

An Analysis of the impact of Climate Change on the health of Children

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Abstract:

Children are a vulnerable group of society, who needs special care and attention. They are susceptible to diseases and health problems including psychological issues. Climate change has impacted the weather patterns of the world. The rise in greenhouse gas emissions has led to unknown adverse impacts. The challenges posed by climate change can become many folds, if not addressed. Children are dependent either on parents or guardians for their basic needs. The natural disasters induced due to climate change impact the well-being of children in a significant manner. The need of state intervention is required in order to develop resilience against the adverse impact of climate change. The researcher has attempted to analyze various impacts of climate change on the well-being of children. It is proposed that the adoption of the fiscal measures can help in reducing the emission levels of the greenhouse gases, in consonance with the sustainable development goals. The levy of green taxes can serve dual purpose of keeping the emission level under control and providing enough funding for the development of the young children.

Keywords: Children, Climate Change, Greenhouse gas emissions, Sustainable Development Goals, Natural disasters

Introduction

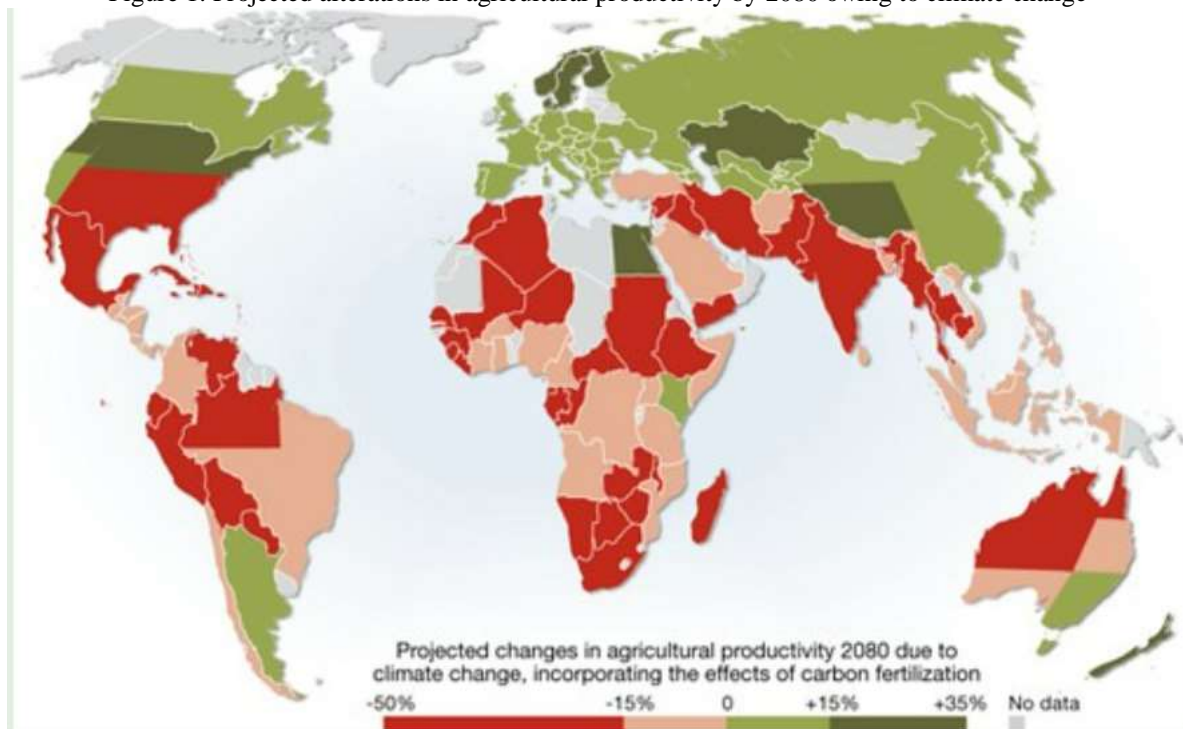
Climate Change is a global environmental phenomenon affecting every creature on the earth in one form or the other. Global warming has been the main reason behind climate change. Rapid industrialization has its benefits. However, the consequences of harmful emissions cannot be denied (Meyer, L. H., & Roser, D., 2006). The continuous emissions of the greenhouse gases in the atmosphere bring forth pressure on the absorption capacity of the atmosphere (Ledley, T. S., et al., 1999). The excessive presence of carbon dioxide in the atmosphere leads to the trapping of heat, which in turn is responsible for the rise in the global average temperature of the earth (Mitchell, J. F., 1989). Climate change has impacted children's health through various illnesses (Ebi, K. L., & Paulson, J. A., 2007). Children become vulnerable to the adverse impacts of climate change due to low nutrient levels in developing and underdeveloped countries (Lawler, J., & Patel, M., 2012). Global warming has impacted the weather patterns worldwide, endangering vulnerable sections of society (Calzadilla A. et al., 2014). Children are vulnerable to respiratory diseases because of toxic air due to excessive emissions (Kelly, F. J., & Fussell, J. C., 2011). The children from the age group of 0 to 5 years requires special attention and care in order to survive. There has been significant number of deaths of children before they could cross the fifth year of their lives. The financial condition of the parents also play a key role in enabling the proper support system to the children. The instability caused due to the natural disasters induced by the climate change do pose social insecurity for the children. There is a need for the state intervention at the regular intervals for the survival and adequate development of the children.

Health impacts on Children

The vulnerability of the children, concerning their health, is a severe issue. Climate change impacts agricultural productivity, especially in the developing and least developed countries (Aydinalp, C., & Cresser, M. S., 2008). Agricultural productivity has been estimated to have reduced by around 20 percent due to climate change (Edame, G. E., et al., 2011). This development has been despite the technological advancement in agricultural production. The adaptability to climate change would ensure food security for all sections of society (Bohle, H. G., et al., 1994). The developed countries, under various international agreements, have promised assistance for developing resilience against climate change (Khan, M. R., & Roberts, J. T., 2013). Adverse weather events also impact the nutritional value of farm products (Rosenzweig C. et al., 2001).

The Projected impact of climate change on agricultural productivity is depicted below:

Figure 1: Projected alterations in agricultural productivity by 2080 owing to climate change



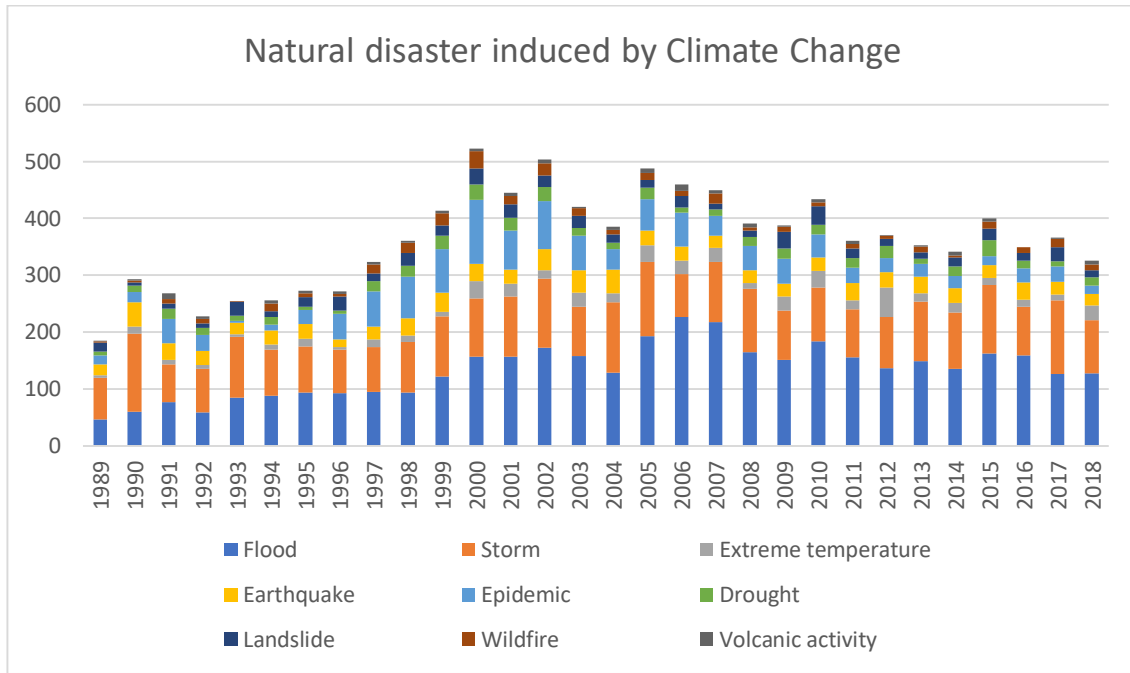
Source: UNEP/GRID-Arendal¹

The graph above presents a gloomy and challenging picture of agricultural productivity by 2080 due to projections based on the present and estimated upcoming challenges. The diagram indicates that the populous regions of the world may face severe challenges in the form of decreased agricultural productivity (Varma, A., & Malathi, V. G., 2003). The reduced productivity threatens the food security of the developing and underdeveloped world (Shiferaw B. et al., 2011). The experiences point out that in a dire situation of food scarcity, the vulnerable sections of society are further at risk (Workie, E., 2020). Children need proper nutrition and enough food during their early years (Arts-Rodas, D., & Benoit, D., 1998). The increased poverty and natural disasters further add to the nutritional scarcity of children (Baez, J. E., & Santos, I. V., 2007).

The figure below depicts the frequency of natural disasters induced by climate change.

Figure 2: Year-wise data of the natural disasters due to climate change

¹Hugo Ahlenius, The Environmental Food Crisis - The Environment's Role in Averting Future Food Crises
UNEP/GRID-Arendal, available at <https://www.grida.no/resources/6829> last accessed 10th April 2022



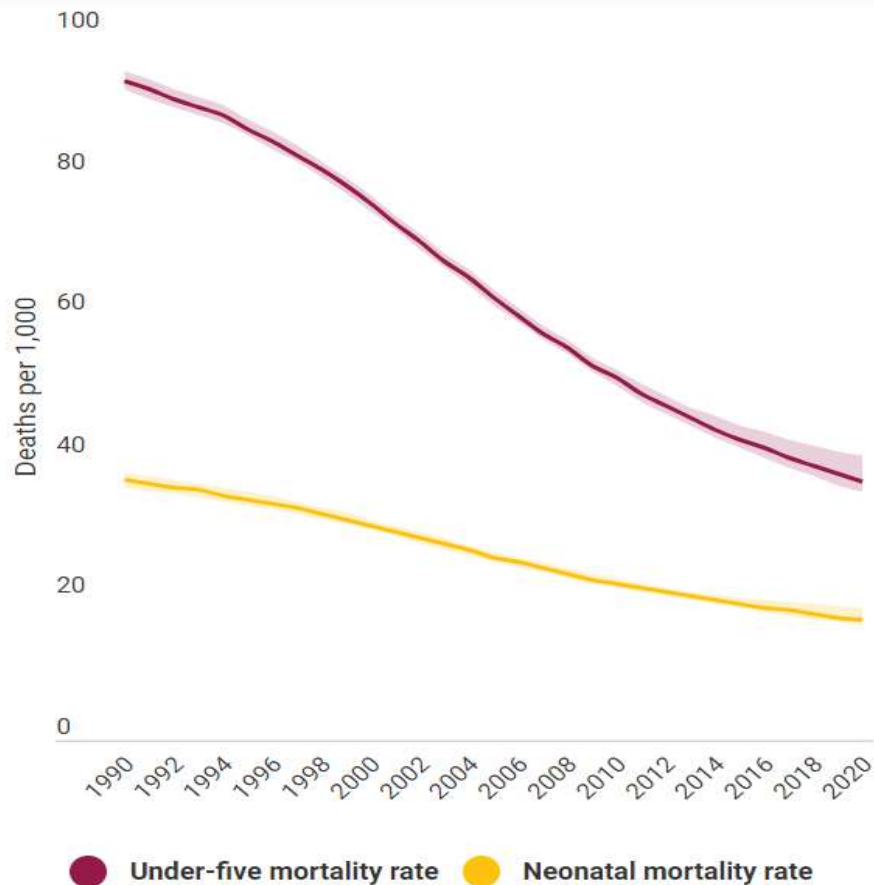
Source: Emergency Events Database, 2019²

The graph in figure 2 displays the occurrence of various natural disasters from 1989 to 2018 across the globe. Natural disasters include floods, droughts, storms, landslides, wildfires, and landslides. The adverse natural events pose severe threats for the children due to their dependence on their caretakers and the scarcity of resources to cope with natural disasters in developing and underdeveloped countries (Rahman, M. S., 2013). The occurrence of disasters has become a regular phenomenon, and there is an urgent need, as envisaged under the Sustainable development goals, to garner enough support from the international community to tackle the crisis (Ribot, J. C., et al., 1996).

Children are generally vulnerable to malaria, diarrhea, and pneumonia, among other infectious diseases (Chowdhury, F. R., et al., 2018). These diseases have been the primary cause of death among children under the age of 5 years. Around 5.3 million children will have infectious diseases in 2020 (Lee, M. K., & Binns, C., 2020).

Figure 3: Number of deaths of children below five years and neonatal

²UNICEF, 2019, Climate Change, available at <https://data.unicef.org/topic/climate-change/overview/> last accessed 23rd April, 2022



Source: UN IGME, 2021³

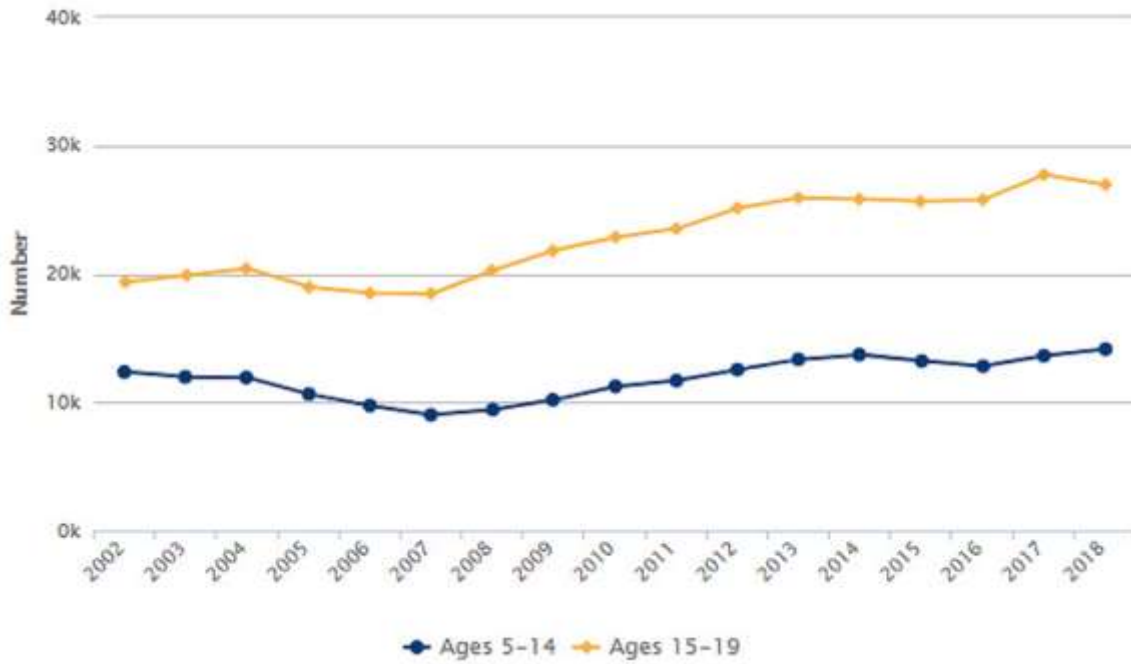
The graphical representation in figure 3 depicts the deaths of children under the age of five years and newly born children. The graph shows that the figure has come down; however, still, the numbers are worrisome. In 2020, around 13800 children under five had lost their lives daily (Bastani, B.,2020). These facts and figures should enhance the efforts to safeguard children. The policies drafted at the global level would set the tone for actions to take the well-begun task further (Savolainen, E. et al.,2020).

The psychological impact of Climate Change on Children

Climate change indirectly challenges children's mental health (Chalupka, S., 2020). Natural disasters have an impact on the income of the parents (Kousky, C., 2016). Climate change has impacted the disease burden on the planet (Coverdale, J., 2018). The tender age of the children makes them susceptible to most of the diseases threatening the earth (Kessler, R. C.,2000). Poverty impacts the commoner's livelihood and puts a constraint on the expenditure to raise the children (Elhadary, Y. A. E., &Samat, N., (2012). The development is further impacted if children suffer from bodily disabilities. Climate change-induced natural disaster profoundly affects children's mental health, who do not have enough wherewithal to cope with the catastrophes (Simpson, D. M., 2011). The psychological issues faced by the children include anxiety, post-traumatic stress disorder, depression, and behavioral disorders (Kiser, L. J., et al., 1991). The children's mental health problems have been exaggerated during the Pandemic due to COVID-19(Akkaya-Kalayci, T. et al., 2020). The lockdown was brought in to contain the pandemic, which forced the people within the four corners of the home (Kaushik, M., 2020). The isolation of the children brought in due to pandemics impacted their mental health. Online education for kids, especially from 0-8 years, has impacted their psychological well-being (Westrupp, E. M., et al., 2021). The increased time spent watching the screen has also led to the addiction to indulging in other activities online (Mylona, I. et al., 2020). The stress went through by the parents during the challenging pandemic phase has also led to the neglect of the welfare of the children (Fegert, J. M., 2020).

Figure 4: No. Of children hospitalized due to mental issues in California

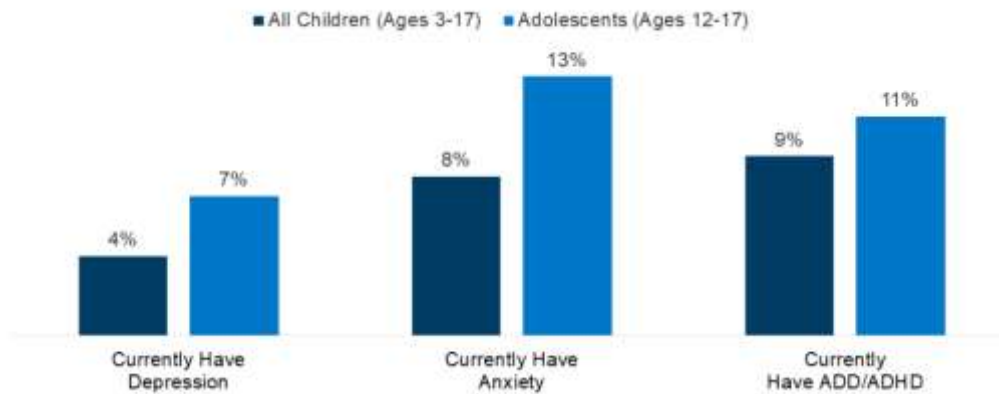
³UNICEF, 2021, Under-five mortality, available at <<https://data.unicef.org/topic/child-survival/under-five-mortality/#>> last accessed on 31st March, 2022



Source: Kidsdata.org

Figure 4 depicts the graph of the number of children hospitalized due to mental health issues. The diagram shows the data for the children within the age group 5-14 years and the age group 15 to 19 years. The information is related to hospitalizations of children in California. The data is for the span ranging from 2002 to 2018. The numbers have been further added on due to the COVID-19 pandemic. The present depiction of the information displays that the students have been facing issues with mental health care. Climate Change may not be directly impacted; however, it does tend to affect children indirectly. The socio-economic impact that the COVID 19 has made has further exacerbated the existing situation wherein the agony of parents has been passed on to the young children, dependent upon them.

Figure 5: Children having anxiety, depression, and attention deficit disorder in the United States



Source: Kaiser family foundation National Survey of Children's Health⁴

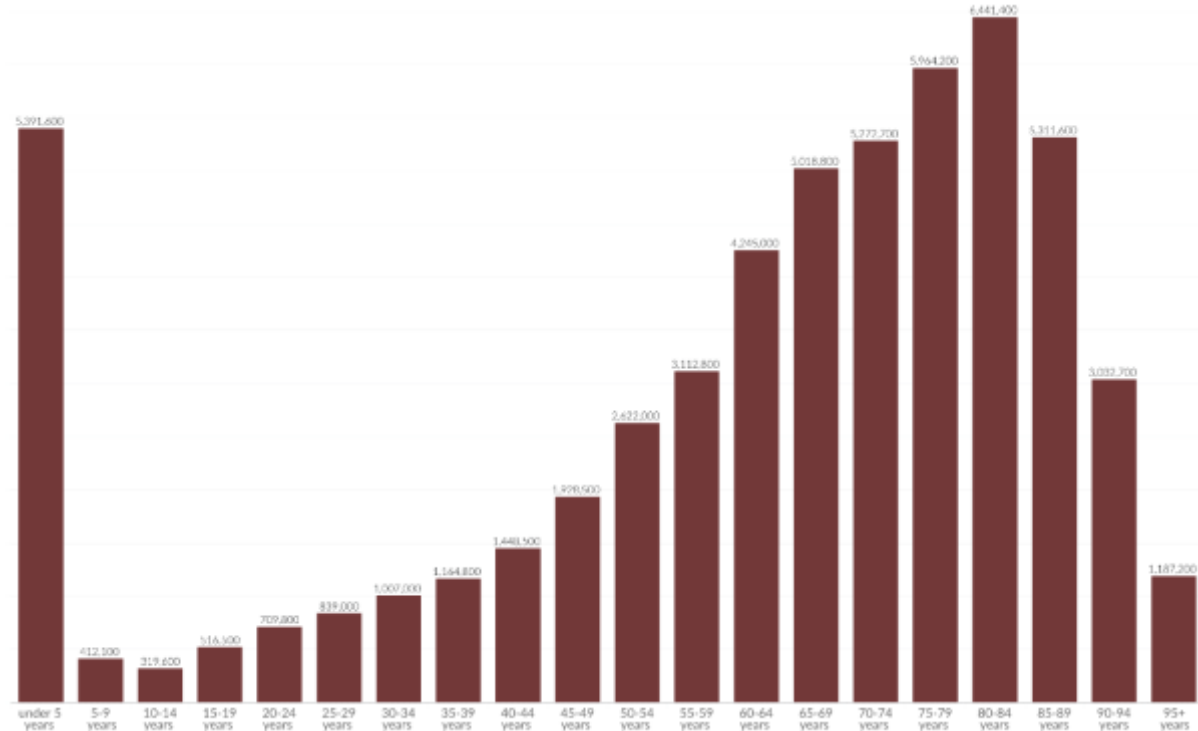
The data in figure 5 depicts the percentage of children currently undergoing depression, anxiety, and attention deficit. The data is regarding the children from the age group of 3 to 17 and the adolescents from the age of 12 to 17 years. The information is about the children suffering from mental health issues. The limitation of the data concerning the present research is that it projects the mental health challenges in the developed region of the world.

Child Mortality due to Climate Change

⁴ Nirmita Panchal et.al., 2021, Mental Health and Substance Use Considerations Among Children During the COVID-19 Pandemic, available at <<https://www.kff.org/coronavirus-covid-19/issue-brief/mental-health-and-substance-use-considerations-among-children-during-the-covid-19-pandemic/>> last accessed 15th March 2022

Climate Change has impacted the disease burden of the earth. Climate change-induced natural disasters affect the financial capacity of the poor. The financially stressed person finds it difficult to divert the limited resources to the factors strengthening the infant’s health. The programs run at the state level are required to support the poor during the crisis. The absence of the intervention at the right stage may prove catastrophic for the child mortality rate.

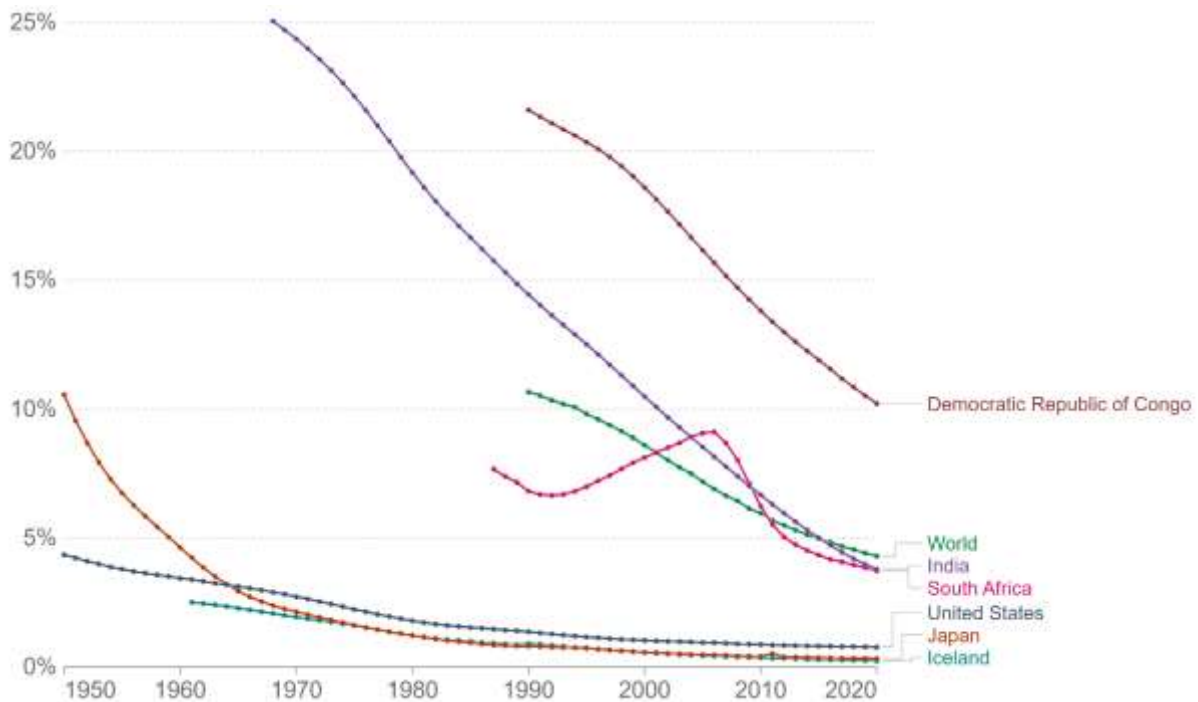
Figure 6: Number of deaths globally across the various age groups in 2017



Source: Institute of Health Metrics and Evaluation

Figure 6 depicts the graph highlighting the number of deaths across the different age groups in 2017. The total number of deaths was around 56 million in 2017. The number of deaths of children between 0 to 5 years was around 5.4 million, which poses a tough challenge for the world to safeguard its youngest children. Children from the age group of 0 to 5 years are most vulnerable. They need to be supported through intervention in the form of proper nutrition and protection from the vagaries of nature. The percentage of children under 5 years, who died during 2017 is around 10%, which is a significant number. Climate Change has affected the opportunities available to the poor, by constraining their economic well-being. The frequent uncertain weather events cast a shadow on the regularity of the income, which can assure the poor in times of uncertainty like pandemics. Frequently occurring floods, drought, and harsh weather impact the productivity of the poor at the work. All this has serious ramifications for the children at home, who become the silent spectators of the gloomy future. The hardships posed by poverty impact the psychological well-being of the children. One event has a linkage with the other. Poverty enables in snatching enough development opportunities for the kids belonging to the poor family. The natural disasters force the poor to migrate at frequent intervals, which again has a significant negative impact on the mental health of the children.

Figure 7: Rate of Youth Mortality



Source: United Nations Inter-Agency Group for Child mortality Estimation.

Figure 7 shows the rate of youth mortality from 1950 to 2020 for different countries across the globe. The information helps in concluding that in developed countries, the rate of youth mortality has been reduced significantly. The average youth mortality in the world is also above the rate in developed countries. In terms of the world average, the performance of India and Brazil is better as per the information depicted in the graph. On the other hand, the performance of the Democratic Republic of Congo has not been that impressive in terms of overall development.

Conclusion

Children have gone through a challenging phase during the COVID-19 Pandemic. The lockdown effected during the pandemic has seriously impacted the psychological well-being of the children. Climate Change has impacted the weather patterns across the world. The extremities in terms of temperature can be witnessed due to climate change. The disease burden of mother earth has increased due to climate change-related weather patterns. Climate change may not directly impact any section of society, but it has severe indirect impacts on social well-being. The income of the poor has been affected due to frequent natural disasters. The economic well-being of the poor is further impacted due to the uncertainties caused due to different natural disasters. The impact on the family indirectly hurts the interests of the children, who are psychologically put in a very difficult situation.

Health has been a very important issue for young children. State intervention is required in order to ensure a healthy childhood for all children. International organizations have an important role to play in steering the health programs for infants and young children. In the various agreements under the United Nations Framework for Climate Change, there has been a stress on capacity building for the organizations in developing and underdeveloped countries. The developed countries need to ensure a consistent flow of finances in order to assist the developing and least developed countries to develop resilience against the adverse events caused due to climate change. The capacity-building programs should run along with the mitigation efforts. The resource crunch should not come in a way to help the children in having a healthy childhood, with equal opportunities.

The imposition of the taxes in order to contain the greenhouse gases is highly recommended in consonance with the Sustainable development goals. The revenue generated through the levy of taxes should be utilised in technology enhancement, which could accentuate the efforts in containing the greenhouse gas emissions. There is a dire need to adopt fiscal measures in order to arrest the climate change at the pace, with which it is taking effect. The utilisation of the funds collected through the imposition of green taxes should be utilised in providing better care and services to the children specially belonging to the section of the society, who are not in a position to adequately support themselves against the adverse impacts of the climate change.

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