# CLIMATE CHANGE AND PAKISTAN’S EFFORTS

The latest report of Intergovernmental Panel on Climate Change (IPCC) is unequivocal on climate change, it is real, and it is happening. Climate change is the long-term changes in weather patterns and temperature. Humans like other species had very little impact on the weather and over all temperature till the 17th century. The quest for development led to industrialization which poured greenhouse gases into the air increasing global temperatures. Some experts call Climate Change a negative externality, which is caused by few, but consequences are shared by all. It is a global phenomenon whose impacts are ubiquitous, but disproportionately more on the poor be it a country or individual.

Pakistan contributes less than 1% towards greenhouse gases yet, the country is one of the most vulnerable countries to climate change. The German Climate Watch report placed Pakistan in the top 10 for the most vulnerable countries to climate change (Eckstein & Kreft, 2020). This is scaringly true, and the diverse geography and the swelling population make the case even stronger. Recently, the Climate Risk Country profile shared by Asian Development Bank (ADB) and World Bank (WB) estimated that Pakistan is facing up to $3.8 billion in annual economic losses due to climate change (Bank, n.d.). The report has some damning revelations regarding the impacts of climate change. According to the report, the average increase in temperatures for Pakistan are above global averages.

According to UN reports, Pakistan is the sixth most vulnerable country to climate change. The immediate impacts of climate change are visible in the country in different manifestations: water scarcity, low agricultural yield, pest invasion, floods, desertification, variability in monsoons, flash floods, receding glaciers, glacial lake outburst floods (GLOF), food security, and others. Considering the yearly loss to the economy, different climate adaptation measures are underway in different areas to help communities adapt to the changing climate. One of the major impacts of increasing temperatures is the creation of glacial lakes which in turn result in GLOF events damaging infrastructures and impacting human lives. The United Nations Development Program with government of Khyberpukhtunkhwa (Kpk) and Gilgit Baltistan is working on building resilient communities against GLOF events and build infrastructures to save communities from the disaster they bring. Climate adaptation measures are very crucial to build resilient infrastructure and communities to face the menace of climate change.

Pakistan is now working arduously to regreen the country to combat climate crisis. The Billion Tree Tsunami Afforestation Project (BTTAP) started by Pakistan Tehreek Insaaf’s government under the leadership of Imran Khan in 2013 in Kpk province was one of the first initiative by any provincial or federal government to combat the issue. According to Food and Agriculture Organization the country has forests on 5% of the land as compared to global average of 30% and UN recommend coverage of 10%. The BTTAP was a successful in stimulating the establishment of nurseries, and labor opportunities. The World Wildlife Fund (WWF) evaluated the project as a third-party evaluator and concluded that the project was a success. Under BTTAP, 872.3 million seedlings were planted, out of which 774.13 million were successful making an average survival rate of 88.75% (WWF, 2016). These samplings were planted through the establishment of closures in degraded forest areas, block plantations and sowings on private, communal, and state lands.

Following the success of the BTTAP, after coming to power at the center, the PTI government under the leadership of Imran Khan has initiated another project of Ten Billion Tree Tsunami Afforestation Project (TBTTAP) to augment the deteriorating forest cover across the country. The project started in 2019 and will be completed in 2023 with the support of United Nations Environment Program (UNEP). Global experts and commentators have lauded the efforts quoting that we have to act against climate change and Pakistan is leading the efforts.

The United Nations has dedicated the decade from 2021 through 2030 the UN decade on ecosystem restoration. Pakistan hosted this year’s World Environment Day 2021 with theme of “ecosystem restoration” which is fully aligned with Imran Khan’s vision. The World Economic Forum has called the BTTAP a momentous milestone with hopes that this will fuel similar drives across the globe. For a country like Pakistan who is grappled with crippling economy and political volatility, projects like BTTAP and TBTTAP bring positive light on the country.

Afforestation initiatives are positive steps towards battling climate change and more concerted efforts are required to steer the country to be more environment friendly. As mentioned, Pakistan hardly contributes 1% towards global greenhouse gases yet it is one of the most vulnerable countries. Afforestation projects should be complimented with carbon sequestration and renewable energy productions along with climate adaptation measures. However, as a developing country, Pakistan heavily relies on fossil fuels to run its daily affairs and industries. The energy mix of the country is mostly skewed towards thermal power which generates 59.42% of the electricity followed by hydel at 30.52% and renewable at meager 2.23% which is much lower than previous years (PES, 2020-21).

Renewable energy sources are required to be kickstarted by heavy capital investment and later require trained human resource to maintain them. Pakistan ventured in renewable energy initiatives like Jhimpir windmills and Quadi Azam solar park, but lack of judicious investment stall further development. Renewable energy development are mega investment projects, but unfortunately Pakistan has not been able to attract handsome Foreign Direct Investments in this sector. Without external support, Pakistan will not be able to harness the huge wind and hydel potential. Taping the wind and hydel potential will help shift the country from fossil fuel consumption towards renewable energy. Also, Pakistan is investing in public transportation projects like Metro and Orange lines to reduce the demand for personal cars along with the introduction of Electric Vehicles to reduce the reliance on fossil fuel.

Clean Development Mechanism (CDM) under Kyoto Protocol provides a good opportunity to Less developed countries to attract foreign investment in building clean infrastructure for certified emission reduction credits (CER). At the onset, Pakistan attracted good number of projects under CDM, but with time the process slow down. Pakistan was positioned in the midrange for producing carbon credits and under CDM partnered mostly with European countries except Japan. Pakistan has huge CER potential and by following China and India’s model she can also build a flourishing market for CER. Similarly, Pakistan can benefit from Reducing Emissions from Deforestation and Forest Degradation (REDD) mechanism for afforestation projects (Ahmed & Salman, 2012). These opportunities will be benefitted from if Pakistan manages to improve her overall forest cover. The afforestation projects like BTTAP and TBTTAP give credibility to Pakistan’s case and underscore a good global standing on climate change and afforestation initiatives.

At present, there are two streams of projects under development in Pakistan: Public Sector Development Program (PSDP) and Foreign funded projects. Under PSDP, four projects are under development one of them is Ten Billion Trees Tsunami Program, and two of them are on water quality monitoring and WASH. Simultaneously, there are four Foreign funded projects are going on which includes GLOF-II, sustainable forest management, Snow leopard and Ecosystem protection program and National zone unit. The current government is focusing on green initiatives to steer the country towards sustainable development. Mass afforestation projects, urban Miyawaki forests, and other climate related initiatives are steps in the right direction but corresponding shifts in industrial setups or energy productions are equally essential.

Pakistan’s cries of trade deficits are legitimate, but a step deeper analysis clarifies that majority of our imports are petroleum products which are then utilized for thermal electricity production. The country aims to have 60 % of its energy from clean resources by 2030 which is a timely step. Shifting from thermal to hydel and renewable energy will save the country a lot on imports. Then again, huge investments are required to setup hydel or renewable energy sources which a country like Pakistan cannot pull off. Already mired in debt payments and IMF obligations, Pakistan has little fiscal space to invest on green initiatives on her own, however the little she has invested in the past have been a success.

On the global stage, Pakistan is and must be a vociferous voice for climate friendly policies and the coming COP26 in Glasgow must be utilized to highlight the green achievements of Pakistan and urge the international community to heed full attention to the issue of climate change. Unlike COP 17 where Green Climate Fund (GCF) financial mechanism was setup to provide funds to developing country to work on climate projects, but unfortunately developing countries have little access to the funds. Instead of pledges, concrete actions are required to fight climate change as the climate change ball is already rolling. Pakistan certainly is on the right trajectory to build resilience against the adverse effects of climate change; however, more focus needs to be on adaptation measures as climate change effects are already visible in different ways. In addition, Pakistan must spearhead a global south alliance against climate change and be the voice for countries struggling with climate change issues.