



Climate Change and Pakistan **(Misbah Shaheen)**

The issue of Climate Change “calamity” has become a point of serious discussion across the whole world’s scientists, academicians, and environment experts. There is a global consensus that climate change is the foremost challenge for humanity in the present era. Climate change is a long-term and large scale shift in the planet's weather patterns or average temperatures. Change in climate is directly linked with human activities and significantly affects Earth’s atmosphere and all its natural resources including water, air, plants, soil, and fossil fuels, etc.

According to the Global Footprint Network (GFP), the developing countries are the most vulnerable to climate change. Pakistan’s ecological footprint (a measure of human demand on the Earth's ecosystems) is 130 times more than its biocapacity (the amount of resources available to people at a specific time and population). It means that climate change poses serious threats to social, environmental, economic and political development of the country at a fast pace. Although it is true that Pakistan has the least contribution to Global Warming: its contribution to the globe’s total Greenhouse Gas Emissions is 0.43% that is 135th of the world’s average carbon dioxide emissions, yet it is ranked on the 12th among the countries who are the most vulnerable to climate change calamity.

The calamity of climate change in Pakistan appears in three forms; (01) Water shortage (02) Food shortage (03) Energy crises. These three sectors are interlinked and interdependent. Pakistan is one among the seventeen countries facing water scarcity problem that would eventually become a serious issue in the near future. According to the report: *Pakistan’s Water Economy: Running Dry*, the western Himalayan glaciers will retreat for the next 50 years, initially will increase flows in the Indus but in the long term scenario, once the reservoirs are empty, the flows will decrease around 30-40% in the Indus River system. Water resources are fundamentals for the health and welfare of the poor, especially vulnerable groups such as children, the elderly, and women. The people

who suffer hunger cannot afford to access clean water. In addition, water resources are essential for ecosystems through which the poor access the natural resources. Karachi, the megacity of Pakistan, already faces the severe problem of water shortage.

The food security of Pakistan is directly linked to water as it has an agrarian-based economy. Agriculture sector which contributes 22% to the GDP of the country, consumes 90 to 95% water resource. However, according to the United Nations World Food Programme (UNWFP) 60 to 77 million Pakistanis, mostly residing in rural areas, suffer from food insecurity. Wheat and Cotton production is decreasing due to floods and other climate change factors. The recent data indicates a 30% decline in major crop yields due to waterlogging, salinity, and floods. The shortage of water and variation in river flows also affect the country's potential to generate hydropower.

In the 21st Conference of the Parties (COP) to the United Nations Framework Convention on Climate Change (UNFCCC) held in Paris, from November 30 to December 11, 2015, more than 190 countries participated and signed an agreement to keep the temperatures below two degrees centigrade to avoid dangerous climate change consequences. There are countries which have higher biocapacity to face climate change like Canada, Russia, Brazil, New Zealand, etc.

In the case of Pakistan, it is unfortunate that the Government of Pakistan (GoP) has not taken serious steps to encounter this calamity and still have not incorporated the recognition of climate risk and environmental protection as an issue of critical concern in the policy formulation. However, there are some good initiatives taken by GoP as Parliament House of Pakistan has completely been shifted to solar power. The Billion Tree Tsunami Project initiated in Khyber Pakhtunkhwa (KP) by the provincial government is also a positive step in this regard.

Yet there is a need to shift the industrial sector to solar power instead of power produced by coal, oil, and gas. New dams should be constructed to avoid the danger of floods and to address the issue of water shortages. More forests should be planted as forests have a good ability to absorb carbon dioxide. Canada and Siberia have plenty of forests. Therefore, their biocapacity is hundred times higher than their ecological footprint. A comprehensive policy should be formulated to execute such actions to protect the environment and to make the people safe from the serious dangers of climate change. A concerted approach by all relevant departments would be beneficial instead of adopting an isolated approach. Currently, the stewardship of climate change rests with the Ministry of Environment. However, the Planning Commission, and the Ministries of Water, Agriculture, and Industries, the National Disaster Management Authority (NDMA), and others, along with civil society organizations should also, play an active role in finalizing and implementing the climate change agenda.