

**RESEARCH PAPER****Climate Change: Impacts on Sustainable Development Goals and Human Rights****¹Dr. Fakhara Shahid* and ²Adil Ahmad**

1. Lecturer, Department of International Relations, University of Okara, Punjab, Pakistan
2. Visiting lecturer, Department of International Relations, University of Okara, Punjab, Pakistan

***Corresponding Author:** Fakhara.shahid@uo.edu.pk**ABSTRACT**

Climate change has sharpened many social, economic and political diseases faced by global community. Climate change has become a threat multiplier, disproportionately effecting the marginalized communities and posing serious threats to fundamental human rights. The interconnectedness of climate change with human rights and SDGs needs a multidimensional and multilevel approach at local, national, and international level. The topic of this interconnectedness has become the concern of academic as well as of policy making circles. This article emphasizes on the urgent need to meet with this multidimensional challenge by using an interdisciplinary and longitudinal qualitative research method. The results of the study have shown that the global sustainable development goals cannot be achieved by international world until before tackling the climate change. An integrated policy framework, capacity building, global collaboration, community engagement, and investment in renewable energy resources is dire need of time in order to safe the basic human rights on the planet earth.

Keywords: Climate Action, Climate Change, Human Rights, Natural Disasters, SDGs, Threat multiplier**Introduction**

In this century human race is facing a serious threat in the form of climate change which has undermines the survival of the human civilization. In simplest form climate change is the phenomenon by which the atmospheric changes take place which leads towards alternations in the global eco and bio spheres through slow natural processes. Climate change is caused by natural as well as by men made activities. The dangerous gases (methane, CO₂, and nitrous oxides etc.) is emitted by human beings through various domestic, commercial and industrial activities (IPCC 2014). Climate change posing a very serious threat to basic human rights and creating a hurdle in the way of achieving sustainable development goals. This article explores the multifaceted impacts of climate change in different spheres of life including social inequalities, social justice and challenges faced by global world in attaining the SDGs. The topic of interconnectedness of human rights, SDGs and climate change has raised the temperature among academic and policy making spheres (Smith, 2021). Moreover, the impact of climate change on key components of sustainable development such as poverty eradication, zero hunger, good health and wellbeing, quality education, gender equality, clean water and sanitation, affordable and clean energy, decent work and economic growth, industry, innovation and infrastructure, reduced inequalities, sustainable cities and communities, responsible consumption and production, climate action, life below water, life on land, peace justice and strong institutions, and partnership has further underscore the collective efforts to address the interconnected challenges (UNDP, 2019). Rising temperature and changing weather patterns are disproportionately affected the marginalized communities and has posed a serious threat to the fundamental human rights in 21st century (UNHRC,2020). Climate

change is not only an environmental issue but it has become a multidimensional threat multiplier which has far reaching implications for the social, economic and political life of entire global world more especially of the third world countries. To address these crucial challenges a comprehensive and multidimensional approach has become need of the time. The inter connectedness of SDGs and climate change is described below that how this environmental issue is posing threats to SDGs achievement and human rights.

Literature Review

Literature has showed that among other global issues, climate change is identified as one of the major threats in 21st century. Developing countries and disadvantaged populations are more likely to be affected by these climate changes. Public health sectors, all over the world have not taken any solid steps to combat this monster despite of the fact that many international state and non-state actors have highlighted the severity of the issue on many platforms. Lack of leadership and weak political, socio-economic setups of the societies are major hurdles in prioritizing the climate change as a major issue which needs to be addressed on emergency basis (Rudolph, & Gould, 2015). It has become clear in literature that low socio-economic status of developing countries is the main cause of mental and physical illness in their population. In modern world, environmental changes are posing a major threat to life of the humans, living on planet earth. Bowles in his article, 'Climate change and health adaptation' identified that heat waves in different counties is a leading factor in bushfires which resulted in the loss of number of humans lives in 2009. Along with the casualties, these bushfires also caused many psychological and mental disorders in the people who survived that tragic incident. Heat waves in different parts of the world are responsible for the spread of some bacteria's which are associated with food poisoning in hot temperatures (Bowles, 2015).

Global warming is increasing the temperature of the earth day after day and this increase in temperature is affecting the hydrological cycle which is linked with quality and availability of water. This effect along with irresponsible human activities is a threat to water security in many parts of the world. Impacts of climate change on global world is very clear i.e. Water security in Middle East, especially in Saudi Arabia is a major challenge because Saudi Arabia is one of the largest states without permanent rivers and lakes. According to author, Saudi Arabia is an example which depicts how climate and irresponsible human activities go hand in hand in creating problem of water scarcity (DeNicola, et.al., 2015). The environmental and health impact of climate change is disproportionately affecting the periphery and poor people in core states. Climate change is creating such complications in which humans' rights of pure water, healthy food and fresh oxygen are in danger. Poor people, labor class, women, children and people with chronic diseases are more likely to be affected by climate-related changes. Irony is, that developing and low-income countries in the world which produce lesser amount of greenhouse gases are more severely affected by climate change than those high-income sates, which are producing comparatively higher amount of greenhouse gases (Levy, & Patz, 2015).

Material and Methods

Depending on the nature of the study and its objectives an interdisciplinary approach is applied on this study because climate change, human rights, and SDGs are interdisciplinary areas. Given the long-term nature of climate change a longitudinal study tracking the changes over time is also applied to understand the multidimensional and multilevel impacts of climate change. Longitudinal study is a research design which involves the observations which are repeated again and again over time. Longitudinal study being an observational study is best implemented in this research, keeping in mind the nature of climate change and its long impacts on the achievement of SDGs. For the purpose of data collection, the subject of climate change was followed continuously and repeatedly along with its long-term effects on health and different sphere of life. Longitudinal Qualitative

Research (LQR) answered the qualitative questions regarding lived experiences of impacts of climate change.

Renaults and Discussion

SDGs 1 &2 (No Poverty and Zero Hunger)

When poverty meets with climate change its impacts on the human wellbeing is increasingly visible. The poorest people of the world are affected by climate change at greater extent while they contribute least to it (NISHIO, 2021). Poor countries have less infrastructure to cope with the effects of climate change that is why they are being hit hardest as compared to rich countries. Developing countries economy depends upon agriculture due to which billions of people are always vulnerable to natural disastrous like droughts, desertification, heat waves famine, and food insecurity (Climate change and poverty, 2023). These disruptions increase food shortage and food prices which ultimately lead towards the poverty and hunger. Millions of people of the world are facing global hunger due to their dependency on farming, hunting and food gathering which is increasingly threatens by harsh climate thus pushing them food insecurity and hunger (concern worldwide, 2022). Rising sea level and extreme weather conditions are forcing people towards the homelessness, poverty and hugeness. The IPCC highlighted these challenges and emphasized on the urgent need of global action against climate change in order to achieve sustainable development goals (IPCC, 2021).

SDGs 3 & 4 (Good Health and Well Being, and Quality Education)

Zero poverty and no hunger are the first two most important sustainable development goals which are highly affected by the climate change as discussed above. Moving ahead it has become clear that the third sustainable development goals good health and wellbeing of people is also directly affected by the climate change. Rising temperature are exuberating the heat related illness and heat stress in vulnerable segment of population like in children and old people. Additionally, warmer and favorable temperature are favoring many diseases carrier vectors, viruses and bacteria's which are spreading many infectious diseases in millions of people affecting their health and well-being. These health challenges are undermining the urgent global need for good health and well-being of the people (Watts et al., 2018)

Climate change is a threat multiplier, its impacts can be seen in every sphere of human life. As for as quality education is concerned in SDGs we cannot ignore negative role of climate change on it. Natural disastrous caused by climate change affect the education system by destroying its infrastructure which leads towards the prolonged closure of schools which disrupts the learning processes for students (Smith, 2019). Furthermore, communities affected by climate change become vulnerable and hence remain unable to invest in education due to which literacy rate dropped. Climate change directly affecting the equal quality education for all (Jonnes & Brown, 2020).

SDG 5 (Gender Equality)

Climate change disproportionately affects gender equality in. Women in rural areas are particularly vulnerable due to their roles in agriculture, where climate variability directly impacts their livelihoods. Erratic weather patterns, such as floods or droughts, affect crop yields, jeopardizing food security and income, thereby exacerbating existing gender disparities. Women often bear the responsibility for securing water, fuel, and food for their families. Climate-related changes, such as reduced water availability or increased distances to collect resources due to environmental degradation, intensify their workload and limit their opportunities for education or employment. Additionally, during climate-related disasters, women face increased risks, including higher rates of mortality due to limited mobility, cultural restrictions, and societal norms. Climate change-induced events can lead

to displacement, loss of homes, and disruption of community structures, affecting women's safety and exacerbating vulnerabilities. However, despite these challenges, women in Pakistan have shown resilience and often play crucial roles in climate adaptation and mitigation efforts, advocating for sustainable practices, leading community initiatives, and contributing innovative solutions to address climate-related issues. Recognizing the intersectionality of gender and climate change is pivotal for creating inclusive policies and strategies that empower women, ensure their active participation in decision-making processes, and provide support for their resilience in the face of climate-related challenges. Efforts to promote gender-sensitive approaches in climate adaptation and mitigation strategies are imperative for fostering sustainable development and addressing the complex relationship between gender equality and climate change in Pakistan. (Smith, 2021)

SDGs 6,7 & 8 (Clean water and Sanitation, Affordable and clean Energy, Decent work and Economic Growth)

Access to the clean water and sanitation services has become challenge of the day due climatic change. Altered precipitation actions are leading toward prolonged droughts which reciprocally leads towards the shortage of clean water, thus posing a serious threat to the lives of human being as well as of other species. The strain in the water resources affecting the quantity and quality of the water. Other natural catastrophes like floods and hurricanes due to the change of climate can affect the infrastructure of clean water and sanitation and poses a direct threat to lives of the people. This intense situation leads towards the spread of many waterborne diseases. Vulnerable communities are more affected by these unhygienic conditions and remained unable to have access to safe drinking water (Smith & Brown, 2020).

Climate change significantly impacts the energy sector and economic growth. The nations heavily rely on fossil fuels, contributing to environmental degradation and climate change. However, this scenario has led to a growing recognition of the need for cleaner, renewable energy sources. Pakistan possesses vast potential for renewable energy, notably in solar and wind power. Transitioning to these sources not only addresses climate concerns but also offers opportunities for economic advancement. Investing in clean energy infrastructure and technology can stimulate economic growth by creating employment opportunities, attracting investments, and reducing the nation's dependence on costly imported fuels. Despite the initial capital required for this transition, the long-term benefits include reduced environmental impact, enhanced energy independence, and the potential for sustainable economic development. Integrating clean energy into Pakistan's energy matrix stands as a dual solution—combating climate change while driving economic progress and energy security. (Smith & Brown, 2020).

SDGs 9 & 10 (Industry, Innovation and Infrastructure, Reduced Inequalities)

Climate change significantly influences Pakistan's industry, innovation, and infrastructure, posing challenges and opportunities in equal measure. The country's industrial sector faces disruptions due to extreme weather events, impacting manufacturing, supply chains, and infrastructure development. Flooding and droughts can damage factories, disrupt transportation networks, and impede the supply of raw materials. This presents a challenge to infrastructure development and maintenance. However, these challenges also foster innovation and the adoption of resilient technologies. Pakistan's industries are pushed toward innovation to adapt to changing climatic conditions. Investment in eco-friendly technologies, renewable energy, and climate-resilient infrastructure is becoming a growing priority. Furthermore, these challenges have led to a growing emphasis on innovative solutions in water management, sustainable agriculture, and disaster-resilient urban planning. As a result, despite the adversities, the necessity to combat climate change has stimulated innovation, spurring the growth of more sustainable and climate-resilient industries and infrastructure in Pakistan. As for as equality among different classes and

communities are concerned its not wrong to say that climate change is not even behind in these areas. Vulnerable communities are more prone to face negative effects of the climate change. Rural areas are more affected by it as compared to the urban areas, similarly, developing countries are more vulnerable to these environmental change affects as compared to the develop countries which are contributing in climate change due to their huge industrial innovations (Johnson,, & Martinez, 2021).

SDGs 11 & 12 (Sustainable Cities and Communities, Responsible Consumption and Production)

Climate change and widening inequality are not separate things. UN has planned to reduce inequality by 2030 but it's not so easy to achieve that goal. In recent years, extreme weather, hurricanes, storms floods have hit the poor and low-income countries more severely than rich countries. Loss of livelihoods push poor people to move to cities but cities don't have proper infrastructure to absorb those people. This causes clear equality gap between rich and poor which needs more efforts and more time to cover. Climate change is not a thing of future. It is here, now. Worst storms, warming rising oceans, increased droughts have a huge impact on cities' infrastructure. Nitrous oxide, carbon dioxide and methane Nitrous are among the causing global warming pollutants and this leads to more severe health problems in cities. During extreme heat we need exceptional amount of power in a city to cool ourselves as well as power plants which results in power shortages in cities. Keeping this in mind, climate-resilient urban infrastructure is needed these days more than anything else. (Kumar, 2021)

These days' people run in competition to get higher social status than others and to maintain their status they need more expensive products. In order to meet the increasing needs of growing population, our production sectors produce more products in factories resulting in emission of dangerous green gases. Thus, production and consumption have destructive effects on the entire planet social set up. UN cannot solely develop responsible consumption and production policies. Each of us should take care of products we use and buy every day. (BRAUN, 2013)

SDGs 13,14 & 15 (Climate Action, Life below Water, Life on Land)

Climate change is both scary and motivating; motivating in the sense that climate change needs a well-planned climate action in which all humans should participate actively to join the cause of UN SDG goals. All of us must think who is responsible for climate change and who needs to fix it. Individual action plus collective action is needed. Alternative transportation like riding or walking and plant-based diets should be given value. Renewable energy resources, importance of solar panels and LED lights must be considered to light our houses and factories.

Since the beginning of the industrial revolution, ocean acidification occurs and plastic litters in oceans. Oceans absorb 30 % of carbon dioxide produced by humans. Most of the people depend on marine and coastal biodiversity for their livelihoods. So, when life below water gets disturbed, it causes problems for life on land, too. UN should take ocean as an incredible source of renewable energy –off shore wind and ocean energy, derived from natural sources that don't emit carbon dioxide or other greenhouse gases. (UN)UN should adopt more careful measures than planned to maintain life on land. Droughts, storms, heat waves, rising sea levels, melting glaciers and warming oceans can harm animals, destroy the places they live, and wreak havoc on people's livelihoods and homes. Frequent Flooding and rising sea levels contaminate land and water resources with saltwater or fecal matter resulting in poor health conditions. (Ruane, 2023)

SDGs 16 & 17 (Peace, Justice & Strong Institutions, Partnership for the Goals)

Sustainable development goal 16 is a ray of hope for many societies. We see that people involved in forestry crimes and factory owners responsible for greenhouse gases in society use bribery and nepotism to save themselves from LAW. In order to reduce climate change effects and promote UNSDG 16, we need to create a peaceful community --- a community which rises above internal and cross border conflicts ----- a community where violence and injustice give way to the rule of law. Anti-corruption agencies, transparency, consultations, accountability mechanisms, strong institutions can play their part in climate related corruption and crimes. (Shahzad, 2023)

Climate change is too big a problem for one country to deal with on its own. It is a long-term battle which requires long term partnerships. Partnerships bring together collective efforts and commitment to produce a sustainable future. In this process people, nation or organizations exchange knowledge, feedback sources, skills and come closer and create more peaceful environment for life on this planet. Climate change has, no doubt, worst impacts on environment. But it can bring harmony, peace, joy on earth when people join hands together to combat this monster. In short, Individual and collective efforts both are needed to attain UN Sustainable development goals. (Vitasek, 2023)

Climate Change and Human Rights

Climate change is one of the most pressing challenges of the time with far-reaching consequences for wildlife, biodiversity and human societies. As global temperatures rise, weather patterns become increasingly unpredictable and extreme weather events like hurricanes, tsunamis, floods, earthquakes and wildfires occur frequently. The impacts of climate change intersect with a fundamental aspect of human existence. Due to natural calamities triggered by climate change, the human beings' right to life, right to housing, right to food and right to water are at stake (HRW, 2023).

United Nations High Commissioner for Refugees (UNHCR) regards climate change as human crises. According to this agency, natural calamities over the years have shattered the lives and livelihoods of millions of people, forcing them to flee their homelands. It claims that currently, many people are living in climate hotspots where they are always vulnerable to disasters and have no resources to cope with the challenges and problems posed by the extreme weather events.

The food system that includes production, transportation, processing, packaging, storage, retailing and consumption supports the livelihoods of over 1 billion people. This system is at the core of satisfying the strongest of human desires: hunger. But still, around 821 million people across the world are undernourished, 151 million children under five are suffering stunted growth due to malnourishment and 618 million girls and women between 15 and 49 have iron deficiency. These stats are alarming. The four components of food security including availability, access, utilization and stability are being severely impacted by the climate change. The extreme weather events are affecting the production of various essential foods like wheat, maize and sugarcane. Less production will automatically flare up the food prices, making it difficult to impossible by a majority of the world population to afford regular meals by 2050. (IPCC, 2019)

Natural calamities induced by climate change are creating conflicts and internal and external displacement of people across the world. In 2020 alone, 31 million people were internally displaced as a result of various disasters. The resources scarcity, environmental degradation and climate change pose a strong threat to human security. In the insecurity of basic needs like food, water and energy prompts conflicts, wars, anarchies, political tensions and even regime changes as it was witnessed in many Arab nations (UNDP, 2023).

Drought is another major concern, induced by climate change. It results in the loss of natural habitats of many animals, fall in the production of food and loss of lives of animals and human beings. Droughts can have very serious impacts on health, agriculture, energy and economy. Around 55 million people are affected by droughts every year in the world. Droughts fuel diseases and deaths and result in migration. The scarcity of water, caused by climate change, is affecting 40 percent of the world population and it is estimated that 700 million people will be forced to displace as a result of droughts by 2023 (WHO, n.d.)

The worst of the climate change effects is water crises as it is evident from floods, rising sea levels, droughts, melting of glaciers and wildfires. A large number of the world population is at the risk of getting affected by floods that is another byproduct of climate change. By 2025, more than 1.6 billion people will be affected by floods. The floods not only damage crops and yields but also destroy housing and livelihood of people, causing migration and displacements (UN, 2020).

Maintaining unique cultural identity and passing it to future generations is one of the rights of every society. So far, very less has been discussed about how climate change can threaten the cultural identity of various communities. Wisner (2010) talked about this in his landmark research. He argued that climate change and its resultant natural disasters like earthquakes and migrations can have grave implications on the cultures of the vulnerable communities. Earthquakes usually destroy historical and cultural sites like museums, monuments, and temples. Moreover, floods and tsunamis and wildfires result in the migration of communities from their ancestral lands. This migration and displacement ruin their cultural identity. So, Wisner predicted that in future, the unique cultural identities will be blurred and more mix cultures will erupt.

Conclusion

In round of the discussion it has become clear that climate change has profound impacts on every sphere of life. It has become an obstacle in achieving the sustainable development goals for global benefits. Its impacts on human rights are also devastating, fundamental human rights are going to obsolete due to the profound impacts of climate change. This interconnectedness of SDGs, human rights, and climate change has for reaching implications for social, economic, and political life of the global world more especially of the developing and underdeveloped countries. Extensive reach of climate change impacts has become clear due to its exacerbation on poverty, hunger, education, gender inequality, access to clean water. A multidimensional approach is necessary for this multidimensional threat. Keeping in view the urgency of this situation a combined local, national, and international effort has become dire need of time.

Recommendations

1. **Integrated Policy Framework:** There should be integrated policy making by taking on board all the stakeholders.
2. **Capacity Building:** There should be launched different initiatives for the capacity building of the vulnerable communities in order to make them more resilient and adaptive towards climate crises.
3. **Global Collaboration:** There is a dire need of collaboration among all nations and intergovernmental organizations in order to tackle climate change impacts.
4. **Community Engagement:** In order to ensure climate change mitigation and adaptation, local communities should be engaged in policy making and countermeasures.

5. Investment in Renewable Energy: Without investing more in renewable energy and aligning all the developmental initiatives with the renewable energy resources, the climate crises cannot be addressed.

References

- BRAUN, T. W. (2013). Climate Change Impacts on Global Food Security. *TIM WHEELER AND JOACHIM VON BRAUN*, 508-513.
- Bowles, D. C. (2015). Climate change and health adaptation: Consequences for indigenous physical and mental health. *Annals of Global Health*, 81(3), 427-431.
- Climate change and poverty. (2023, February 9). wales, England.
- DeNicola, E., Aburizaiza, O. S., Siddique, A., Khwaja, H., & Carpenter, D. O. (2015). Climate change and water scarcity: The case of Saudi Arabia. *Annals of global health*, 81(3), 342-353.
- Food Security — Special report on climate change and land. (n.d.). Special Report on Climate Change and Land.
- Johnson, L., & Martinez, S. (2021). Climate Change and Social Inequality: Impacts and Solutions. In A. Editor & B. Editor (Eds.), Title of the Book (pp. xx-xx). Publisher.
- Jones, F. R., & Brown, M. A. (2020). Vulnerability to Climate Change: A Sociological Perspective. *Environmental Sociology*, 6(3), 223-234.
- Kumar, P. (2021). Climate Change and Cities: Challenges Ahead. *frontiers*.
- Levy, B. S., & Patz, J. A. (2015). Climate change, human rights, and social justice. *Annals of global health*, 81(3), 310-322.
- Intergovernmental Panel on Climate Change. (2021). Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change. Cambridge University Press.
- Smith, A. B. (2021). Climate Change and Social Inequality: Implications for Human Rights. *Environmental Justice*, 14(3), 125-133
- NISHIO, A. (2021, November 5). Retrieved from World Bank Blogs: <https://blogs.worldbank.org/climatechange/when-poverty-meets-climate-change-critical-challenge-demands-cross-cutting-solutions>
- Rudolph, L., & Gould, S. (2015). Climate change and health inequities: A framework for action. *Annals of Global Health*, 81(3), 432-444.
- Ruane, A. (2023). *How climate change affects life on earth*. IPCC.
- Shahzad, H. (2023). PAKISTAN & SDG 16 - PEACE, JUSTICE, &. *Centre for Strategic Perspectives (CSP), ISSI*.
- United Nations Development Program. (n.d.). UNDP
- UN. (n.d.). *The ocean – the world’s greatest ally against climate change*. un.org.
- Smith, J. K. (2019). Climate Change and Education: Impacts and Adaptations. In M. A. Brown & F. R. Jones (Eds.), *Climate Change and Society: Sociological Perspectives* (pp. 123-140). New York: Springer.
- UN Human Rights Council. (2020). Climate Change and Human Rights.
- UNDP. (2019). Climate Change, Inequality, and Human Rights: A Guide for Legislation and Implementation.

- UNHCR - The UN Refugee Agency. (n.d.). Climate change and disaster displacement.
- United Nations Climate Change Conference (COP28). (2023, October 30). Human Rights Watch.
- Un-Water. (n.d.). Water and climate Change, UN-Water. UN-Water.
- Vitasek, K. (2023). How Strategic Business Partnerships Can Combat Climate Change. *Forbes*.
- Watts, N., Amann, M., Arnell, N., Ayeb-Karlsson, S., Belesova, K., Berry, H., ... & Costello, A. (2018). The 2018 report of the Lancet Countdown on health and climate change: shaping the health of nations for centuries to come. *The Lancet*, 392(10163), 2479-2514.
- Wisner, B. (2010). Climate change and cultural diversity. *International Social Science Journal*, 61(199), 131-140.
- World Health Organization: WHO. (2019, November 8). Drought.