

Repercussions of Climate Change on Global Economy

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Abstract: There is no doubt that climate change is one of the alarming concerns of the world. It can be the prime reason behind prospective devastation of the globe. Owing to rapid climatic variations, there has been paradigm shift in the global financial system. This paper evaluates the causative factors behind such transformation in global economy owing to climate change. It further examines about the natural calamities and catastrophes detrimental ramifications on disaster affected zones and how this lead to the shrinking of economy. Furthermore, this research indicates why state should opt for solid roadmap to endorse modern resilience system to avert any deprivation in economy. The methodology followed for this research that four quality books of foreign authors were studied meticulously and five quality research papers were reviewed. The results of this analysis are that Disaster management institutions are not executing the tasks efficiently and are not provided with adequate machinery to minimize financial imbalance, modern resilience system is deficient and there is a dearth of structural adjustments such as auditing and monitoring in NGOs. Likewise, some substantial recommendations such as modern rehabilitation and reconstruction framework should be originated, advanced resilience system should be introduced and promulgation of laws is required.

Keywords: Climate Change, Global Economy, Resilience System, Financial system

I. INTRODUCTION

Climate Change is one of the gravest concern which has hampered the progression of globe. These climatic patterns play crucial role in maintaining of natural ecosystem of life. There are two main causative factors behind climatic variations. One of them is natural and other is anthropogenic. The natural causative factors are ocean currents, the earth's orbital changes and solar variations. While, the anthropogenic are industrial activities, large scale production and non-renewable energy sources. According to the fourth national climate assessment report produced in 2018, which apprised that if we do not put constraints on greenhouse gas discharge and be ready to adapt, climate change could gravely shatter the global economy (National Geographic report, 2019). Hot temperature, sea intrusion and harsh weather will devastate external property and indispensable infrastructure, affects human health and productivity, and negatively affect important sectors like agriculture, forestry, fisheries and tourism (Food and Agricultural Organization report, 2017). A contemporary case study on USA evaluates how climate change could impact 22 various sectors of the economy under varied scenarios. The study forecasted that if the higher-temperature scenario prevails, climate change impacts on these 22 sectors could cost the U.S. \$520 billion each year (Renee cho, 2019). But through mitigation strategies, if we can maintain it to 2.8° C, it would cost \$224 billion less. So, one can gauge that climatic variations can have negative ramifications on global economy.

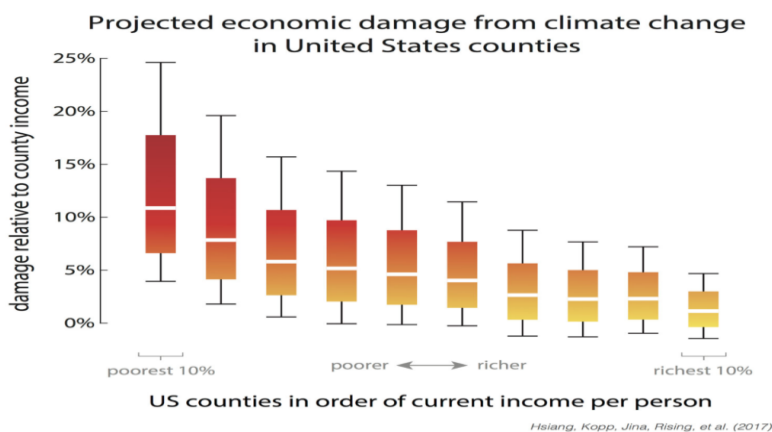


Fig. 1

II. METHODOLOGY

The methodology employed for the research work was that four quality books were studied comprehensively. This includes the "The Economics of Climate Change" (Nicholas Stern, 2006), "Economic Risk of Climate Change: An American Prospectus" (Trevor Houser, 2015), "Planetary Economics: Energy, Climate Change and the Three Domains of Sustainable Development" (Micheal Grubb, 2013) and "The Climate Casino, Risk, Uncertainty and Economics for a Warming world" (William Nordhaus, 2013). Moreover, five quality research papers were reviewed meticulously. This includes "Socio-economic and climate change impacts on agriculture: an integrated assessment" (Fischer, 2005), "Climate change impacts and adaptation in cities: a review of

the literature” (Alistair Hunt, 2010), “Relative impacts of human-induced climate change and natural climate variability” (Mike Hulme, 1999), “A general equilibrium analysis of climate change impacts on tourism” (Maria Berritella, 2005) and “The role of economics in climate change policy” (Warwick J. McKibbin, 2002).

III. RESULTS

The results that were extracted includes that Disaster Management Authorities are not playing their appropriate role for the mitigation and curtailment of extensive disasters such as floods, storm ,droughts, earthquakes and Tsunamis which cause plunder around the globe with considerable impacts to both the global financial system and the social lives of those influenced by these catastrophes. One can measure the susceptibility of the concern by peeping into global natural disasters in 2016 combined to generate economic deprivation of USD 210 billion, an amount which is 21 percent above the 16-year average of USD 174 billion(International federation of Red Cross, 2016). The numerical figures of human fatalities caused by natural disasters in 2016 was roughly 8,250 (Debarati Guha-Sapir, 2017). International endeavors by the Disaster Management authorities to avert, impede or adapt to extreme weather events carry grave importance to defend the health and safety of the public, the environment, and economic stability of nations. Unfortunately, there was no much better performance of National Disaster Management Authorities during the period of emergency in 2016. Such attempts are often being followed through agreements such as the Sendai Framework, United Nations Framework Convention on Climate Change (UNFCCC) and Sustainable Development Goals (Illan Kelman, 2015). Hence, the efforts are only related to paper work and casual meet ups.

Policies/strategies	Disaster mitigation	Emergency response	Adaptation	Social vulnerability
Ministry of Climate Change:				
Climate change policy	Strong	Strong	Strong	Strong
Climate change policy implementation action	Strong	Weak	Strong	Weak
Climate change authority mandate	Strong	Weak	Strong	Weak
Environmental policy	Fair	Weak	Neglected	Neglected
Rangeland policy	Weak	Strong	Weak	Neglected
Food security and agriculture policy	Neglected	Strong	Fair	Neglected
Forest policy	Strong	Weak	Neglected	Neglected
NDMA:				
Disaster risk reduction policy	Strong	Fair	Neglected	Strong
Disaster management plan	Neglected	Strong	Neglected	Weak
Disaster risk management framework	Neglected	Strong	Neglected	Neglected
Earthquake rehabilitation and reconstruction policy	Weak	Strong	Weak	Neglected
Pakistan Red Crescent principles	Neglected	Strong	Neglected	Weak
NGOs:				
Humanitarian organisations	Weak	Strong	Weak	Weak
Development organisations	Strong	Weak	Depends on NGO	Weak
Source: Authors' own.				

Moreover, there is poor resilience system in world which can cope up the post ramifications of any disaster. Climate change add extra uncertainties, putting more pressure on local institutions and infrastructure to adapt (Sara Meerow, 2016). Owing to scarce resources, infrastructure, services and the facility to handle the growth in population, small cities could experience gigantic losses of life and property due to disasters, unless proactive measures are mainstreamed into governance and planning(Abhas K Jha, 2013). One of the impeccable example is the Bangkok floods of October–November 2011, the flooding of local manufacturing and production facilities afflicted global supply chains for computer and automobile components and this led to transitory factory closures and layoffs in multiple cities outside Thailand (Chachavalpongpun, 2011). If there would have been stronger and better urban resilience system, there would be lesser probability of economic losses. Furthermore, Poor auditing and monitoring by Non-Governmental Organization creates more hurdles for the economic challenges. However, NGOs face multifarious impediments in pursuing their due objective related to climate change mitigation such as a paucity of fundamental awareness about their obligations in civil society and public impression that the government is solely responsible for the well-being of its citizens and residents (Razan Al Mubarak, 2012). The conception of climate services refers to the origination, furnishing, and contextualization of details and facts derived from climate research for decision-making at all levels of society (Vaughan and Dessai, 2014). Regrettably, modern NGOs don't provide these climate services owing to which there is great increase in environmental catastrophe.



Figure 1. NGOS ATTENTION TOWARDS CLIMATE CHANGE

IV. CONCLUSION

To conclude, there is great nexus between climate change and global economy. Climate change repercussions can be calculated as an economic cost (Smith et al., 2001). This is specifically well-suited to market effects that are associated with market transactions and unswervingly influence GDP. Monetary measures of non-market impacts, e.g., ramifications on human wellbeing and ecosystems, are more difficult to evaluate. In a literature analysis, Desanker et al. (2001:490) concluded that climate change would cause sea-level rise, coastal erosion, saltwater intrusion, and heavy flooding which will negatively impact global economy. In another literature review, Nicholls et al. (2007:338-339) concluded that the socio-economic impacts of climate change on coastal and low-lying areas would be overwhelmingly adverse and it would cause paradigm shift in global economy.

V. RECOMMENDATIONS

1. Formulation of effective policies for agricultural input and output which can be beneficial for farmers.
2. Provision of economic significance to environmental impacts owing to climatic variations.
3. Engagement of various experts and stakeholders to adjust priorities as circumstances change.
4. Proper Research is needed to execute the strategic framework for the mitigation of repercussions of climate change on global economy.
5. Social cost should also be given due concentration in order to boost economy
6. Effective Climate Policy is needed to address these concerns.

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