

! Pafbars
2024
Q5

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Global warming presents an existential threat to states like Pakistan. Examine the far reaching impacts of global warming on Pakistan and propose a model of economic development that aligns with environmental protection.

INTRODUCTION

Pakistan is a country of 241.46 million inhabitants. In recent years, all of them are under threat due to global warming and climate change.

'Pakistan ranks as 5th most vulnerable to Climate Change.'

(UN-Habitat)

In 2022, the country was ravaged by floods that resulted ^{being} millions displaced, billions in damages and thousands lost their lives. As the government's climate change minister also said in the same year

'Pakistan has seen a springless year.'

(Minister for Climate Change - Pakistan)

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IMPACTS OF GLOBAL WARMING ON PAKISTAN

a) Global warming has increased the Droughts
in Central Pakistan.

Pakistan's central and southern regions face severe droughts every year. Several regions of Sindh and Balochistan suffered from extreme droughts in 2021-22.

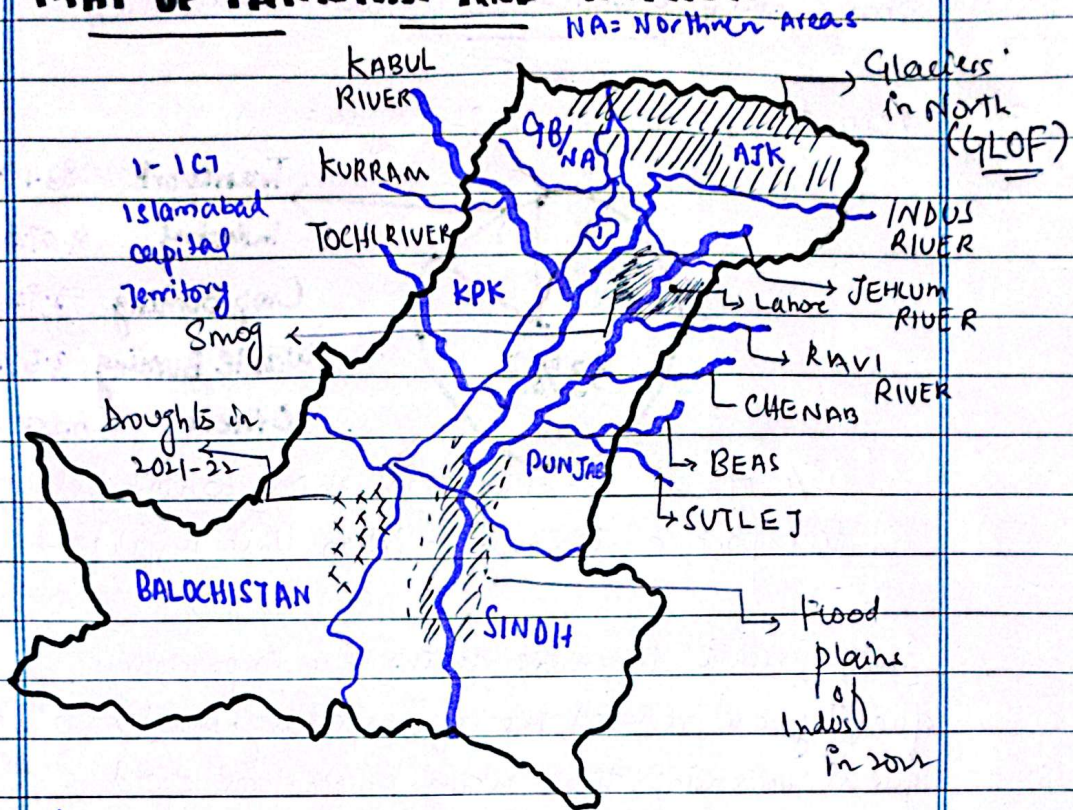
In ~~the~~ ^{the} following data shows the water scarcity in district of Thar that lead to infant deaths.

Year	Water Scarcity Level	Deaths of Infants (under 5)
2014	100%	326
2015	100%	396
2016	100%	476

(Center for Strategic
and Contemporary
Research)

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MAP OF PAKISTAN AND IMPACTS



(b) Floods in Indus Basin in 2022

Climate change has intensified the monsoon cycle in the country. The frequency and intensity all have affected. According to the Economist,

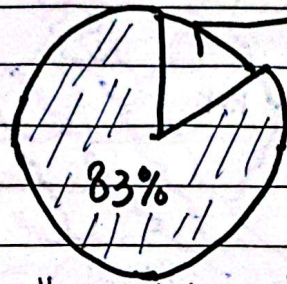
'For every degree Celsius of global temperature increase, the Indian subcontinent should expect 5.3% increase in precipitation during the monsoon.' (The Economist)

Flooding affects the country every year. In 2022, the country suffered a loss of \$30 - 3.2 billion PKR and 30 million plus people had been affected.

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c) Smog has intensified its duration and severity

According to Urban-Unit, Punjab:



Transport	83.15%
Industry	9.07%
Crop Burning	3.9%
Waste Burning	9.6%
Others	0.25%

'83% of all emissions in Lahore contributed transport emissions?' - (Urban Unit Punjab)

Smog results in more deaths due to poor air quality and reduced the life expectancy. Due to global warming, the rising temperatures speed up the formation and intensity of smog levels. Moreover, it has also extended the duration of the smog seasons is smog.

d) Glacial Melting and Enhanced Risk of Glacial Lake Outburst Floods (GLOF)

Pakistan has more than 7253 Glaciers, this is highest numbers outside the polar regions. This is also another reason why it is referred to as the 'Earth's third pole'. Global warming has accelerated glacial melting and as per monitoring by the officials at the Climate Change ministry, it was noted that

'In 2021, 33 Glacial lakes were at

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The risk of bursting and over 7.1 million in KP and GB are in the path of them, out of them 26.7% and 22% live below the poverty line.' (MOCC)

e) Heatwaves have become more prevalent

Heatwaves a phenomenon unheard of have become prevalent in all major cities. As the global warms up, temperatures also increase leading to 'heatwaves' and 'wet bubble effects'

'In this year, Karachi has seen 500 deaths due to the heatwave that came from May-July.'

(Dawn)

Moreover, the temperatures in Central and Southern Sindh has crossed 50°C, with Hyderabad Mohenjodaro crossing 52°C.

b) Urban Flooding due to the Monsoons

Pakistan's urban centers all are suffering at the hands of global warming. The monsoon patterns have changed bringing more rain than ever. Cities are experiencing urban flooding at a whole new scale.

According to Met Department.

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'Lahore saw 360 mm (14 inches)
fall in three hours.'

(PMD)

This caused wide level urban flooding
in the entire city. This is only about to
get worse as global warming has led to
more precipitation levels in the rainfall
system/patterns.

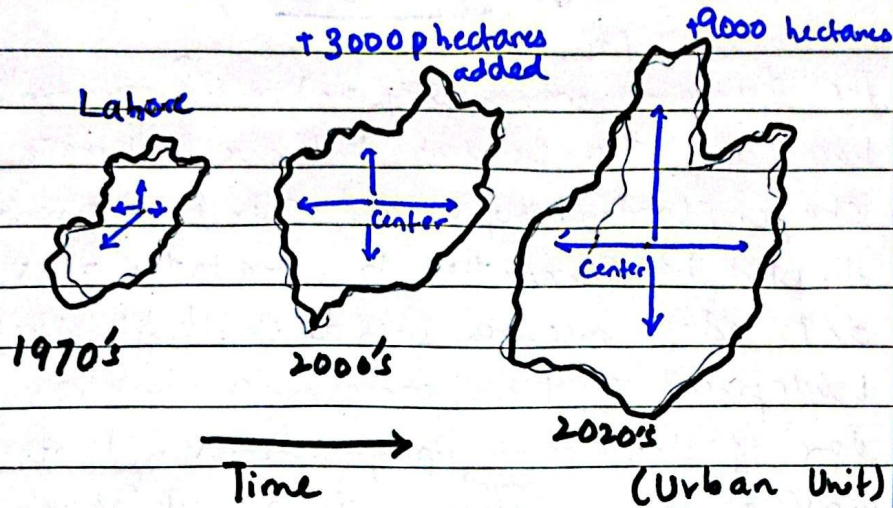
PROPOSED MODEL FOR SUSTAINABLE ECONOMIC DEVELOPMENT

a) Accelerating the Transition to Renewables

As from the above, Transport emissions contribute
a huge chunk of the emissions in all
major urban centers. By transitioning to
electric power, ^{one} we can reduce the emissions
by the transport sector. Similarly, using renewable
energy sources more in our power supply.
Currently, Wind and Solar make up for
4.5% of the total energy supply. If this
could be increased to 10-15%, our reliance on
fossil fuel driven power plants could be reduced.

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b) Reducing City / Urban Sprawl of Urban ^{Centres} City



Our cities are continuously expanding, they are encroaching on green agricultural spaces. Promotion of mixed use development coupled with a high FAR (Floor Area Ratio) can ensure vertical development patterns take place and not horizontal development. City expansion must aimed at the sky and not at the neighbouring fields.

c) Mandating Green Cover Requirements

Development cannot be stopped, however it can always be done sustainably. City authorities must mandate green cover limits of the city so that effect of the smog, urban flooding can be reduced. Replacing green cover where development has taken place is another proposal. Authorities should enforce developers to preserve and protect the environment and replace if they have damaged it.

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d) Community Centric Development to avoid Degradation of the Environment

The farming community and rural community has been the hardest hit due to climate change. Floods, droughts and other environmental disasters has forced them to move to the cities or to adopt measures such as stubble burning etc. Development of these communities must be done first. Economic uplift schemes and other modes of income ~~must~~ ^{must} be introduced for these communities. Examples can be taken from India as well.

'Punjab and Haryana government to pay Rs. 2500/acre to farmers to not burn stubble.'

(Economist-India)

e) Sustainable Industrialization and Phasing Out Polluting Industrial Units

Due to the lack of oversight, small scale industrial units have sprung up that ^{cause the} use environment more harm than good. Industrialization should be promoted but only that which is compliance of EPA/NEQ standards. Phasing ^{the} out polluting environment whether done by small or large units must be closed and other alternatives must be given to them.

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CONCLUSION

Global warming has far reaching impacts on the world especially, Pakistan. Floods, droughts, heatwaves and so much more is attributed to global warming. Sustainably managing the development is key to progressing ahead. To ensure our future, we must work with the environment and not against it.