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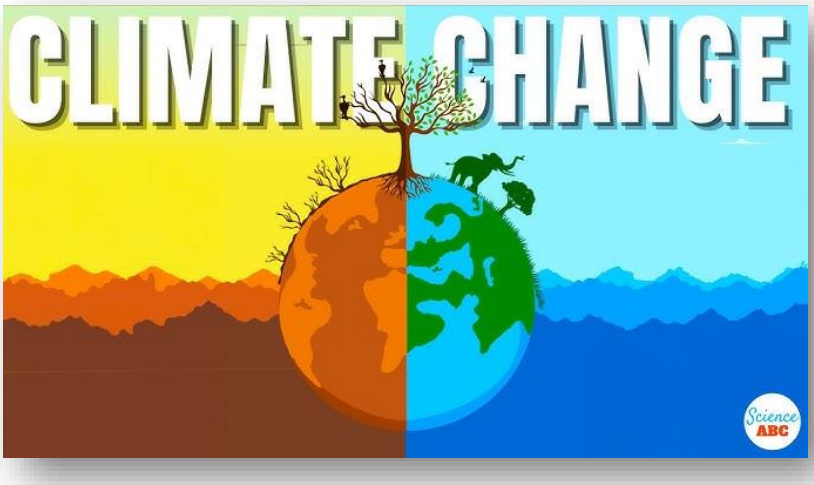
Afghanistan's Position in Climate Change and a Rescue Strategy to Address It



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AFGHANISTAN'S POSITION IN CLIMATE CHANGE AND A RESCUE STRATEGY TO ADDRESS IT

Introduction

The United Nations Framework Convention on Climate Change defines climate change as altering the Earth's climate, directly or indirectly caused by human activities. This term encompasses all changes that human activities have introduced to the global atmospheric composition. Climate change, driven by centuries of industrial projects, the increasing use of fossil fuels such as oil and coal, deforestation, and various agricultural practices, has significantly elevated the levels of greenhouse gases like carbon dioxide (CO2), methane (CH4), and nitrous oxide (N2O) in the atmosphere. This has led to global climate shifts, including rising global temperatures, higher sea levels, and the intensification and frequency of extreme weather events such as droughts, floods, and sudden storms. These changes pose significant threats to the realization of human rights and the fulfillment of fundamental physical and physiological needs, particularly endangering those living below the poverty line, women, children, and indigenous groups across social, economic, and political dimensions.

Afghanistan is not immune to these climate changes. In fact, according to global reports, Afghanistan is ranked as the sixth most vulnerable country in the world to climate change. Save the Children reported that in the first six months of the current year, at least 38,000 people, half of whom are children, have been displaced in Afghanistan due to climate-related events such as droughts, extreme heat, floods, landslides, and storms.

Meanwhile, officials from the National Environmental Protection Agency of the Islamic Emirate of Afghanistan, in their annual report, stated that due to climate change, approximately 21 million people in the country lack access to drinking water, and around 2.5 million have been displaced from their main areas. Annually, farmers suffer agricultural losses valued at $250 million.

This paper explores Afghanistan's position in the context of climate change, the consequences of these changes in the country, and the rescue strategy necessary to mitigate the impacts of climate change.

AFGHANISTAN'S POSITION IN CLIMATE CHANGE

Afghanistan has signed various international climate agreements, including the UNFCCC in 1992, the Kyoto Protocol in 2013, and the Paris Agreement in 2017, to collaborate with other nations to reduce climate change's adverse effects. Although Afghanistan could potentially benefit from these agreements—especially the Kyoto Protocol and the Paris Agreement—by receiving financial, technical, and capacity-building support from developed countries, the nation has not been able to fully capitalize on these opportunities. This is primarily due to the ongoing political instability, insecurity from decades of continuous conflict, and the lack of international recognition of the Islamic Emirate. As a result, Afghanistan has yet to benefit significantly from these protocols. Notably, Afghanistan has not been invited to the United Nations Climate Change Conference (COP) for three consecutive years in 2021, 2022, and 2023, which was held in Dubai.

On the other hand, Afghanistan has organized and implemented several laws, regulations, and policies, such as Environmental Laws, Forest Laws and Regulations, Oil and Gas Laws, Mining Laws, Water Laws, Energy Laws, and regulations on air pollution reduction and prevention, along with the Environmental Protection Policy. These efforts reflect Afghanistan's commitment to collaborating with the international community in addressing climate change.

According to the 2021 Global Climate Risk Index by German watch, Afghanistan was classified as the sixth most vulnerable country in the world, following Mozambique, Zimbabwe, Japan, and Malawi. Similarly, the World Food Program (WFP) reported that Afghanistan ranks as the sixth most vulnerable country globally to climate change. Despite its minimal contribution to the climate crisis and being one of the smallest emitters of greenhouse gases, Afghanistan is considered one of the most vulnerable nations to this issue.

Furthermore, the International Federation of Red Cross and Red Crescent Societies (IFRC) reported in 2020 that Afghanistan was among the ten most vulnerable countries to natural disasters from 2000 to 2019. The European Union's representative in Kabul also declared Afghanistan as the most vulnerable country facing climate change. Additionally, at a 2023 international climate conference in Dubai, Roza Otunbayeva, the head of the United Nations Assistance Mission in Afghanistan (UNAMA), stated that approximately 20 million Afghans are facing severe food shortages.

Despite the significant threats posed by climate change, Afghanistan's lack of technical capacity and the international community's limited engagement—stemming from the non-recognition of the Islamic Emirate—paint a concerning and alarming picture of the country's present and future.

THE IMPACT OF CLIMATE CHANGE IN AFGHANISTAN

As previously mentioned, research indicates that the extensive use of fossil fuels—including coal, oil, and gas—by industrialized countries has been the primary contributor to global climate change, accounting for over 75% of global greenhouse gas emissions and nearly 90% of all carbon dioxide (CO2) emissions. Despite Afghanistan's minimal contribution to greenhouse gas emissions, the country has suffered significant adverse effects due to the emissions generated by major industrial nations. These emissions have exacerbated climate change in Afghanistan, resulting in substantial human, financial, and agricultural losses for its people.

The table below provides a comparison of countries based on carbon dioxide emissions in 2022:

NO	Country	Share of World CO2 Emissions	CO2 Emissions (tons, 2022)	Population (2022)	Per Capita CO2 Emissions	1-Year Change
1	China	32.88%	12,667,428,430	1,425,179,569	8.89	-0.39%
2	Iran	1.78%	686,415,730	89,524,246	7.67	1.27%

3	Pakistan	0.52%	199,329,850	243,700,667	0.82	-7.74%
4	Uzbekistan	0.34%	132,433,520	34,938,955	3.79	3.70%
5	Turkmenistan	0.18%	69,882,930	7,230,193	9.67	1.83%
6	Tajikistan	0.03%	10,551,280	10,182,222	1.04	1.31%
7	Afghanistan	0.01%	5,675,770	40,578,842	0.14	0.65%

As observed in the table, Afghanistan contributes minimally to the production of carbon dioxide (CO_2)—one of the primary greenhouse gases driving climate change—when compared to its neighboring countries. However, due to its proximity to some of the world's largest CO_2-emitting countries, such as China, India, Iran, Russia, and Japan, Afghanistan is among the most vulnerable nations to climate change. This proximity has imposed severe and dangerous consequences on the Afghan population, which will be discussed in the following sections.

Floods: A Recurring Natural Disaster in Afghanistan

Flooding in Afghanistan, as a recurrent natural disaster, has posed significant challenges for the people of this country. Unseasonal heavy rains and devastating floods have led to the overflowing of rivers, inundating agricultural lands, orchards, and even residential homes across various provinces. These floods have caused substantial loss of life and inflicted severe financial damage on the local populations. The recent floods, exacerbated by drought and resulting in reduced soil permeability—leading to lower water absorption rates—have left behind extensive destruction. According to figures released by the World Food Programme in May 2024, more than 300 people lost their lives, and over 1,000 homes were destroyed in districts of northern Afghanistan due to these floods.

Furthermore, UNICEF, in its semi-annual report, highlighted that heavy rainfall and catastrophic floods in northeastern Afghanistan in May affected 21 districts in Badakhshan, Baghlan, and Takhar provinces, resulting in the deaths of 180 people and injuries to 280 others. Additionally, the United Nations Office for the Coordination of Humanitarian Affairs (OCHA) reported that the recent floods have impacted approximately 83,000 people across Afghanistan.

The adverse effects of climate change, particularly the destruction of homes and sources of income, have led to the displacement of a significant number of local residents. According to a report by Save the Children, at least 38,000 people, the majority of whom are children, were displaced in Afghanistan in the first half of the current year due to climate change. The number of displaced persons in the first half of 2024 exceeds the total number of internally displaced persons in Afghanistan throughout the entire year of 2023.

Drought: Another Adverse Consequence of Climate Change

One of the most detrimental effects of climate change is drought and the subsequent reduction in rainfall. Research indicates that the average annual rainfall in Afghanistan is 256 millimeters, with the

highest recorded levels reaching up to 312 millimeters. However, in some areas, rainfall has been recorded at less than 100 millimeters. Given these averages, Afghanistan is classified among the arid regions of the world. The extent of drought, which can affect areas ranging from several hundred to thousands of square kilometers, is primarily attributed to the decrease in rainfall and snowfall, leading to a significant reduction in water resources.

To compensate for the shortage of water for drinking, agriculture, livestock, industry, and green spaces, people have increasingly relied on groundwater resources. This excessive use poses a serious risk of irreversible damage to these water reserves. Prolonged droughts also have severe negative impacts on the quantity and quality of agricultural products, leading to serious livelihood challenges. Since 80% of Afghanistan's economy relies on agriculture and livestock, prolonged drought exacerbates poverty and increases the population's dependence on humanitarian aid.

According to UNICEF, nearly 24 million people in Afghanistan, including 12.3 million children, are in urgent need of humanitarian assistance. In some provinces, severe shortages of safe drinking water have forced people to resort to unsafe water sources, including saline, bitter, and contaminated water. The National Environmental Protection Agency of the Islamic Emirate reported that, by the end of the last solar year, approximately 21 million people faced drinking water shortages. The consumption of contaminated water by livestock has also led to the spread of diseases and even fatalities. The International Federation of Red Cross and Red Crescent Societies (IFRC) reported that between April 2018 and July 2019, drought in Afghanistan affected 10.6 million people.

Earthquakes: A Potential Connection to Climate Change

While international earthquake researchers generally agree that drought, global warming, and climate change do not directly cause earthquakes, these factors can make earthquake-prone areas more susceptible to seismic activity. In recent years, the impact of climate change on the occurrence of large earthquakes, especially in areas not traditionally known for powerful seismic events, has become more pronounced. The potential link between climate change, drought, and earthquakes has been particularly noted over the past five years, drawing significant attention in places like California and other regions around the world.

In Afghanistan, according to the United Nations Office for the Coordination of Humanitarian Affairs (OCHA), earthquakes in Herat last year affected around 11,500 people, despite the fact that no significant earthquakes had occurred in the region for nearly a thousand years. Additionally, a 6.4 magnitude earthquake struck the Jurm district of Badakhshan province last year, causing heavy casualties and damage.

Seismologists assert that "theoretically, using existing assumptions and physical methods, it can be argued that climate change and drought have a positive role in triggering seismic stress, particularly in areas with active fault lines that have experienced significant loss of water—up to 30 cubic kilometers or more."

Rising Temperatures: A Consequence of Human Activities

The increase in global temperatures is primarily driven by human activities, particularly industrial processes that lead to the release of greenhouse gases. These activities have resulted in climate change and global warming. Since 1850, the Earth's temperature has risen by an average of 0.11 degrees Fahrenheit (0.06 degrees Celsius) per decade, amounting to a total increase of approximately 2 degrees Fahrenheit. However, the rate of warming has accelerated significantly since 1982, with temperatures increasing by 0.36 degrees Fahrenheit (0.20 degrees Celsius) per decade. The year 2023 was the hottest year on record since global record-keeping began in 1850, with temperatures 2.12 degrees Fahrenheit (1.18 degrees Celsius) above the 20th-century average of 57.0 degrees Fahrenheit (13.9 degrees Celsius). This represents an increase of 2.43 degrees Fahrenheit (1.35 degrees Celsius) above the pre-industrial average (1850-1900). The past decade (2014-2023) has seen the highest temperatures in recorded history, and it is predicted that 2024 may become the warmest year on record.

Afghanistan has also experienced a significant rise in temperatures over the past decades. According to a joint report by the World Food Programme (WFP), the United Nations Environment Programme (UNEP), and the National Environmental Protection Agency (NEPA), temperatures across Afghanistan have increased, particularly in the spring and autumn seasons, over the last 30 years. Another NEPA report indicated that between 1950 and 2010, Afghanistan's temperature increased by 1.8 degrees Celsius—double the global average rate of warming.

Food Security: The Impact of Climate Change

According to the United Nations' 1986 definition, food security is described as the access of all people at all times to sufficient food for a healthy life. The key factors in ensuring food security include the availability of food, access to it, and the stability of food supply. Given these criteria, climate change poses significant negative impacts on livestock, agriculture, farming, and horticulture. It also leads to droughts and a lack of access to safe water, which directly and indirectly affects food security and introduces risks at various stages of the food supply chain.

Afghanistan, already vulnerable due to a range of other factors, faces serious challenges related to poverty and hunger, largely due to its susceptibility to climate change. According to the United Nations Office for the Coordination of Humanitarian Affairs (OCHA), 48% of Afghanistan's population lives below the poverty line. The organization also reports that 12.4 million people in the country are currently experiencing food insecurity. This means that one in every three people in Afghanistan is facing food insecurity. As a result, climate change, as a global issue and natural disaster, has become a major contributor to poverty in Afghanistan by depriving people of their livelihoods, including farms, orchards, livestock, and even homes.

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CLIMATE CHANGE MITIGATION STRATEGIES

By implementing this strategy and taking cohesive actions in these areas, we may be able to reduce some of the negative effects of climate change and contribute to improving environmental conditions:

1. **Reduction of Greenhouse Gas Emissions**: Enforce policies aimed at reducing greenhouse gas emissions, such as investing in renewable energy sources (solar, wind, and hydropower), optimizing energy consumption, and enhancing the efficiency of these energy types in industries and buildings.
2. **Water Resource Management**: Improve the management of water resources using modern technologies, preserve aquatic ecosystems, and reduce water pollution. This strategy can be effective in combating climate change.
3. **Pollution Prevention**: Efforts should be made to prevent various types of pollution with suitable alternatives. For instance, to reduce reliance on fossil fuels in transportation within major cities such as Kabul, Mazar, and Kunduz, encourage the use of public transport, cycling, and walking, or ultimately, develop electric vehicles. Additionally, imposing pollution taxes, similar to practices in countries such as China, India, and Indonesia, could help prevent or reduce pollution that contributes to climate change.
4. **Ecosystem Protection**: Establish protected areas and support successful projects in ecosystem restoration, forest conservation, and natural habitat preservation. Raising public awareness about climate change and encouraging individuals and communities to adopt responsible and sustainable behaviors regarding ecosystem protection are also crucial.
5. **International Cooperation**: Engage in international agreements and collaborate with countries and global organizations to address climate challenges. This presents another important opportunity that should be utilized.

CONCLUSION

Considering the above, Afghanistan faces significant challenges due to climate change, which has affected the lives of millions and triggered both economic and humanitarian crises. Despite signing international agreements aimed at combating climate change, the country's political instability and the lack of international recognition of the Islamic Emirate have hindered its ability to benefit from financial and technical support.

Reports indicate that Afghanistan is among the most vulnerable countries to climate change, despite contributing minimally to global greenhouse gas emissions. This situation is largely the result of the negative environmental impacts caused by industrialized nations and the insufficient attention given to Afghanistan's technical capacities and international cooperation. The lack of access to clean drinking water, the increase in internally displaced persons, and the significant damage to the agricultural sector underscore the urgent need for strengthened infrastructure and international collaboration to mitigate the effects of climate change in Afghanistan. The country requires serious attention and support from the global community to address these challenges and improve the livelihoods of its people.

RECOMMENDATIONS:

Recommendations to the Islamic Emirate of Afghanistan:

1. **Strengthen Local Capacities:** The Islamic Emirate should initiate educational and technical programs for farmers and local communities focused on water resource management and sustainable agriculture. This approach can help reduce vulnerability to climate change.
2. **Enhance Environmental Regulations:** Strict enforcement of environmental laws and regulations, particularly those related to forest and water resource protection, is essential for mitigating the negative effects of climate change.
3. **Develop Environmental Infrastructure:** Investing in water infrastructure, reforestation in forest areas, increasing green spaces in cities, and implementing modern irrigation systems and rainwater harvesting can significantly reduce the adverse impacts of climate change.
4. **Collaborate with Local and International Organizations:** Establishing effective partnerships with NGOs and international organizations to exchange knowledge and resources can improve environmental conditions and reduce the damage caused by climate change.

Recommendations to the International Community:

1. **Provide Financial and Technical Support:** The international community should offer financial and technical assistance to Afghanistan under international agreements to help the country build its capacity to combat climate change.

2. **Engage with the Islamic Emirate:** The international community should engage with the Islamic Emirate of Afghanistan to facilitate international cooperation and include Afghanistan in climate change negotiations.
3. **Support Environmental Projects:** Supporting projects related to environmental protection and climate change in Afghanistan can play a crucial role in mitigating the negative effects of these changes.
4. **Forest Conservation and Development:** Efforts should be made to prevent deforestation and wildfires, and to promote the planting of trees in vacant and public spaces to expand forested areas.
5. **Water Resource Management:** To manage water resources effectively, measures such as constructing storage wells, raising awareness about groundwater conservation, and protecting green areas should be implemented.
6. **Organize International Conferences:** Hosting international conferences on climate change with a focus on Afghanistan's situation can draw greater attention to the country's challenges and needs.

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