

Climate Change and Pakistan – Overview

Climate change refers to long-term changes in temperature, rainfall patterns, and weather conditions across the world. Pakistan is one of the countries most affected by climate change because of its geographical location, large population, weak infrastructure, and dependence on agriculture. Rising temperatures, irregular rainfall, and frequent natural disasters are already affecting people's lives, economic activities, and the natural environment. Although Pakistan contributes very little to global greenhouse gas emissions, it faces serious consequences of climate change. If timely actions are not taken, these impacts will become more dangerous in the future.

Impacts of Climate Change on People of Pakistan

Climate change directly affects the lives and well-being of people in Pakistan. Heatwaves have become more common, especially in cities like Karachi and Lahore, causing health problems such as heatstroke and dehydration. Floods destroy houses, schools, and hospitals, forcing many families to leave their homes and live in temporary shelters. Water shortages due to changing rainfall patterns increase tensions among communities and provinces. Climate disasters reduce income opportunities, pushing poor people deeper into poverty. Food shortages occur when crops fail, and diseases spread quickly after floods due to dirty water and poor sanitation. Women, children, and the elderly suffer the most during climate-related emergencies.

Impacts of Climate Change on Economy of Pakistan

The economy of Pakistan is highly vulnerable to climate change because it depends heavily on agriculture, water resources, and natural systems. Floods and droughts damage crops such as wheat, rice, and cotton, reducing farmers' income and national exports. Infrastructure like roads, bridges, and power plants often gets damaged during extreme weather events, increasing government spending on repairs. Energy production is affected when rivers have either too much water during floods or too little during droughts. Frequent climate disasters discourage foreign investment and slow economic growth. Large amounts of money are spent on disaster relief instead of education, health, and development projects, weakening long-term economic stability.

Impacts of Climate Change on Environment of Pakistan

Climate change is seriously damaging Pakistan's natural environment. Rising temperatures are causing rapid melting of glaciers in the northern areas, which affects river systems. Forests are under stress due to heatwaves, droughts, and wildfires, reducing tree cover and oxygen supply. Wildlife habitats are destroyed by floods and changing climate conditions, leading to loss of biodiversity. Soil erosion increases due to heavy rainfall and floods, reducing land fertility. Freshwater ecosystems are disturbed by changing river flows and water pollution. Overall, climate change weakens natural systems that support life and human survival.

Extreme Weather Events, Cyclones, and Flooding

Extreme weather events have become more frequent and intense in Pakistan due to climate change. Heavy and unpredictable rainfall causes large-scale floods, especially in Punjab and Sindh, destroying crops, homes, and infrastructure. Flash floods in hilly areas result in sudden loss of lives and property. Tropical cyclones forming in the Arabian Sea are becoming stronger because of rising sea temperatures. Coastal storms damage fishing boats, homes, and ports. Urban areas face severe flooding due to poor drainage systems. Repeated disasters reduce recovery time, leaving communities continuously vulnerable and economically weak.

Sea Level Rise and Future Climate Risks

Sea level rise is a major future threat for Pakistan, particularly for coastal areas like Karachi and the Indus Delta. Rising sea levels cause saltwater intrusion, which damages agricultural land and contaminates freshwater sources. Mangrove forests, which protect coastlines from storms, are being destroyed, increasing vulnerability to cyclones. Coastal fishing communities lose their livelihoods as marine ecosystems are disturbed. Roads, buildings, and industries near the coast face long-term risks of damage or collapse. Climate change also increases migration as people are forced to move away from unsafe areas. Without effective mitigation and adaptation strategies, future climate impacts will be far more destructive for Pakistan.