

The Economic Costs of Natural Disasters in a Changing Climate

Outline

1- Introduction

Thesis Statement: The natural disasters in a changing climate are increasing burden on economy. Loss of agricultural crops, Problems in energy sector and infrastructure losses are some economic costs of natural disasters.

These economic costs can be mitigated by using weather resistant seeds and climate resilient infrastructure.

2. What are the Economic costs of natural disasters in a Changing climate

- (a) Loss of agricultural crops which contribute a major portion in country's GDP
- (b) Increase in the losses of transmission lines, affecting industrial sector
- (c) Losses of infrastructure like roads
- (d) Pressure on the budget increases due to mass exodus
- (e) Number of out-of-school children increases due to destruction of educational institutes

3 ways to mitigate the economic costs of natural disasters in a changing climate

- (a) Use of weather resilient seeds for better crop production.
- (b) Reforms for transmission lines to bear natural disasters
- (c) construction of weather resilient infrastructures
- (d) structural reforms to implement Pakistan Climate Change Act 2017
- (e) International collaboration to make new policies

4- conclusion

"If you think economy is more important than climate, try holding your breath and then count your money." (Guy McPherson) This quotation highlights the importance of climate over economy. Economy is dependent on climate conditions. If changing climate conditions are ignored, they will definitely cost the economy. There are many economic costs due to natural disasters in a changing climate.

Agricultural crops are destroying due to floods. The excessive weather fluctuations damage the transmission lines which affect the industrial sector also. Floods are destroying the (infrastructure) infrastructures like roads which cost heavily in ^{their} rebuilding. People are forced to leave their residential areas and government has to support them financially. Educational institutes in backward areas are destroying which cause an increase in out-of-school children. All these economic costs can be mitigated by using weather-resistant seeds, reforms in transmission lines and by building weather resilient infrastructure.

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seeds and climate resilient infra-
structures.

Natural disasters in a changing climate are destroying the agricultural crops which contributes a major portion of about 23% in country's GDP. Natural disaster mainly floods cause the eruption of crops from their roots. Most of the other economic sectors are dependent on agriculture sector. It causes food insecurity in country and loss of raw material for industries. As per Pakistan Statistics of Bureau: The floods of 2022 destroyed 38% of the Kharif crops.

Along with that natural disasters like tornadoes destroy the transmission lines which also affects economy. It is because industrial sector runs on electricity and losses in transmission lines affect the working of this sector. The production of this sector decreases manifold. This causes trade-deficit

due to decrease in exports. Thus natural disasters are affecting the economy by disturbing the functioning of industrial sectors.

Disasters also destroy infrastructure like roads similarly the destruction of transmission lines. The heavy flow of floods washes off the portions of roads. It affects the transportation in that areas. Government has to invest heavy amounts in the re-building of these roads. As per Tehsil Chairman of a valley in Gilgit, in dawn news, 2022 the 2022 floods destroyed 37 km road of this valley which connects it with city.

In a nutshell, government has to spend a lot of money in the re-building of these roads, affected with floods.

The floods not only destroy the roads but also the houses of many residents of the affected areas which results in mass exodus. This mass

Exodus puts pressure on government budget. It is because, government has to spend a heavy amount on the arrangements to accommodate these people. AS per world Meteorological organization, 2023: 48% people of affected areas of KP and Gilgit in Pakistan migrated to safer places after the floods of 2022.

It means that natural disasters put pressure on government budget due to mass exodus of people from affected areas.

Along with this mass exodus the number of out-of-school children increases due to destruction of educational institutes in the backward areas. It is because the infrastructure of these educational institutes are not up to the mark. It also costs heavily upon economy to re-build all these institutes to decrease the number of out-of-school

children. AS per UN report 2023: There are 2.5 million out-of-school children in Pakistan. Resultantly, disasters destroy these educational institutes which increases ^{the number of} out-of-school children and government needs to spend heavily to re-build these schools.

All these economic costs can be mitigated by adopting some measures as the use weather-resilient seeds for better crop production. These weather resilient seeds will minimize the risk of the destruction of crop due to floods and other natural disasters. weather-resilient crops have the potential to bear the changing climate.

Example: Many countries like China and India are using these weather resilient seeds to minimize the effects of changing climate. Resultantly, Pakistan can also use these seeds.

to minimize the effects of climate and to increase the production of crops.

The effects of natural disasters can also be mitigated by reforming the transmission lines. It is because these deteriorated transmission lines are affecting the industrial sector of Pakistan. These transmission lines can be reformed in this way so that they can bear the pressure of natural disasters. This will boost the functioning of industrial sector by ending the disruptions in electricity supplies. Thus, these reforms are necessary to lessen the impacts of natural disasters on economy.

Along with these reforms in transmission lines, weather resilient infrastructure of roads, (and) houses and educational institutes is also necessary to minimize the effects of natural disasters in the economy. weather resilient

infrastructures will bear the changing climate conditions. It will decrease the pressure on the economy of Pakistan and other countries. The extra cost which is used in their re-building will be saved. This will save people from migration, ensure continuity of transport in these areas and number of out-of school children will not be increased. Thus, weather resilient infrastructure is the need of the hour in this changing climate conditions.

Although the reforms at societal level will decrease the burden on economy, structural reforms at governance level are also much needed to make them effective. Structural reforms to implement the Pakistan Climate Change Act 2017 are also needed. The climate change authority and climate change fund are absent in country. There must be

structured to make all other activities, related to mitigation, effective. Thus, reforms at governance level are more crucial to make other measures effective.

Along with efforts at national level, international collaboration is also inevitable to develop new policies. These new policies should incorporate new ways to lessen the impacts of changing climate on the economies. There must be like ending of delays in the release of Loss and Damage Fund, decided in both COP 27 and COP 28. Resultantly, this international collaboration will definitely decrease the effects of changing climate conditions on the economies.

In a nutshell, natural disasters in changing climate are burdening the economies of the countries. The economic

costs are increasing due to a lot of damages due to these disasters. But there should be hope to do well to tackle the natural disasters in changing climates. By strictly adopting the measures to mitigate the effects of these disasters, this pressure on economies can be decreased.

Climate resilient is not a liberal nor a conservative challenge, it is a common sense.

(Ronald Reagan)