**[Renewable transition](https://www.dawn.com/news/1883397/renewable-transition)**

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CLIMATE change has emerged as a global crisis, but its effects are disproportionately devastating for developing countries like Pakistan. While contributing fewer than one per cent to global greenhouse gas emissions, Pakistan is among the nations most severely impacted by climate change. This vulnerability has intensified poverty levels across the country and is posing a significant threat to its socioeconomic stability.

According to a report titled The State of Poverty in Pakistan by the Pakistan Institute of Development Economics (PIDE), 21.5pc of the population — one in five — lived in poverty in 2018-19. UN Habitat ranked Pakistan as the fifth most vulnerable country on the Global Climate Risk Index. The 2022 floods caused losses exceeding $15bn and affected 33m people. Similarly, the 2010 floods devastated one-fifth of the country’s geographical area, displacing over 20m. Over the past 13 years, these two massive floods have pushed 53m people deeper into poverty or into cycles of poverty. This erosion of social resilience has made communities increasingly vulnerable to future climate shocks.

The World Meteorological Organisation (WMO) reports that extreme rainfall in Pakistan has increased by 50-75pc, likely driving these catastrophic floods. This trend highlights the urgent need for Pakistan to adopt robust strategies to combat human-induced climate change.

A transition to 100pec renewable electricity is essential to address this. The World Bank notes that using just 0.071pc of Pakistan’s land for solar photovoltaic (PV) deployment could meet the country’s current electricity demand. Yet, 60pc of installed electricity generation capacity relies on coal, oil, and gas, while 8.41pc comes from nuclear power. During fiscal year 2024 (July-March), Pakistan spent over $8bn on crude and petroleum imports. Transitioning rapidly to renewable sources will reduce dependency on thermal and nuclear energy, which pose significant risks during climate-related disasters

Renewable energy is vital for the nation’s survival and growth.

Pakistan’s potential for wind power is equally impressive. According to the Asia Wind Energy Association, the Thatta wind corridor alone could generate 50 GW of renewable electricity, while the WB estimates Balochistan’s wind power potential at 20 GW. Harnessing solar PV and wind power can help Pakistan reduce greenhouse gas emissions and meet the targets outlined in the Paris Climate Agreement.

Urban areas must also be transformed into sustainable ecosystems to preserve nature and biodiversity. An improved public transport system is crucial, with rapid bus and metro train networks in all large and medium-sized cities to reduce emissions from private vehicles and decrease congestion. Increasing urban green spaces, planting native trees, and creating micro-gardens will enhance biodiversity and make cities more environmentally friendly. Trees, the most cost-effective technology for capturing and storing carbon dioxide, should be planted widely, with an emphasis on native species to support resilient ecosystems.

Cities should also be redesigned to prioritise bicycles and pedestrians, reducing reliance on vehicles. Rainwater harvesting systems are crucial to prevent flooding and reduce unsustainable surface water use. Solar PV-powered streetlamps could be installed nationwide. Innovative projects like Austria’s photovoltaic motorway roofing, India’s solar PV panels over canals to prevent evaporation, and Netherlands’ solar pavements demonstrate practical solutions that Pakistan can adopt.

Agriculture, a backbone of Pakistan’s economy, must also adapt to climate change. The introduction of climate-resilient crops, water-efficie­­nt irrigation methods, and sustainable farming practices can reduce the sector’s vulnerability to climate change while ensuring food security. Educating farmers and providing them with access to modern technologies will empower rural communities and alleviate poverty. Additionally, Pakistan must invest in education and vocational training to equip its youth with the skills needed to implement climate-innovative solutions. By fostering green entrepreneurship, Pakistan can create sustainable income opportunities while reducing its carbon footprint. Public awareness campaigns should emphasise the importance of individual and collective actions to combat climate change.

To conclude, Pakistan has the potential to produce 100pc renewable electricity throu­­gh clean energy sources. Transforming urb­an and rural areas into engines of sustainable development can foster green economic growth and reduce poverty. Training youth in climate-innovative solutions, promoting sustainable farming, and enhancing urban planning will enable Pakistan to combat climate change and minimise its devastating consequences. The time to act is now.

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