

Causes and Consequences of Climate change in Pakistan

outline

1-Introduction

1.1- Hook

1.2- General Statement

1.3- Thesis: In Pakistan climate change is

this has been intensified due to

caused by lack of preparedness, infrequent meetings, deforestation, no strict laws, rapid urbanization, heavy dependence on fossil fuel and shortage of short dams. climate change also has severe consequences like fragile economy, global warming, displacements and deaths, altered weather patterns loss of crops, poverty and ozone depletion.

2- Causes Of Climate Change in Pakistan

2.1- There is a lack of preparedness in Pakistan (Bangladesh and Nepal has pre activation mechanisms)

2.2- Infrequent meetings are held at climate related institutions (for example Pakistan water council could arrange only one meeting since it's inception in 2018).

such phrases do not carry any meanings

2.3-In Pakistan there is no enforcement of existing climate related laws (for instance Punjab Flood management Act 2017 remains unimplemented)

2.4-In ~~Pakistan~~, there exists no policy for resilient infrastructure (recent NDMA report indicates poor infrastructure is main culprit of deaths)

2.5-Deforestation is the leading cause of climate change in Pakistan (recent report of Global Forest Watch tells khyber Pakhtunkhwa has lost 11000 hectares ^{of forests} between 2005 and 2023)

2.6-Rapid urbanization is a devastating cause of climate change (housing societies are being constructed at river beds)

2.7-Heavy use of fossil fuels is polluting our environment (vehicles emit CO₂ gas into air)

2.8-No coordination is present among federal government and provinces

2.9- Government has no planning for short dams and storage reservoirs (kalabagh dam can store 6.1 million cusec water)

2.10- Logging has been increasing for previous years.

2.11- Lack of advance techniques and Research in Pakistan is a major cause to feel impact of climate change.

3- Consequences of climate change in Pakistan

3.1- Fragile economy is the first outcome of climate change (According to world bank Pakistan lost 30 billion dollars in 2022 floods). appropriate data

3.2- Global warming is the major consequence of climate change. (temperature of Pakistan is rising 0.5°C every year)

3.3- Climate change cause massive displacements and casualties. (In 2022 ^{floods} 8 million persons displaced)

3.4- Unusual monsoon patterns

occur due to climate change (In 2025, Pakistan has faced 60% to 70% more intense monsoon)

3.5 Floods contribute to loss of agricultural lands and livestock (According to world bank in 2022 floods Pakistan lost 1.2 million livestock)

3.6 Climate change has harmful impact on health (After floods, cholera and typhoid spread)

3.7 Main consequence of floods is poverty (In 2022 floods, between 8.4 to 9.1 million population fell below poverty)

3.8 Law and order situation becomes compromised (After floods robbers from kacha areas come into cities)

3.9 Ozone depletion is caused by climate change

4- Way Forward to curb effects of climate change in Pakistan

4.1- There is a need to strengthen local governments in Pakistan

4.2 A strict policy should be adopted towards illegal constructions

4.3 Coordination must be improved among federal government and provinces

avoid writing in passive please

4.4 Installation of early warning systems must be ensured

4.5 Short dams should be constructed for storing water

4.6 Solar energy and green energy should be adopted

4.7 Resilient infrastructure should be made necessary for construction

5. Conclusion:

The Essay

"We are the first generation to see feel the impact of climate change and we are the last generation that can do something about it." (Barack Obama)

Pakistan has been facing effects of climate change for many years. Pakistan has faced 20 major floods between 1950 and 2025. But unfortunately,

~~Pakistan did not take solid ^{actions} steps~~
~~to deal with climate change.~~ There
are some causes of climate change
in Pakistan which include lack
of preparedness, no active participation
of climate change related authorities
for example Council of common interest
holds a meeting yearly. Many laws
have been ~~made~~ ^{have been enacted} but they remain
~~unimplemented~~: Pakistan has no
laws or codes for construction. Deforestation
is also cause for climate change. Rapid
urbanization, heavy use of fossil fuels,
lack of coordination, no planning
for short dams, logging and
no use of advance science
in managing effects of climate
change. On the other hand, there
are some consequences of climate
change which include poor economy,
global warming, deaths, loss
of agriculture lands and
livestocks. Climate change also has
impacts on human health. It also

causes poverty and distorted law and order situation in society.

The major causes of climate change in Pakistan are discussed below. These causes pose a serious threat to environment:

Lack of preparedness is the most contributing factor towards climate change in Pakistan. Country has no early warning systems only seven to ten days before weather forecast tells that emergency is at hand. In Pakistan only 85 weather stations are working across ~~the~~ all ^{the} provinces. There is no unified information system exists in the country like geographic information system. Information system operates with fund based forecast, while in Bangladesh an institutionalised based forecast system works. Like wise, there is no proper coordination is present between national disaster management

authority and health department
No specific fund is allocated to
health department for preparedness
for any consequence. For example
Flood prone areas, like Dera
Ismail Khan, Rajanpur and Dera
Ghazi Khan lack early medical
kits activation mechanism. Pakistan
has no integrated community
based clinics, while Nepal has
integrated community based clinics
which work on pre activation
mechanism. Pakistan mostly rely
on foreign rehabilitation funding.
Camps are established after
floods. These medical camps lack
medical facilities and only have
some basic medicines like Paracetamol
and ibuprofen.

Likewise, infrequent meetings are held
by National Economic Council, Council
of Common Interest and many
other related councils. For
example National Security Council

formulated Pakistan Security Policy in 2021, it only focused on security but ignored ~~the~~ traditional non security threat which is climate change. In the same way, Pakistan Water Council only hosted ~~a~~ one meeting since its inception in 2018 and Climate Change Council only arranged a meeting in four decades. In the same manner, Pakistan Environmental Council held one meeting although it was established in 2007. National Economic Council does not ~~discuss~~ **council of common interest have been rendered useless and ineffective** discussing issue of climate change and its solutions. Council of common interest is bounded to call a meeting quarterly in a year. It is headed by prime minister of Pakistan. This institute also gives no attention to topic of climate change consequences and efforts to deal with them. Not even a single climate related initiative has been taken by

these councils. In Pakistan, governments have made many laws to control change in climate. For instance Pakistan river protection ordinance 2002 which does not allow construction within 200 feet of river sides and 1500 meters within mountain are considered as sensitive mountain zone. In the same manner Punjab has Punjab flood management act 2017 and other province has khyber pakhtunkhwa river protection act 2007. But these are just piece of paper. Law enforcement agencies remain unsuccessful in implementing these acts practically. For instance in Lahore Ruda and LDA are busy in permitting licences and allow housing societies to be built at riversides, for example Bahria town and defense housing authority

have been given illegal licences. In the same way Pakistan lack resilient infrastructure. In 2025 floods 2100 villages have been affected only due to poor infrastructure. Floods mostly affect mud ~~made~~ houses and cause deaths. According to national disaster management authority's report in floods 55% total casualties happened but 17 percent are due to less resilient infrastructure. In Karachi recent monsoon rains caused ~~no~~ destruction of many buildings. Like wise in 2022 floods huge hotels buildings have destroyed. No proper strict policy is present with regard to construction of buildings. Builders and owners only prefer their businesses and promote construction of huge building with multiple stories. Builders compromise materials of construction and fill their pockets.

This is one of major cause which exacerbates ^{the} effect of climate change.

Moreover deforestation is the leading cause of climate change in Pakistan. Deforestation causes

release of carbon dioxide gas into atmosphere which is a prominent green house gas. It causes global warming. According to Global Forest Watch report indicated that Khyber Pakhtunkhwa is losing forest area at rate of 1.5 percent yearly, has lost 11000 hectares forest area between 2005 and 2023, and will lose 23 percent by 2030. This report further indicated that this province had 12 percent forest area in 2020. Khyber Pakhtunkhwa had 2.3 million ~~hectares~~ acres back in 2020, it has lost 581 hectares between 2020 and 2024. This loss is equal to 40.8 million kilotonns of carbon dioxide. Likewise

these are not substantive paragraphs

Malakand division also had 50 percent forest cover. It has also lost 431 ~~hectares~~ forest cover between 2005 and 2024. Although this division consisted of 173 kilo hectares forest area Gilgit Baltistan lost 1700 square kilometer green space in 2023. Due this factor glaciers are melting and lead to unisual weather patterns.

Rapid urbanization is a growing issue which result in climate change. Housing socities are being constructed at river beds and by cutting down trees. For example Park view housing society has been built at Ravi river side and during recent 2025 heavy monsoons this society faced a huge financial loss. In the same manner defense housing authority in Multan has been developed by ~~cutting~~ slaughtering mango trees and crops. Hotels and restaurants are being constructed

plz write more substantiative arguments

in the same way. For instance
Dardarya in Karachi at sea, and
Lexus hotel Hunza has been
established by cutting down
forests. Moreover today man is
busy in heavy use of fossil
fuels. In big cities like Karachi
and Lahore, roads are always
busy with a large of vehicles.
These vehicles emit ~~aggressive~~
aggressive amount of carbon
dioxide and other greenhouse
gases which mainly pollute air.
Fossil fuels are being used in
various industries. There is no
proper disposal system of waste
products in industries. Their harmful
gases are freely released into
air without making them
neutralize. These gases like nitric
oxides and carbon monoxides
add to impurities of already
polluted environment.
The other most crucial factor

plz do not start sentences with in pakistan, in big
cities your can write these at the end of sentences

which intensifies the effect of climate change is lack of coordination among federal government and provinces. Pakistan has been facing this issue since its independence. 60 percent hindrance in implementing green energy goals is due to trodden federal provinces relationships. If meetings are held they end with no effective and solid stance. Furthermore, government does not pay heed towards the construction of short dams and storage reservoirs. According to a report Kalabagh dam can store 6.1 million cusec water and can produce 3600 MW energy. But unfortunately it is no more matter of interest for country's stakeholders. Water is being wasted for many years due to shortage of small reservoirs for storage. These reservoirs can be built in areas where excess rainfall occurs, to ~~supply~~ watering crops.

Small canals can also be constructed to prevent water waste. Because our neighbour country India has constructed 6,000 small dams and large dams. Therefore, India is a middle riparian country and can store water reserves for 170 days, on the other hand Pakistan is a low riparian country and can store water reserves only for 30 days.

Logging has been increasing for many years. It is a devastating cause lead to climate change. Logging in Melam Tappa, Kalam and Bahrain is not a secret. According to a report, in last year 15 to 20 timber loaded trucks were being sent to Punjab every day. Due to rapid growing population in Punjab, demands for food, construction and industrialisation also have increased. So this timber is useful in the

construction of houses and buildings. Forest also provide resins and gums which are raw material for industries. In the same manner Pakistan does not use advance skills and science to encounter the climate change consequences. Many research institutes face a shortage of research teams, like Pakistan Agriculture research council; Pakistan Council for water resources and Pakistan research council of science and technology. This delay in appointment hinders the integration of management sciences ~~to~~ in rehabilitation procedures, adoption of latest technologies and production of hybrid seeds. Due to which country has no a single climate resilient farm. Old irrigation methods are being used without applying modern scientific and efficient techniques. Sprinkler system is a advance irrigation technique.

is being used by Egypt. But in Pakistan water due to rainfall has been wasting for many years.

Climate change has become a non-traditional security threat for Pakistan. Its ramifications can be seen every year during floods. It leaves various consequences on human ^{on humans' life} life in many ways.

Like wise, climate change put a heavy burden on economy. It damages infrastructure at massive rate. For example according to world bank Pakistan lost 30 billion dollars in 2022 floods. Furthermore, Pakistan spends more amount on rehabilitation process which ^{weaken} ~~weaken~~ already ^{stagnated} ~~stagnated~~ economy. During recent floods 2025 government issued massive fund for camps and other facilities. In khyber-pakhtunkhwa in 2025 while inspecting the flood situation a helicopter crashed in

Mohmand. More over medical camps are also established in which additional medical staff is needed due to which our health sector is overly burdened. Recent report of Germanwatch indicated that Pakistan is on top to be affected by climate change and has lost 4 percent gdp between 1993 and 2022.

In the same manner global warming is the most challenging outcome of climate change. Temperature of the earth has been rising continuously. In Pakistan temperature rises every year with rate of 0.5 percent. Due to global warming unusual weather patterns occur. For example in year 2025 in month of April temperature rose 8°C above the normal range. ~~This leads to heat waves~~ ^{this causes} In 2024 heat waves caused many casualties in Punjab

and Sindh hospitals become full with heat waves victims. Heat waves usually hit deserts. Global warming deteriorates the quality of soil. Because heat causes soil hardening which in turn reduces infiltration capacity of soil by 40 to 60 percent. High temperature also affects the humidity of air. For instance 1°C rise in temperature can increase 7 percent more moisture in the air. Global warming plays a key role in melting down of glaciers which causes massive floods. In Pakistan 3,000 glaciers melted in 2024. For instance Nigir glacier in Nuza also has been melted. Others in Himalayan and Karakoram also have been melting to form glacial lakes.

A devastating outcome of climate change are floods. Floods disturb the circle of human life. They cause massive destruction of

houses and many persons become homeless. While others lose their lives. As data given by world bank 33 million people were affected by 2022 floods and 8 million population became homeless. More than 1700 persons died. In recent 2025 floods in Kohistan 7 lac people were affected. Like wise a person citizen of Buner has lost his 31 family members in these floods. Due to floods and heavy rains electric shocks can also occur. Because water is a good conductor of electricity. A man touches unrepair electricity wires and dies. In Skardu cloud burst happened and many precious lives were lost. For example a famous well-educated family of Kohistan has lost its members while returning from Skardu.

From some years weather has

been following unusual patterns. Monsoon patterns have completely altered. Moreover, in Pakistan in year 2025 60 to 70 percent more intense monsoon occurred. In Chakwal 400mm record rain was recorded just in 10 hours. In Islamabad and Rawalpindi approximately annual rain fall is 1000mm but in July and August more than 800mm rainfall was recorded. Similarly in Buner 510mm rainfall has been recorded just in 1 hour. Back in 2020 in Karachi 223mm rainfall was recorded. Due to this heavy monsoon, river and dams become full with water beyond their capacity and lead to floods. These heavy rains cause landsliding in northern areas and also suppress the transportation and tourism. Unusual and intense monsoon also has impacts

on growth of crops. Likewise, wheat production declines due to heavy rain fall.

In the same manner floods damage agricultural lands and production.

Food shortage becomes an alarming situation after floods. Another

impact of floods is death of livestock. In 2022, floods Pakistan has lost 1.2 million live stocks.

Moreover in Pakistan an

estimate ^{indicates} ~~suggests~~ that 220,000 hectares of rice were flooded.

from August 1 to September 26, 2025. This condition leads to higher prices.

In district Dera Ghazi Khan and Rajanpur 300,000 acres area has been damaged.

In the same manner wheat and cotton crops also have been damaged to a

greater extent in district Thang due to flood in Chenab river. Flood consequences can come even after

some time. Flood affected areas face outbreaks of typhoid and cholera. During rehabilitation

people use to live in camps and do not maintain hygiene. They use public toilets and no proper drainage system is used. Polluted water is used for drinking. Moreover, sometimes uncooked meal is provided to them. No proper sanitation system works at camp sites. People can easily get agents, causing typhoid and cholera. On the other hand vector borne diseases can also spread, for example malaria and dengue. These are spread by mosquitoes. Usually camps are established in open place and no proper disposal of garbage is present. This environment favours production of mosquitoes. These agents bite host and transfer disease. In the same way victims can catch many skin

for Strong Argumentative

Paragraphs: Stick to one main point per paragraph.

Be clear and concise.

Use reliable sources for evidence.

Avoid vague language like "some people say...". Keep your tone formal and objective

allergies and respiratory allergies
For instance acute dermatitis
and mold allergies may accelerate
due to damp conditions. Snake
bites biting is also a common
complain in flooded areas.
Moreover, climate ^{change} also increases

poverty. Due to heat waves out
door businesses are badly affected.

Many fruit salers, vegetable salers
and juice saulers have to
shut down their set ups to
save their lives. In extreme heat

~~no one can like to leave home.~~

Likewise, due to floods many
employees become jobless. Farmers

lose their crops and become
unable to fulfill their needs.

According to an estimate
this year Pakistani labour has
been grown by rate 0.56 percent
and has raised to 40 percent
collectively. This situation has

become alarming for Pakistan.

avoid such generic statement pls

In the same way in 2022 floods 8.4 million to 9.1 million persons lost their jobs. Poverty rises to such a level that poor population becomes unable to spend even on health. Poor parents are unable to send their children to school so it ^{causes} hurdles in the education process also. Schools infrastructure in affected villages is also damaged drastically. According world bank if these climate changes continuously happen then world poverty will rise to 44 percent by the end of 2050. So poverty is the horrible repercussion which must be addressed. Similarly when floods come in an area, then expert robbers come from flooded areas to the cities. In this way law and ^{order} ~~other~~ situation of big cities is compromised. That's why street crimes, purse and mobile phone snatching become common in the society. Moreover, other

crimes such as robbery in big
shops and houses ~~are~~ also surge.
Therefore, ^{massive} crime reports are received
by police during floods
rehabilitation process. Hence it becomes
a challenge for agencies to
maintain law and order situation.

Further more due to climate
change our ozone layer has been
depleting at greater rate. Due to
it's depletion harmful UVA and
UVB rays reach earth. These
rays cause many health
complexities. Mainly they cause
skin cancer and eye diseases.
Carbon dioxide and nitrogen oxide
are the main culprits of ozone
depletion. Ozone depletion also
has impacts on animals and
plants. UVB rays cause the
damage to genetic make up
in animals. Ozone depletion is
always on top to cause global
warming. Because more rays

reach earth. It also harms the ecosystem, agriculture yield, marine life and also stunts growth of plants. So ozone depletion has become a harmful consequence of climate change.

In Pakistan climate change has become a threat for society, but on the other hand Pakistan has no resilient planning to mitigate the consequences of climate change. Some solid actions should be taken by Pakistan.

First of all there is a need to strengthen local governments in the country. The devolution of power to local governments will strengthen not only local administration but also early response to any climate risk. For instance in India system of local governments known as "panchayat". This system is like right hand of Indian government. In recent floods these local bodies

evacuated areas already to deal with any threat as early response to climate change. Secondly Pakistan should form a strict policy towards illegal constructions at river beds. Although many laws are present but ~~st~~ they should be enforced strictly. Surveillance will be best approach by installing cameras near river sides and green spaces.

Besides these steps, coordination ^{among} ~~between~~ federal government and provinces should be improved.

Meetings of National Economic Council and Council of common interest must be held on time. In these meetings all climate related issues should be addressed. Pakistan should install early warning systems across all the country. Countries like China are getting benefits from these systems. Pakistani

government should plan to build more dams. Our neighbour India has total 60,000 short and long dams. Pakistan must adopt ~~an~~ climate friendly energy sources like solar energy and green energy. Country should give tax exemption to manufacturers of solar pannels. According to estimate by International Labour Organisation 24 million jobs would be created by adoption of green energy. At the end resilient infrastructure planning should be made to prevent huge loss.

For example Canada and USA have special bodies to design buildings to cope with climate change. So these were some solid actions by which Pakistan can mitigate climate change consequences.

In a nutshell there are many causes of climate change in Pakistan which are mainly no

early response mechanism, not sufficient gatherings at national forums, no proper implementing of already existing laws, no planning of resilient infrastructure and forests cutting down are the leading causes. Some other causes are rising urbanisation, fossil fuels are used in vehicles and industries, lack of coordination among federal government and units, shortage of dams, Logging is emerging issue and at the end Pakistan mostly relies on old traditional weather monitoring systems. In return climate change also impacts ~~the~~ economy and rises the temperature. It also results in floods which massive displacements and deaths ~~are~~ and also alters the monsoon patterns. Pakistan loses agricultural lands and livestock after floods. After deluges outbreaks

of malaria, cholera and typhoid occur. Floods leave dark impacts on society in the form of poverty due to which law and order situation is compromised.