

Topic: Pakistan's Climate and Sustainable Crisis: challenges and sustainable solutions

Outline

I. Introduction

Pakistan has ranked among the top ten climate vulnerable countries due to the drastic impact of climate change. Rapid melting of glaciers, infrastructure and agricultural losses, among others. The government has taken several actions to overcome the increase of climate change.

II Manifestation of Climate Change

III Impacts of Climate Change on Pakistan's Fragile Economic System

- A. political-level threats imposed by Climate Change
 - a. It hampers unity between center and provinces due to water scarcity.
 - e.g. i) Sindh and Punjab water dispute
 - b. Political instability due to lack of Deepening political stability
 - i) Pakistan and IMF clear and its conditionalities
 - c. It triggered conflict between center and provinces and among provinces due to disproportionate impacts of Climate Change
 - i) Gilgit-Baltistan demand 1 billion
 - ii) Sindh wants separate state in NFC
 - d. Conflict arises because of construction of dams
 - i) D-Basha Dam (lack of fuel)
 - ii) Kalabagh Dam (not used to build Sindh and Baloch)

B. Economic Face of Climate Change

~~Vulnerability in the~~

a. loss of infrastructure and developmental project
i) 858 billion loss—the floods of 2010-22 (WB)

b. Climate change posed serious threat to agriculture sector
i) Declined in the yield of Rice, Cotton and wheat by 10%.

c. Rapid melting of glacier
i) 7000, glacier decreased by 23% (DAWN)

d. Loss of biodiversity
i) Monsoon trees declined 75% (DAWN)

Construct grammatically correct expression

C. Social Adversal : Climate Change

a. Huge displacement of people
i) From More than Seven million people displaced—(2022)

b. Spread of water-borne diseases
i) 60% disease spreads due to Climate change (WHO)

c. It triggers poverty
i) 40% of population lives below poverty line (WB)

d. Disruption of human activities
i) Floods in 16-2024, loss of business activities and 100% for one month.

IV Solution to overcome the menace of climate change and Sustainable living standard for Pakistani masses

A. a. Transition to renewable energy

b. Preference to Sustainable development goals

c. Infrastructure development
i) Chinese model smart cities

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d. Sustainable and water resource agri
tural activities
i) Drip irrigation system- ✓
ii) water resistant crops rather than Cotton and Rice

e. Strengthen Early warning system mechanism
i) Efficient NODMA and DPMA2 ✓
ii) establishes glacier surveillance system ✓

IV Conclusion

Topic: Pakistan Climate Crisis: Challenges and Sustainable Solutions

The bee is dependent on the flower to make honey; the flower is dependent on the soil, air, and atmosphere, and the atmosphere is dependent on human interference. The domino effect of climate change have jeopardised the lives of human-beings and other creatures. Despite being contributing less than one percent, Pakistan is ranked among the top ten climate vulnerable countries of the world. Rapid melting of glaciers, continuous floods, infrastructural loss, erosion of agricultural land and huge displacement of people are the clear impacts of climate change on Pakistan's already fragile economy. Furthermore, if has triggered hydro politics between countries. For instance, the recent India's unilateral suspension of Indo-US Water Treaty has further strained the water relationship between the two arch-rival countries. Furthermore, Pakistan has billions in economic and infrastructural losses due to climate change. Lack of climate finance and weak disaster management system have further deepened the impacts of climate change. Therefore, Pakistan needs to take robust strategic solutions to overcome the menace of climate change.

Plz link this concept with climate crisis in Pakistan...it is isolated placement of title

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Climate change is no longer just a looming threat; it is present reality. Severe heatwaves, floods and mass are the clear examples of climate change. According to the United Nations Environment Program (UNEP), more than 2 billion people were unable to acquire neat and clean water for domestic use. Furthermore, continuous wildfire across the world have jeopardised the biodiversity. For instance, the recent fire in Los Angeles destroyed millions of hectares of greenery land and forest cover. Furthermore, both in 2024 and 2025, Mathenai fire in Parisian is considered. The steady increase in temperature in the region is due to this. Hence, climate change is considered to be a normal. There are several impacts of climate change in the existence of Pakistan. These are expressed below.

To begin with, political level of impacts imposed by climate change on Pakistan. It hampers unity between provinces due to water shortage. Water is an important ingredient of life with out adequate water living on planet is impossible. However, climate

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Climate change has diminished the per capita availability of water in the country. Sindh, a lower riparian province has claimed adequate share of water and refused to build new dams due to water scarcity in the province. Furthermore, according to the Indus River System Authority (IRSA), both Punjab and Sindh have faced 50% water shortages. It not only affects the relations among provinces but poses serious threat to the economic potential of the provinces. ~~economic development of the country is necessary for its progress and prosperity~~

Moreover, Pakistan, already grappling with countless socio-economic problems, yet climate change has incurred billions in losses every year. For example, Pakistan has acquired loan for economic purposes but this bailout is intended to mitigate climate induced losses. Furthermore, the International Monetary Fund (IMF), also imposed strict conditionalities which further squeezed the economic resilience of the country. For example, recently floods in Northern areas particularly Gilgit Baltistan have incurred Rs 4 billion losses. The climate change has deep impacts to the overall economic system of the country. And government needs to adopt resilient mechanism to avoid itself from more calamities.

Plz avoid writing in gossiping style
Do have some data to prove yourself

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The disproportionate impacts of climate change have further strained the fiscal relations between center and units among units. For example, Singh, Baloghi and ICPIC have demanded re-structure the National Finance Commission (NFC) awards based on climate change and economic challenges. However, both provincial and federal government refused these demands of provinces, which has led to political instability and a constant threat to national integration. According to the government, pollution is a major threat to the environment.

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Furthermore, Climate change is considered as the ~~biggest threat to development of~~ ~~infrastructure such as buildings, bridges and~~ ~~any other developmental projects. According~~ ~~to the United Nation Environment Program~~, (UNEP) the floods of 2010, and 22 have caused to ~~losses of~~ \$58 billion ~~for~~ for Pakistan. The floods of 2022 ~~were~~ destroyed ~~Swat,~~ ~~hotels, roads, 1~~ ~~of bridges, as a result, it~~ ~~caused~~ ~~millions in economic and infrastructural~~ ~~losses. Furthermore, it not only affects infra~~ ~~for all~~ ~~ways, but also displaces millions~~ ~~of people~~

In addition to this, the agriculture sector of Pakistan was jeopardised due to climate related hazards such as scorching heats, water scarcity, crop related diseases among others. According to Icison Head Organisation, drastic decline in the yield of wheat, cotton and rice due to water scarcity and climate induced crop disease. Furthermore, agriculture sector of Pakistan is considered as the backbone of Pakistan, fragile economy if contributes a 1% to the GDP and engage 87.5% work force, according to the Bureau Statistic of Pakistan. Hence, the ~~need~~ ~~to~~ ~~introduce~~ ~~mechanism~~ to enhance agriculture, ~~potentially~~ ~~consider~~ ~~climate change impacts on the~~ ~~agriculture sector~~ ~~of the country.~~

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Moreover, fog, smoke and dust have severe impacts on the lives of people. It indulges people into health related issues such as Cardiovascular diseases, air stain problem. According to the World Health Organization in 2029 in the ranks of 100 most polluted cities in the world, Lahore is close of all. Economic and co-beneficial activities of people for one month. Further more, according to the National University of Clincs, - go's Energy Policy Institute estimates that air pollution in Pakistan has required the government to set aside 100 years. This shows the severity of climate change. and a link with the issue of the face of climate change.

Plz be careful about grammar

Plz link paragraphs

There are several strategic solutions to overcome climate change drastic impacts on Pakistan's long-term survival and sustainability.

First Transition to renewable energy, one of the important and cost effective strategy to overcome climate change severity. It means, carbon free environment where renewable energy dominate each and every sector of the economy rather than fossil fuels and hydrocarbon. China one of the role model countries for Pakistan.

According to International Energy Agency (IEA), China's share in global renewable energy is more than 80% percent. This shows China's success power of renewable energy in the face of

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Furthermore, rapid melting of glacier is also clear evidence of climate change. Pakistan, is home to more than 7000 glaciers and losses 23% of ice mass from 1990 to 2018, according to Dawn article. Glacier, are considered the main source of clean water, however, rapid melting of the third pole- Himalian glaciers, Hindu Kush and Karakoram have jeopardized Pakistan's future water availability. Furthermore, glacier are also play an important role by cooling or absorbing heat on the surface of land. So why these are ~~alleviate~~ the primary carbon sink on Earth.

Biodiversity is the primary ingredients of ecological system. It comprises forest, soil, micro-organisms and oceans. However, increasing heat, indicate melting of glaciers and extinction of wild animals.
~~This needs to be more solid and substantive in arguments~~ Furthermore, according to the International Union for Conservation of Nature (IUCN), more than hundred species of species have completely extinct from the Earth, among several others are: Indus River Dolphin, Mountain Gorilla and Amur Leopard. This presents, the harshness of climate change in the face of biodiversity destruction. Therefore, afforestation and reforestation are the necessary steps to avoid more biodiversity loss.

Furthermore, displacement of population is a clear manifestation of climate change. Every year, billions of people displaced due to climate change and other related issues. For example, according to (UNDP) estimation, more than 700,000 people were displaced in 2022 in Pakistan due to continuous floods and soaring heat. Furthermore, it not only displaced humans population but also toppled the entire population into a state of menacing socio-economic problems such as poverty, illiteracy, and health distortion. According to World Health Organization (WHO) report, more than 80% of diseases spreads due to climate change. Hence, Pakistan needs to introduce robust social mobility mechanism that avoid climate induced risks.

Additionally, climate change not only disturbs the ecological balance of the planet, but it also involves the population into a menacing socio-economic problems. For instance, according to the World Bank, more than 10% of population lives below poverty line. ~~lack of food, water, shelter, primary health facility~~ have further exacerbated poverty rate among the poor masses. Furthermore, it not only affects the socio-economic potential of the country but also disrupts the labour force of the country.

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global climate resilient competition. However, Pakistan's ambitious 13th five year economic revitalization program, Clean Pakistan, also pledges 30% transition to renewable energy. Furthermore, CPEC initiative energy projects such as Quid-e-Azam Solar Park, Jam Pir wind projects and Sulikシン hydro power projects are also good initiative to acquire renewable energy. Hence, these projects must be prioritized over all hydrocarbon.

Second, Sustainable Development Goals can be a major driving force to boost Pakistan's economic and climate related tourism. It provides smooth way to environment protection and economic ways to maintain its existence. However, Pakistan's needs to implement all these provisions to sustain its long-term existence. Furthermore, Crossborder data sharing and climate related planning must be prioritized to overcome climate induced threats such as erratic rainfalls, wildfires, and moridimate melting of glaciers. Hence, SDGs are very important economic, environmental and political initiatives that must be considered to reduce climate distortion.

Third, resilient Infrastructure development is a guarantor of environmental protection and sustainable climate initiatives to avoid losses from

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distortion. For example, China's sponge Cities infrastructure are the clear example of resilient infrastructure development. Furthermore, strong water storage mechanism such as dams, barrage and storage system are very important strategy to overcome climate change induces floods and extreme rainfalls. Hence, the construction of, Kalgash Dam, and Diamer Bhasha dam must be prioritized rather than politicizing of these projects. Fourth, the agriculture sector of Pakistan has consumed lots of water resources. For example, wheat, cotton and rice need huge amount of water, so as compare to other products. Pakistan needs to cultivate water resistant crops such as fruits and beans to conserve its water resource. Hence, furthermore, Drip irrigation system also an important strategy to save water and sustainable farming. Hence, Pakistan needs to introduce sustainable farming techniques to conserve its precious water resource.

• Fit last but not the least, robust early warning system is very important strategy in order to minimize climate related hazards. such as floods, glacial lake outburst (GLOFs) and rapid melting glaciers. Pakistan needs to strengthen its National Disaster Management Authority (NDMA), and District Disaster Management Authority (DDMAs) to avoid themselves

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before the occurrence of disasters. Furthermore, Satellites Glacier Surveillance System is also an important strategy to overcome climate related hazards such as melting of ice caps, and glaciers.

In a not-such climate, Clean air, serious threats to Pakistan's long-term survival and sustainability.

Repeated climate related hazards such as Glacial lake Outburst (GLOF), Scorching heatwaves and Inordinate melting of glaciers have severed impact on Pakistan's economic development and social growth.

According to the United Nations Environment Program (UNEP), the floods of 2010, and 22 caused \$58 billion losses for Pakistan, and displaced millions of people across the country. Furthermore, despite being to

sheer in global carbon emission, Pakistan ranks among the top ten climate vulnerable countries of the world. In conclusion,

there are several solutions to avoid itself from the hazardous impacts of climate change. Few of them were given the above, or Pakistan must implement these solutions to offset climate impacts on Pakistan's long-term development and sustainability.