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Non-Traditional Security Challenges

The Ramification of Climate Change on Food Security: Case Studies of Balochistan and Sindh

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Climate change is considered a key factor of food insecurity. The rise in temperature and environmental changes negatively impacts crops production in agrarian regions,



creating food insecurity. Almost 37% of the Pakistani population is suffering from this situation. Human activities and the industrial revolution caused global warming by more than 95%. Pakistan's contribution to global greenhouse emissions is very less. However, there are devastating impacts of climate change on the already malnourished population of Pakistan. Climate Change destabilizes the temperature and equilibrium of Earth and also has a far-reaching impact on human life and the environment. Global warming, greenhouse gases and environmental pollution leave devastating impacts. In Pakistan, climate change vulnerabilities have reduced agriculture productivity, increased the variability of monsoons, and decreased the capacity of water reservoirs, drought years and floods. Climate change is irreversible on the timescale and will worsen in the next decades. It also wreaks havoc on people's livelihood, especially in Sindh and Balochistan. Due to climate change, the population of both provinces face devastating food insecurity issues. However, the government has been taking immediate measures to overcome the critical situations in Southern and Western parts of Balochistan and Sindh.

The main problem lies with the production, affordability and access to the food. On top of many structural issues, the looming problem is of climate change which is very crucial because it is considered the most pivotal cause of food insecurity. Heavy rainfalls, droughts, unfavorable conditions in the harvesting season greatly reduced the production ratio in Pakistan, especially in Sindh and Balochistan. The unpredictability of monsoon rainfalls, melting of Himalayan glaciers, and natural disasters hinder agriculture production and threaten food availability. In the most recent decade, Pakistan has faced 150 weather-related incidents as a result of climate change.

“Almost 37% of Population lacks food security due to climate changes in Pakistan, especially in Sindh and Balochistan”¹

Attaining food security is a critical task for the government and poor segments of society. 87% of households are drought-affected in Sindh instead of having their livestock, but decreased fodder production and water scarcity lead to limited sales of animals. In Sindh, monsoon rainfall was 70% below average. In Balochistan, it was 45% below average in 2018, while in 2019, heavy rains resulted in a flood in both provinces. Approximately 1.3 million people experienced food crises. This is the reason 23% of the people are termed as “stressed” in Balochistan and Sindh².

¹ Report “The Impact of Climate Change on Pakistan’s Food Security” by Rida Anwar, Center for Strategic and Contemporary Research, CSCR 2020

² World Food Program Report

Climate Change

Global warming has significantly increased the probability of extreme weather conditions, including shrinking glaciers, rising sea level, high temperature, heavy precipitation and thawing permafrost. The consequences of climate change directly affect all aspects of human life. The major impact is an increase in hunger and water scarcity. As a result, health risks are increasing day by day. There is a significant increase in air temperature, causing heat waves, another health risk for human life. Global climate is interconnected thereby, consequences cannot be limited to a specific area. The range of researches indicates that the net cost of climate change is significant and increasing with time³. Intergovernmental Panel on Climate Change (IPCC) and more than 1300 scientists, forecasted a temperature rise to 10 degrees Fahrenheit in the future and will impact adversely on individuals, societies, ecosystems and agriculture⁴.

Ramifications of Climate Change on Food Security: Case Studies of Balochistan and Sindh

Pakistan lies geographically in a mostly arid and semi-arid area and is prone to droughts, floods, earthquakes and landslides. On the other hand, natural disasters already disrupted the livelihood and economy. All these circumstances damage agriculture productivity and increase food insecurity. Balochistan and Sindh are the two main provinces of Pakistan having the highest prevalence of malnutrition, food

³ Report "Global Climate Change" Vital Signs of the Planet, Intergovernmental Panel on Climate Change, NASA

⁴ Report "UNDP Climate Change Adaptation"

insecurity and poverty. In 2020, the masses faced multiple risks, including locust breakout, droughts, floods, and high prices of food items⁵.



According to Acute Food Insecurity Analysis 2021, 9 rural districts of Sindh and ten rural districts of Balochistan were analyzed, and the results showed that 26% of the population had faced food insecurity from March to June 2021. 19% are estimated in crisis during harvest season. While doing a comparative analysis of 2019 and 2021, the situation appears to have improved substantially. However, food insecurity remains high, 20% to 35% in Balochistan and 15% to 30% in Sindh⁶.



⁵ Report "Pakistan: Food Security Snapshot Baluchistan & Sindh" Relief web 2021

⁶ Integrated Food Security Phase Classification 2021, Report

Causes of Food Insecurity:

- **High Rates of Commodities**

The food insecurity crisis occurred in Sindh and Balochistan due to climate changes, high rates of food items, unfavorable environment and health conditions. Food prices went up by 9.1% since February 2021 for rural consumers. Low incomes resulted in low purchasing power of daily wagers, labor and household workers.

- **Locust Infestation**

In Balochistan and Sindh, many districts fall under arid zones where locust infestation adversely affected food crops and fodder production. Under favorable conditions, locust production increase to 20-fold in 3 months. 60% area in Balochistan and 25% area in Sindh could serve as a breeding ground for desert locusts in wet winters, which can cause severe damage to crops⁷.

- **Climate Change and Droughts**

In Sindh and Balochistan, arid zones are highly dependent on rainfall and in the previous year, drought-like conditions had been faced due to climate change and the deficiency of pre-winter rainfall, mainly in the Southern and Western areas of Balochistan⁸.

Conclusion

⁷ Report by Food and Agriculture Organization (FAO) 2021

⁸ Report by Nizam Amin Turbat "Balochistan: Food Security a Serious Issue" DAWN June 09-2021

To mitigate the risk of climate change and food insecurity in Pakistan, scientists and policymakers from the South Asian Association for Regional Cooperation (SAARC), International Maize and Wheat Improvement Center (CIMMYT), International Center for Integrated Mountain Development (ICIMOD) could join hands to support agriculture and food planning system⁹. Although Pakistan is the leading country in crops production. However, due to unfavorable circumstances, the people of Balochistan and Sindh have experienced severe food insecurity issues in recent years. The government is unveiling its food security policy with immediate changes to eradicate poverty, hunger, unemployment. The primary goal is to launch a “zero-hunger” program for the masses of both provinces. Food and Agriculture Organization also brought 25 water schemes for Balochistan and Sindh to avoid wastage or shortage of water, inbuilt all with the solar system. Another proposal is “the notion of crop insurance” which will be introduced in the near future. Pakistan is a blessed country with four seasons. Therefore, a robust framework and effective plan of action can enhance productive capacity, facilitate farmers and stabilize food security conditions in Pakistan.

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⁹ Report “Climate Projections and Impacts” Climate Risk Profile 2020