change has variety of vulnerability on earth. Few of them has been recorded and few them are still unknown. However, the research on future adaptation to resilient those impact is highly needed for upcoming generations. Even though the climate change caused by human activities on earth, the adaptation and migration research may save billions of billions livelihood/ habitat/resources/ Energy/ Economy on earth ...Earth too.

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