

# → Impact of Climate Change on Pakistan Economy: Challenges and Way to Counter

## Outline

- 1) Introduction
- 2) Impacts of Climate Change on Pakistan's Economy

### i) Agriculture Sector

- Decreased crop yields and productivity due to changing weather patterns
- Increased frequency of droughts and floods affecting agricultural production
- Changes in temperature patterns affecting the distribution and prevalence of crop and livestock diseases.

**Case Study:** Impact of climate change on wheat production in Pakistan.

### ii) - Water Resources

- Increased evaporation due to rising temperature.
- Impact on water availability for irrigation, drinking and industrial use.
- Increased risk of water scarcity and competition for water resources among different sectors.

**Case Study:** Indus River Challenges.

### iii) Energy Sector

- Increased demand for Energy due to changing weather patterns.

- Impact on energy production and transmission

- Less opportunities for investment in renewable energy sources.

Case Study: 2015 Heatwave in Karachi

### iv) - Infrastructure and Human Settlements.

- Increased frequency of natural disasters such as floods and landslides

- Impacts on infrastructure, including roads, buildings and bridges.

- Increased risk of displacement and migration.

Case Study: Impact of 2005 Kashmir Earthquake

## 3) - Economic Impacts of Climate Change in Pakistan

### i) - Losses to GDP

- Estimated losses to Pakistan's GDP due to climate related disasters

- Impact on economic growth and development.

Case Study: 2022 Flood in Pakistan

## ii) Poverty and Inequality

- Impacts of Climate Change on poverty and inequality in Pakistan.
- Increased vulnerability of marginalized communities to climate related disaster.

Case study: Impact of Climate Change in Thar Desert

## iii)- Food Security

- Impact of Climate Change on food security in Pakistan
- Increased risk of food shortages and price volatility

Case study: Food security in Thar Desert.

## 4)- Challenges in Addressing Climate Change in Pakistan

### i) - Institutional and Governance Challenges

- Weak institutional capacity and governance structure.
- Lack of co-ordination and co-operation among different stakeholders.

Case study: 2022 Flood in Pakistan

### ii)- Financial and Resource Constraint

- Limited financial resources and capacity to invest in climate change mitigation and adaptation measure.
- Limited access to technology and expertise.

## Case Study: Challenges Faced by Pakistan Government

### iii) - Socio-Cultural Challenges

- Limited awareness and understanding of climate change
- Cultural and social barriers to adopting climate-resilient practices

## Case Study: Challenges Faced by Farmer in Pakistan

### 5) - Ways to Counter the Impacts of Climate Change on Pakistan's Economy

#### i) - Climate-Resilient Infrastructure

- Investing in climate resilient infrastructure, including sea walls, levees and green roofs
- Promoting sustainable urban planning and development practices.

## Case Study: Kanchi Coastal Protection Project

#### ii) - Climate Smart Agriculture

- Conservation agriculture and agro-forestry
- Supporting climate resilient agricultural practices
- Research and development

## Case Study: Introduction of climate resilient wheat in Pakistan

### iii) - Renewable Energy

- Development of renewable sources, including solar and wind power.
- Investing in energy efficiency measures
- Reducing energy consumption

case study: Gul-e-Azam solar Park in Pakistan

### iv) - Climate Change Adaption and Resilience

- Supporting climate change adaptation and resilience - building efforts of the community level
- Promoting climate-resilient water management practices and supporting water conservation efforts
- Promoting climate change education and awareness among stakeholders.

### v) - Conclusion