



## Beyond COP: Pakistan's evolving role in a global climate context

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The global community has diligently pursued the ambitious goals of the Paris Agreement<sup>1</sup> to address climate change. The upcoming 28<sup>th</sup> Conference of the Parties (COP) underscores the urgency of dealing with the climate crisis.<sup>2</sup>

Pakistan, with its decades-long experience in facing tangible effects like floods and droughts, is in a critical position. These natural disasters pose significant challenges to the country's environmental resilience and sustainability.<sup>3,5</sup> Pakistan's vulnerability to climate change is evident, as emphasized by the increased frequency and severity of natural disasters. Alarmingly, Pakistan is globally ranked 8<sup>th</sup> in vulnerability to climate change impacts<sup>6</sup> and holds the 23<sup>rd</sup> position in the Inform Risk Index, signifying high disaster risk among 191 countries.<sup>7</sup> It highlights the crucial need for proactive and concerted efforts to address the unfolding climate crisis.

Despite multifaceted limitations, Pakistan has the potential to contribute significantly. Limited financial resources hinder large-scale climate initiatives due to economic constraints.<sup>8</sup> Simultaneously, the adoption of eco-friendly practices faces challenges due to obstacles arising from infrastructure gaps and technological constraints.<sup>9</sup> Nevertheless, Pakistan's meaningful involvement in global climate solutions remains vital. The nation's distinctive perspectives, creative innovations and steadfast commitment are invaluable assets in enriching the global effort against climate change.

Pakistan initiated its National Climate Change Policy in 2012,<sup>10</sup> later refining it in 2021 for more effective addressing of ongoing climate challenges.<sup>11</sup> Adopting a multidimensional approach, the policy emphasizes community-based

initiatives and sustainable agricultural practices to enhance resilience. It also prioritizes mitigation and adaptation strategies, promotes renewable energy, and encourages international collaboration to address the evolving climate crisis.<sup>11</sup>

In response to urgent climate challenges, Pakistan employs a comprehensive strategy involving various approaches, from nature-based solutions to technology-driven interventions.<sup>12</sup> The country is committed to a renewable energy transition, accelerating the adoption of solar and wind power to reduce carbon emissions. Initiatives like the 'Ten Billion Tree Tsunami Programme' and the Prime Minister's 'Urban Forest Project' reflect Pakistan's dedication to large-scale afforestation and sustainable urban development.

The 'Ten Billion Tree Tsunami Programme' aims to capture 148.76 million metric tons of carbon dioxide equivalent emissions in the next decade. The financing for this initiative comes from domestic sources, amounting to an estimated expense of \$800 million.<sup>12</sup> This reflects Pakistan's commitment to addressing environmental concerns using indigenous resources.

Despite facing challenges with a vulnerable water infrastructure leading to substantial water loss, Pakistan is implementing initiatives for water management and conservation. The "Decade of Dams" as designated by the 'Water and Power Development Authority' (WAPDA), involves constructing five dams. These include ongoing projects like 'Diامر-Bhasha Dam' and 'Mohmand Dam', along with three hydropower projects and one canal and water supply project. This comprehensive plan, set to be implemented between 2023 and 2029,

aims to elevate water storage by over 24 million acre-feet.<sup>13</sup> The success of these endeavors would significantly contribute to addressing water-related challenges in the country.

Adoption of climate-smart agriculture practices, including innovative technologies and management changes, is already underway, aiming to enhance resilience and sustainability.<sup>14</sup> Securing diverse financing, implementing pro-poor policies, and empowering institutions are vital for the transformative impact of climate-smart agriculture. Additionally, investing in research for climate-resistant crops contributes to addressing local and global climate challenges.

Urban planning integrates green spaces and energy-efficient infrastructure for climate-resilient cities. Community-based adaptation strategies acknowledge local vulnerabilities and traditional knowledge. Robust educational programs are implemented to promote public awareness. These programs also encourage the adoption of sustainable practices.

Pakistan actively pursues international collaboration, leveraging partnerships for knowledge sharing and technology transfer.<sup>15,16</sup> Green finance mechanisms drive investments into sustainable projects, and waste management initiatives minimize environmental impact. Climate-resilient infrastructure is designed to withstand extreme weather events, reflecting Pakistan's commitment to navigating climate change with determination.<sup>17</sup>

Regional collaboration is crucial for addressing shared climate challenges. The emphasis lies on collaboration between Pakistan and other 'South Asian Association for Regional

Cooperation' (SAARC) nations, with particular attention to neighboring countries, especially India. Regrettably, the SAARC action plan on climate change,<sup>18</sup> adopted at the SAARC Ministerial Meeting on Climate Change in Dhaka, has not been fully implemented. Strengthened collaboration within the SAARC framework can serve as a positive model for transboundary action, creating global impact in addressing climate change.

In summary, Pakistan is at the forefront of global climate action, spearheading initiatives such as the 'Ten Billion Tree Tsunami Programme' and the Prime Minister's 'Urban Forest Project.' Despite challenges, the nation's commitment to sustainability is evident in its comprehensive approach, including local initiatives, sustainable agriculture, and international collaboration. With a focus on resilience and innovative solutions, Pakistan can emerge as a crucial player in shaping a greener and more sustainable world.

## REFERENCES

1. United Nations Climate Change. The Paris Agreement. Accessed on: September 28, 2023. Available from URL: <https://unfccc.int/process-and-meetings/the-paris-agreement>
2. United Nations Climate Change Conference. COP28 UAE Thematic Program. Accessed on: September 28, 2023. Available from URL: <https://www.cop28.com/en/thematic-program>
3. United Nations Development Programme. Pakistan engulfed by worst floods in decades. September 03, 2022. Accessed on: September 28, 2023. Available from URL: <https://undp-pakistan.exposure.co/pakistan-engulfed-by-worst-floods-in-decades>
4. United Nations Development Programme. Pakistan: Flood Damages and Economic Losses Over USD 30 billion and Reconstruction Needs Over USD 16 billion. October 27, 2022. Accessed on: September 15, 2023. Available from URL: <https://www.undp.org/pakistan/pressreleases/pd-na-pakistan-floods>
5. The World Bank Group. Pakistan country climate and development report 2022. Accessed on: September 28, 2023. Available from URL: <https://openknowledge.worldbank.org/server/api/core/bitstreams/2d1af64a-8d35-5946-a047-17dc143797ad/content>
6. Eckstein D, Kunzel V, Schafer L. Global climate risk index 2021. Germanwatch. Berlin. 2021. Accessed on: September 28, 2023. Available from URL: [https://www.germanwatch.org/sites/default/files/Global%20Climate%20Risk%20Index%202021\\_2.pdf](https://www.germanwatch.org/sites/default/files/Global%20Climate%20Risk%20Index%202021_2.pdf)
7. DRMKC - Disaster Risk Management Knowledge Centre. INFORM Risk. Country Risk Profile. European Commission. Accessed on: September 25, 2023. Available from URL: <https://drmkc.jrc.ec.europa.eu/inform-index/INFORM-Risk/Country-Risk-Profile>
8. Chaudhry QUZ. Climate change profile of Pakistan. 2017. Asian Development Bank. Philippines. <http://dx.doi.org/10.22617/TCSI78761> Accessed on: September 15, 2023. Available from URL: <https://www.adb.org/sites/default/files/publication/357876/climate-change-profile-pakistan.pdf>
9. Saddique N, Jehanzaib M, Sarwar A, Ahmed E, Muzammil M, Khan MI, et al. A Systematic Review on Farmers' Adaptation Strategies in Pakistan toward Climate Change. *Atmosphere* 2022;13(8):1280. <https://doi.org/10.3390/atmos13081280>
10. Government of Pakistan. Ministry of Climate Change. National climate change policy. September 2012. Accessed on: September 15, 2023. Available from URL: [http://www.gcisc.org.pk/National\\_Climate\\_Change\\_Policy\\_2012.pdf](http://www.gcisc.org.pk/National_Climate_Change_Policy_2012.pdf)
11. Government of Pakistan. Ministry of Climate Change. National Climate Change Policy. Islamabad Pakistan. October 2021. Accessed on: September 15, 2023. Available from URL: <https://mocc.gov.pk/SitelImage/Policy/NCCP%20Report.pdf>
12. Government of Pakistan. Pakistan: updated nationally determined contributions 2021. Accessed on: September 20, 2023. Available from URL: <https://unfccc.int/sites/default/files/NDC/202206/Pakistan%20Updated%20NDC%202021.pdf>
13. Nisar N. The Bleak State of Water Conservation in Pakistan. Centre for Strategic and Contemporary Research. May 30, 2022. Accessed on: September 20, 2023. Available from URL: <https://cscr.pk/explore/themes/energy-environment/the-bleak-state-of-water-conservation-in-pakistan/>
14. CIAT; World Bank. 2017. Climate-Smart Agriculture in Pakistan. CSA Country Profiles for Asia Series. International Center for Tropical Agriculture (CIAT); The World Bank. Washington, D.C. 28 p. Accessed on: September 22, 2023. Available from URL: <https://climateknowledgeportal.worldbank.org/sites/default/files/201906/CSA-in-Pakistan.pdf>
15. ADB Urban Climate Change Resilience Trust Fund City Resilience Profiles: Bangladesh, Pakistan, Philippines, & Viet Nam. Accessed on: September 22, 2023. Available from URL: <https://www.adb.org/sites/default/files/projectdocuments/48317/48317-003-tacr-en.pdf>
16. Environmental Protection Agency, Government of Khyber Pakhtunkhwa. Forestry, Environment & Wildlife Department. Khyber Pakhtunkhwa climate change policy. June 2016. Accessed on: September 15, 2023. Available from URL: [https://kp.gov.pk/uploads/2016/11/Final\\_Climate\\_Cange\\_Policy\\_for\\_KP\\_Province\\_25\\_October\\_2016\\_WebSec\\_Comments.pdf](https://kp.gov.pk/uploads/2016/11/Final_Climate_Cange_Policy_for_KP_Province_25_October_2016_WebSec_Comments.pdf)
17. United Nations Development Programme. Climate change adaptation. Scaling Up of Glacial Lake Outburst Flood Risk Reduction in Northern Pakistan. Accessed on: September 15, 2023. Available from URL: <https://www.adaptationundp.org/projects/scaling-glacial-lake>

[outburst-flood-risk-reduction-northernpakistan](#)

18. South Asian Association for Regional Cooperation (SAARC). SAARC action plan on climate change.

Accessed on: September 15, 2023.  
Available from URL: <https://www.saarc-sec.org/images/areas-of-cooperation/ENB/SAARC%20ACTION%20PLAN%20ON%20CLIMATE%20CHANGE.docx#:~:text=The%20action%20plan%20would%20seek,of%20technology%20and%20knowledge%20transfer>

[ATE%20CHANGE.docx#:~:text=The%20action%20plan%20would%20seek,of%20technology%20and%20knowledge%20transfer](#)

#### CONFLICT OF INTEREST

Author declare no conflict of interest, whether financial, personal or otherwise, that could potentially bias or influence the content, perspectives or conclusions presented in this piece.



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