

Equality Matters



By

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Define the relationship between gender equality and climate change (CC)?

- Ÿ The relationship is complex and shaped by existing political and social power relations.
- Ÿ CC reinforces pervasive gender inequalities that are part of longstanding social challenges in societies across the world.
- Ÿ CC exacerbates existing gender inequalities in specific dimensions such as health and livelihood systems, that are critical for coping with CC impacts.
- Ÿ Important question: **how to tackle these challenges?**

Who matters?

- Ÿ Poor and marginalized populations who are most vulnerable to climate shocks.
- Ÿ As an example: Karachi, where long-standing historically shaped ecological vulnerabilities, infrastructural degradations, and shifts in rainfall patterns have resulted in urban floods.
- Ÿ Resilience and vulnerability are directly linked to inequality: The higher the social status, the better the management of vulnerabilities, the better the capacity of resilience.
- Ÿ **Who are impacted most?** Men, women, elderly and children who are poor, marginalized, or low-income working class populations that suffer disproportionately.

Who is heard and how?

- Ÿ NGOs, corporate groups, international organizations, and elites often become the primary voice in public arenas.
- Ÿ **Who isn't heard?** Those with the most to lose often have the least say in the matter, for instance indigenous populations, poor women, children, transgender persons and elderly
- Ÿ The range of voices that reaches the forefront is not an effective representation of the politics of accountability because those impacted the most, have the least proximity to the centers of political power.

Who decides?

- Ÿ Power dynamics play a crucial role in CC decisions.
- Ÿ Informed and effective decisions require informed and transparent data generation: nuanced forms of data are imperative.
- Ÿ Co-production of knowledge by finding ways to consciously include local, indigenous and vulnerable communities is critical.
- Ÿ Who decides depends upon **'who sees what and how information on climate risks is used in decisions'**

Who benefits?

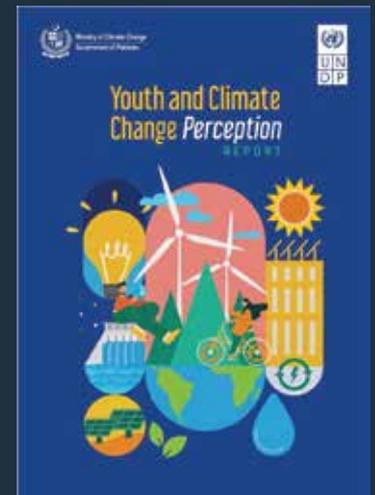
- Ÿ Those in power or proximate to centers of political power.
- Ÿ Unless underlying and longstanding structural challenges are tackled, handling of the impacts of CC will remain very limited.

Way forward

- Ÿ CC Policy must be more sensitive to gender inequalities.
- Ÿ CC Policy must be inclusive to the needs of vulnerable populations.
- Ÿ CC Policies must be localized to provinces, districts, municipalities.
- Ÿ CC Policy must involve multi-stakeholder participation.
- Ÿ Linkages between government and academic institutions for grounded research, capacity building, knowledge generation, and sharing is crucial.

UNDP Youth and Climate Change Perception Report, 2021

A recently published survey-based report, which gauged the perception and knowledge regarding climate change, among the youth of Pakistan.



HIGHLIGHTS

Climate Change Knowledge

- 35% of the respondents who completed postsecondary schooling indicated having high degree of understanding of the concept of climate change.
- 69% of the respondents of the phone survey had poor understanding of the causes of climate change.

Climate Change Vulnerability

- Over 50% of the respondents in rural areas selected 'changes in temperature' and 'changing weather patterns' as the most significant consequence of climate change.

Adaptation Strategies

- 56% of the rural respondents, while 62% of the urban respondents selected 'use of environmentally friendly modes of transportation' as an effort they are employing in their daily lives, to combat the impacts of climate change.
- 42% of the urban respondents chose resource constraints as the most significant problem relating to adaptation.

Regulatory Knowledge

- 69% of the respondents of the digital survey knew about the Ministry of Climate Change.
- 42% of the digital survey respondents were aware of the initiatives taken by the government to increase climate change knowledge, awareness, and action.

Climate Advocacy

- 53% of the respondents answered that climate education was a part of their formal schooling.
- 45% indicated that green job creation represented the biggest opportunity area for climate change action.
- 35% of the respondents of the phone survey indicated that they had risen the plinth of the house in order to adapt to climate changes.
- 19% of the respondents selected migration and resettlement as an activity undertaken in order to adapt to the changes in the environment.
- 30% respondents of the phone survey stressed upon the need to involve youth in design formation process in order to increase youth participation in policymaking.

“ With the grand-scale green recovery programme propelling large scale restoration and job creation, Pakistan is demonstrating that nature-based recovery efforts can create a large number of jobs, and accrue nature and climate dividends.”



Financing Nature Allies for Human Development

“Nature is our strongest ally for the collective ambition of establishing a sustainable and equitable world.”



By

Midori Paxton

Head, Ecosystems and Biodiversity
United Nations Development Programme
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Next Frontier – Human Development and Anthropocene. This was the title of the 2020 Human Development Report. The Report concludes that the current model of development is broken. With the traditional economic and development paradigm which gauges growth with consumption and expenditure, without taking into account depletion of natural capital, human activity has been putting immense pressure on the planet. As a result, we are in our current climate and nature crises, which are compounded by the inequality and the COVID-19 pandemic crisis.

In order for the world to achieve the Sustainable Development Goals (SDGs), there is an urgent need to advance human development while eliminating planetary pressures. And to do this, we need to reinvent our economies to be able to develop with nature, and to be able to invest in nature. We all depend on nature for air, water, food, health, livelihoods, and wellbeing. Businesses need nature to survive, thrive and prosper for any long-term success. 50 percent of the 169 SDG targets need nature to achieve them, and half of the world's Gross Domestic Product (GDP) is dependent on nature. We have to walk away from the paradigm that was prevalent for too long – the paradigm that ignores natural capital in the economic and financial decision-making process.

We need to shift away from a world where massive cleaning of buildings or medical treatment of millions of people

due to air pollution, is counted as a plus for the economy. We need to change the thinking of an economy where companies make billions of dollars of profits with commodity production, which cuts down tens of thousands of hectares of primary forests, deprives thousands of people from access to natural resources and livelihoods, and smothers millions in filthy haze from fires.

As a catalyst for this shift, the Taskforce on Nature-Related Financial Disclosures (TNFD) was launched last month. TNFD will have 30 members from private finance and the business sector, and will provide a framework for organizations (financial institutions and non-financial corporates) to report and act on evolving nature-related risks. This is expected, in turn to support a shift in global financial flows away from nature-negative outcomes and towards nature-positive outcomes at scale. UNDP, along with the United Nations.

Environment Programme (UNEP) Finance Initiative, Global Canopy and World Wide Fund for Nature (WWF), is a founding member for thisground-breaking initiative.

In order to create an enabling environment and to catalyze nature-positive public and private expenditure and investment, role of governments, in particular, ministries of finance and central banks, are critical. UNDP's Biodiversity Finance Initiative (BIOFIN) has been working with 40 countries to



“ It is becoming increasingly difficult for many countries to direct sufficient investment for nature, and more broadly for SDG action. ”

assess policy and institutional set up, current expenditure for nature conservation, and to identify financing gap for properly safeguarding ecosystem services and biodiversity in countries.

Governments then develop the national biodiversity finance plan looking at four aspects of increasing finance for nature. These are: (i) Increase efficiencies of current expenditure; (ii) Realign expenditure to reduce and eliminate negative expenditure such as repurposing of nature-negative government subsidies (e.g. agricultural or fisheries subsidies); (iii) Establish new sustainable financing mechanisms including payment for ecosystem services, trust fund, and various levies; and, (iv) Prevent future costs through strategic investments and policy changes that protect biodiversity today, and reduce the need for larger expenditures in the long-term to restore or replace lost ecosystem services. In these efforts, it is critical to enhance policy, administrative or investment measures, or enabling conditions that can result in new, improved or scaled-up biodiversity finance.

While these efforts through BIOFIN and other initiatives by partners and governments try to ensure adequate financing for safeguarding essential ecosystem services and biodiversity, the COVID-19 pandemic has worsened debt problems facing 72 low- and middle-income countries. It jeopardized USD 598 billion in debt service payments from 2021 to 2025, including USD 87 billion this year. It is becoming increasingly difficult for many countries to direct sufficient investment for nature, and more broadly for SDG action.

In order to address this, UNDP and the MAVAF foundation

supported Finance for Biodiversity Initiative, are working with the government of Pakistan to develop a new bond instrument– the Nature Performance Bonds (NPBs). Building on the government’s internationally recognized effort to combat climate change impacts and conserve biodiversity and ecosystem services, such as the Billion Tree Tsunami, NPBs aims to reduce the country’s sovereign debt burden while accelerating its restoration and nature-conservation efforts, and creating much needed additional jobs. On June 3, 2021, the government of Pakistan, United Kingdom, Canada, Germany, and UNDP formally expressed its intention to engage in a dialogue for launching the pioneering NPBs. An NPB with a defined set of ambitious ecosystem restoration targets, will accelerate the restoration work, as well as expand access for finance for development.

The World Economic Forum (WEF) assesses that a transition to a nature-positive economy could generate USD 10.1 trillion of new annual investment, and create 395 million jobs by 2030. With the grand scale green recovery programme propelling large scale restoration and job creation, Pakistan is demonstrating that nature-based recovery efforts can create a large number of jobs and accrue nature and climate dividends. The country has fast become a trend setter in the global effort to realise a resilient pathway to sustainable growth and prosperity.

Nature counts for our society and economy. We must therefore start accounting for nature and start investing in nature. After all, nature is our strongest ally for the collective ambition of establishing a sustainable and equitable world.

Nationally Determined Contributions: The Pakistan Paradigm

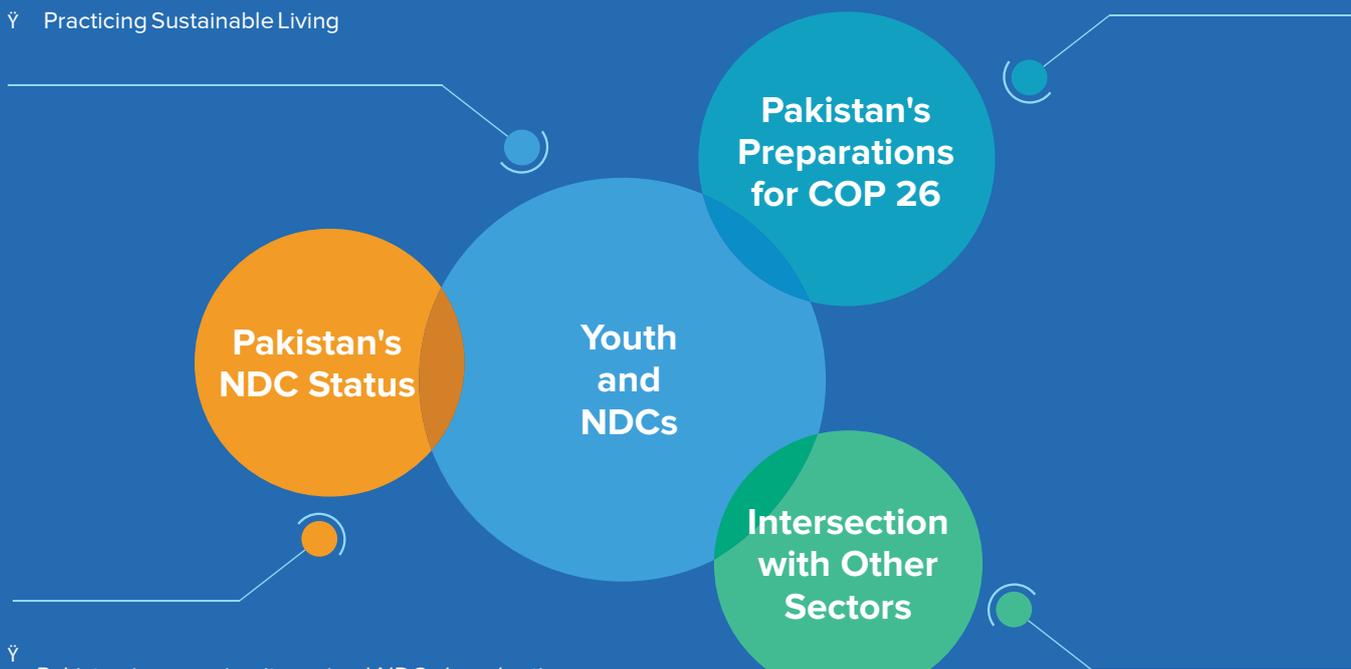


By
Sara Hayat
Climate Change Specialist

Youth leaders, as agents of change, can implement the NDCs and safeguard their own future by:

- Raising Awareness: Climate Awareness Campaigns
- Research and Analysis
- Practicing Sustainable Living

• After successfully hosting World Environment Day on 5th June, 2021, Pakistan is hoping to lead by example and highlight its climate combating successes, including the 10 Billion Tree Tsunami Program, at COP 26.



Pakistan's NDC Status

Youth and NDCs

Pakistan's Preparations for COP 26

Intersection with Other Sectors

- Pakistan is preparing its revised NDCs by adopting a transparent and comprehensive mechanism, focusing on both climate adaptation and mitigation aspects.
- Technical review committees consisting of working groups comprising key stakeholders, including civil society members, are compiling information at both the federal and provincial level, to help prepare inclusive and ambitious NDCs.
- In its first NDC, Pakistan pledged a 20 percent economy wide emissions reduction in greenhouse gases by 2030, and is aspiring to strengthen its commitments further.

- Pakistan is consistently ranked as one of the countries most impacted by climate change, even though it contributes less than 0.8 percent to global greenhouse gas emissions.
- The comprehensive, revised NDCs are strongly focusing on adaptation aspects. These include water, agriculture and livestock, human health, forestry, biodiversity and other vulnerable ecosystems, disaster, and gender.
- Many of these sectors are cross cutting and impact the mitigation pledges as well. Adding different adaptation aspects have made Pakistan's NDC commitments stronger and more likely to have positive impacts at a grassroots level.

Renewable Energy, Renewed Pakistan

“ The role of the energy sector, globally, in combating climate change, has become even more critical. ”



By
Dr. Sardar Mohazzam
Managing Director
National Energy Efficiency
and Conservation Authority
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The Energy-Climate Nexus in Pakistan

Climate Change has reshaped both the availability and utilization of natural resources in the context of the Sustainable Development Goals (SDGs).

Resource competition for economic development has compelled developed and developing countries to take corrective measures jointly. Under the Paris agreement, member states have committed to take actions to protect the planet from the impacts of climate change, so as to limit the rise in global temperature by 2°C. This year, the global climate change agenda in the form of COP26, is focusing on transitions towards clean and renew-

able energy technologies, to revisit the development priorities for sustainable economic growth.

Pakistan has been categorized as one of the top 10 climate-vulnerable countries in the world.¹ The country's energy sector stands at the top of the list, with a 51 percent share in the greenhouse gas (GHG) emissions.² This translates into projected emissions of 1,603 MT CO₂-equivalent by 2030, out of which 898 MT CO₂-equivalent would be from the energy sector. With COVID-19 slowing down economic growth, the envisioned seven percent gross domestic product (GDP) growth rate may aggravate, with a downward trajectory.³



1. Germanwatch Global Climate Risk Index 2021.
2. Ministry of Climate Change (2019). "Pakistan's Second National Communication Report (SNC)". Submitted to United Nations Framework Convention on Climate Change
3. The Pakistan Vision 2025 mentions 7% GDP growth rate.

Pakistan's Energy Status

The primary energy supply in Pakistan has been 84 million tons of oil equivalents (Mtoe) in 2019.⁴ It has decreased by 2.9 percent as compared to the previous year, owing to a major decrease in supplies of oil and Liquefied Piped Gas (LPG). The share of oil and gas in energy supplies stood more than 70 percent.⁵ The final energy consumption is recorded at 55 Mtoe.

This implies losses of nearly 35 percent, in conversion to final energy used. With Pakistan transitioning through a major economic transformation, the final energy consumption is forecasted to be 140 Mtoe by 2030. The existing GHG emissions trend demands rapid transitions in energy systems and enhancement of the share of renewables.

Pakistan: A Global Champion

It is a fact that Pakistan's contributions in the global GHG emission scenario is less than one percent.⁶ However, in light of its commitments in the global climate change context, the country is making drastic changes in its energy system. In this context, Pakistan's efforts for climate change adaptation and mitigation have been acknowledged globally. For example, Pakistan hosted the 'World Environment Day' this year. Pakistan has been declared as a 'Global Champion' for the theme on 'Investment and Finance', for the high-level dialogue (HLD) on energy transition.

“ The global agenda for energy transition under COP26, demands a major shift in energy systems around the globe. ”



Pakistan's Energy Future Outlook

Pakistan's energy future outlook would be based on three basic components i.e. energy access, renewable energy, and energy efficiency.⁷ Pakistan has set targets to ensure 100 percent electricity access by 2030. As far as the share of the renewable energy mix is concerned, Pakistan has planned to add 30 percent renewable energy resources to the total energy mix.⁸ However, recently, Prime Minister of Pakistan set a new ambitious target to enhance the share of renewable energy by 60 percent, by 2030. Similarly, the country is aiming to double

the rate of energy efficiency measures by 2030. In order to combat climate change impacts, informed decision-making in policies and plans for the transition towards clean and sustainable energy resources in Pakistan, is integral. The country is targeting to decarbonize the energy system, with the promulgation of the National Electricity Policy, and most importantly, the Alternate Renewable Energy Policy. To meet the future energy demands in the country, it is ensured to align all policy measures with the global sustainable development agenda.

4. Hydrocarbon Development Institute (2020). "Pakistan Energy Year Book- 2019".

5. Ibid

6. The Express Tribune (2018), "Carbon emissions in Pakistan likely to rise about 300% by 2030." Available at <https://tribune.com.pk/story/1877884/2-carbon-emissions-pakistan-likely-rise-300-2030>

7. Ministry of Planning, Development and Special Initiatives (2020) "Sustainable Energy for All (SE4ALL)-National Action Plan".

8. Ibid

For example, the Renewable Energy (ARE) policy (2019) focuses to decarbonize the energy system and introduce new renewable energy technologies to enhance the share of renewable energy generation capacity to up to 20 percent by 2025, and 30 percent by 2030.⁹ The National Electricity Policy (NEP-2021) targets to ensure transparency, development of local fuels, energy efficiency, and more reliance on clean energy.¹⁰ Similarly, the integrated generation capacity expansion plan (IGCEP 2018-40) to support energy security, affordability, and sustainability of electricity provision, would be helpful in the implementation of the NEP.¹¹

In addition, the implementation of the National Electric Vehicle Policy (2020) would help to curb the use of fossil fuels in Pakistan. At present, 34 percent of energy, mostly obtained through imported oil, is used in the transport sector. To achieve the targets of a robust electric vehicle market having a 30 percent share by 2030¹², integrated efforts are required from all key stakeholders at the national and provincial levels. The provision of electricity through renewable energy technologies and Energy Efficiency and Conservation (EE&C) measures for standards of the electric vehicle (EV) charging stations, would be crucial to achieving the long-term goals of the EV policy.

National Energy Efficiency and Conservation Act 2016 is the key document to institutionalize the efficient use of energy resources in Pakistan. In this reference, NEECA Strategic Plan

2020-23 aims to save 3 MTOE of primary energy supply in the next three years. This will prove to be a great contribution to introduce new technologies in the energy systems of Pakistan, as well as reduce carbon footprints. If energy-saving is carried out with an accelerated energy efficiency of 3.5 percent¹³, it would directly reduce emissions by 6.4 MT CO2 during this period.

The recently approved National Electricity Policy 2021 depicts the compliance of EE&C measures set out by NEECA, and the promotion of incentive-based demand participation. Implementation of these policies and plans will alter the energy landscape of Pakistan, from heavy reliance on fossil fuels, to clean and affordable energy sources. About USD five billion can be saved in the next 20 years in potential fuels and other costs, if Pakistan meets its renewable energy targets by 2030, according to the World Bank.

A number of renewable energy projects related to solar, wind, and bioenergy, have been implemented to increase the share of renewable energy in the final energy mix, in order to reach the targets set out for 2030. Policy actions such as net metering regulations by NEPRA to purchase additional electricity from consumers, would encourage more generation from solar resources. The addition of renewable energy technologies like wind, bioenergy, and hydrogen energy, would help the cause for more economic benefits and eco-friendly energy supplies.

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Pakistan has set targets to ensure 100 percent electricity access by 2030.
”



9. Alternate Energy Development Board (2019). "Alternate Renewable Energy Policy 2019". Available at: <https://nepra.org.pk/IGCEP-2047/Comments%20of%20Stakeholders%20on%20IGCEP.pdf>

10. Ministry of Energy -Power Division (2021). "National Electricity Policy 2021."

11. National Transmission and Distribution Company- NTDC (2018). Indicate Generation Capacity Expansion Plan (IGCEP) 2018-2040.

12. Ministry of Climate Change (2020). "National Electric Vehicles Policy 2020."

13. National Energy Efficiency and Conservation Authority (2020). "NEECA Strategic Plan 2020-23". Available at: www.neeca.gov.pk/downloads

The Power of Energy Efficiency and Conservation

EE&C has emerged as an opportunity to address the energy and climate challenges faced by the country. About 10-15 percent of the primary energy supply in Pakistan can be saved through EE&C measures. Pakistan can tap this energy-saving potential through EE&C measures in energy-intensive sectors i.e. industry, building, and transport. Likewise, a huge potential to invest exists in retrofitting programs, mandatory energy audits, accredited laboratories, and awareness programs.

The operationalization and implementation of EE&C has achieved considerable priority on the government's agenda. Regulations such as appliance standardization, energy audits, and building codes, are appreciable but, it would require sufficient technical and financial capacity to implement the EE&C agenda in true spirit. The potential for investment in EE&C projects for the next three years stands at PKR 7.4 billion. All EE&C measures are part of Pakistan's NDC commitments to take mitigation actions, so as to ensure energy sector emission reductions by 2030. According to an estimate, around USD 18 billion investment opportunities exist for EE&C, for the next decade in Pakistan.

The Future is 'Clean'

The shift towards clean technologies is inevitable. Targets to enhance the share of renewables and double the rate of EE measures by 2030, are important for Pakistan. Consistency in implementation of agreed plans for the rapid transition towards renewable energy sources and EE&C for a thriving eco-system, are requisite. It demands more drastic, well-coordinated, and long-term efforts, as the demand for energy is

increasing with every passing day. Given the urgency of climate change impacts, Pakistan is geared towards decarbonizing, decentralizing, and digitizing, with regards to the energy sector.

The de-carbonization of the energy system will enable Pakistan to fulfill its Nationally Determined Contributions (NDC) commitments of 20 percent reduction in GHG emissions (from business as usual), by 2030. Under the Paris agreement, the channeling of funds from Green Climate Fund (GCF), Global Environmental Facility (GEF), and other multilateral, bilateral as well as developed countries, will be vital to achieving the goal set by the country in accordance with the SDGs. At the national level, importance of green financing facilities such as Green Banking Guidelines (GBGs), must be realized, given the changing dynamics of energy sector priorities and climate change impacts in Pakistan. The development of a mechanism for innovative financing, green investment, incentive schemes for energy efficiency measures, and fossil fuel subsidy reforms, will be instrumental in achieving the global, as well as the local agenda for sustainable development.

“ Given the urgency of climate change impacts, Pakistan is geared towards decarbonizing, decentralizing, and digitizing, with regards to the energy sector. ”



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Climate Governance: Policy Directives for the Future

“ A high degree of political championship at the national level alone cannot sustain Pakistan’s climate action agenda, because of the significant role provinces play in implementation. ”



By¹

Sana Zia

UK Development Advisor Punjab & Governance Advisor
Foreign, Commonwealth & Development Office

&



Sobiah Becker

Climate Change Advisor,
Foreign Commonwealth & Development Office (FCDO)
FCDO seconded Climate Change Advisor to UNDP Pakistan

Pakistan is amongst the world’s top ten countries most vulnerable to the negative impacts of climate change. In the face of its heightened vulnerability, Pakistan needs robust institutions, improved inter-provincial coordination mechanisms, and strong political will to deliver climate action. Top level commitment must cascade down to sub-national levels, so that a cogent approach that addresses public resource management, solidifies the role of key stakeholders, and considers the political economy of climate action can fully emerge. A green post COVID-19 recovery demands this transformation: of systems, of actors, and of decision-making pathways. Otherwise, Pakistan runs the risk of being locked into a high-carbon and high-intensity growth pathway.

Pakistan’s Climate Governance Landscape and Institutional Mechanisms

Pakistan’s National Climate Change Policy (NCCP - 2013) and Climate Change Act (CCA- 2017) establish a broad policy and institutional landscape for addressing climate change. While the

NCCP identifies policy levers for addressing climate change, it provides insufficient policy coherence across key sectoral policies at the federal and sub-national level. This lack of congruence and coordination has likely impacted the development of provincial climate policies and plans. Thus, effective vertical and horizontal integration of subnational and national stakeholders, can support and accelerate NDC implementation in Pakistan. As part of its Paris Agreement commitments, Pakistan’s NDCs set out credible targets for sectoral greenhouse gas reductions by 2030. Pakistan is gearing up to submit its revised NDC so it would be worthwhile to examine national efforts to increase climate ambition through a governance lens, and suggest a way forward.

Strong federal and provincial collaboration will accelerate and strengthen national actions. Appropriate, effective climate action will need to be rooted in robust monitoring mechanisms across all levels of government, which requires collaboration and coordination across all departments. The 18th



**What are NDCs?
Why are they important?**

Just as the Sustainable Development Goals (SDGs) embody a global agenda for inclusive development, Nationally Determined Contributions (NDCs) are a global call for action against global warming. These two global agendas are co-evolving and mutually synergistic; implementing one strengthens the other. Pakistan’s NDCs set out a course of action for the government, by defining credible targets for sectoral greenhouse gas reductions by 2030.

¹ This thought piece reflects the personal views of the authors.



“
 In the face of its heightened vulnerability, Pakistan needs robust institutions, improved inter-provincial coordination mechanisms, and strong political will to deliver climate action.
 ”

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and implementation of climate action to the provinces, giving them the wherewithal to make implementation decisions, as well as financial allocations, for climate action. Therefore, the focus on Pakistan’s climate governance should include revisiting how the provinces contribute to, and connect, with the federal direction setting.

An actionable federal agenda that is scalable and actionable at the provincial level will deliver national commitments needed to successfully realize NDC targets. There is sufficient anecdotal and empirical evidence to show that subnational efforts to address climate change can often be more effective, simply because of the proximity of provincial governments to the consequences of climate change.²

Robust NDCs are more likely to attract financial inflows from traditional and non-traditional sources, particularly where more ambitious pledges are

The credibility of the revised NDCs is critical to the success of national efforts, that in turn will bolster international efforts to meet the 2 °C target.

conditional on finance.³ The monitoring, reporting, and verification of climate finance in-/outflows will be key to attracting climate investments, and is also an obligation under the Enhanced Transparency Framework (Articles 4, 7, 13) of the Paris Agreement. Supported by the Foreign, Commonwealth & Development Office (FCDO), the UNDP published the first ever Climate Public Expenditure Institutional Review to report on climate-related public expenditure, which is an important first step towards transparency in public financial reporting. When scaled up, this work will build up public capacity in fiscal planning, risk assessments and reporting to refine public responses to climate change induced risks.

Whither Climate Governance?

In the post-Paris Agreement world, trust, evidence, and action will be determinants of success for any country. COP26 affords Pakistan the opportunity to cement its climate

2 Puppim de Oliveira, 2019
 3 Averchenkova and Bossi, 2016

Pakistan's Climate Expenditure Reports published between 2011-2018

- In the last climate expenditure report published in 2018, Pakistan spent 8.4% of national annual budget on climate related expenditure. This constituted between 1.52-2.08% of the GDP.
- These reports suggested a significant variance in the amount of climate-relevant expenditure within different ministries indicating variable resource allocation and policy delivery.
- These annual reports provided national and provincial snapshot that helped governments see trends at portfolio and sectoral levels and guide decision making.



leadership credentials via a revised, ambitious NDC. In parallel, Pakistan needs to chart out a clear path to enable NDC implementation. This journey begins with a transformational process for NDCs from the current level of abstraction, to one that entails understanding of policy choices, developing appropriate capacities among stakeholders, shaping necessary incentives, and inclusive decision making.

At the provincial level, we recommend prioritizing three areas: mainstream climate action in key provincial policies, systematically track and improve financial allocations for climate action, and establish well-championed provincial coordination and reporting mechanisms.

On mainstreaming climate action in provincial policies, while there is merit in developing provincial climate action

plans, these could focus on demystifying climate jargon to help the provincial systems understand and act upon sectoral action as required. Implementation is more likely if climate action is embedded in post-COVID growth strategies such as Punjab's Growth Strategy and KP's Azm-e-Nau.

On improving financial management on climate, FCDO, in partnership with UNDP, helped Pakistan publish Climate Expenditure Reports (called CPEIR) for several years between 2011 and 2018 (key findings in both 3). Khyber Pakhtunkhwa (KP) also took one step further and developed a Climate Change Financing Framework. With this experience in the back pocket, Punjab and Khyber Pakhtunkhwa are now well positioned to take the next step, and build capabilities within their Finance Departments to initiate a comprehensive budget tagging of its climate and disaster expenditure. This

could enable them to see trends and set climate budget markers at any time during the budget cycle. Moreover, this will enable them to identify specific areas where climate finance is most needed, and use this evidence to raise climate finance more effectively.

On stronger provincial coordination mechanisms, the appointment of Special Advisor on Climate by Pakistan facilitated stronger links between political ambition and institutions (e.g. Ministry of Climate Change), at the federal level. Provinces may consider a similar model. However, this would only work if appointments came with sufficient authority and clear mandate to work across the departments required to collaborate for climate action. If successful, this could create additional space and leadership for climate reforms in the provinces.

Drip, Drip

Improving Health and Livelihoods in Gilgit-Baltistan

Setting Safe Drinking Water Standards

The water plight of local communities in Gilgit Baltistan has caused serious health concerns, which if not addressed, may lead to an increase in mortality.



Water treatment facilities at



By

Haider Raza

Regional Head Gilgit-Baltistan
World Wide Fund For Nature-
Pakistan

“Due to contaminated water, students used to suffer from different water-borne diseases. We are thankful to WWF-Pakistan and UNDP for providing the much-needed facility to the academy. In our academy, 320 students, including boys and girls, got access to safe drinking water due to the provision of the water purification plant.”

Precipitation changes fueled by climate change have exacerbated the water woes of the Gilgit-Baltistan region, where local communities rely on polluted snow melt water streams for drinking, as well as domestic and agricultural use. Frequent water-borne disease outbreaks not only impact the health of the people but also add to their medical expenses and limit their ability to partake in economic and social activities. Women and young girls travel long distances to collect water from contaminated channels.

WWF-Pakistan, with the financial support of the government of Italy and UNDP, is implementing the Mountain Protected Area project in the buffer zone villages of the Central Karakoram National Park. One of the interventions of the project included the installation of safe water facilities in selected

schools for girls. Depending on the physical characteristics of source water, five water treatment facilities for turbid water and 16 water purification systems have been installed in 21 schools in buffer zone villages. Water quality tests revealed a substantial improvement and matched with the World Health Organization (WHO) drinking water guidelines and the National Drinking Water Quality Standard (NDWQS).

Open and accessible to the communities, these sources of safe drinking water are not only positively impacting health and education indicators but are also a step towards gender empowerment and improved economic opportunities, as they reduce medical burdens and free up time for participation in recreational and income-generating activities.

Climate Fragility

Replenishing Ecosystems

Mountain regions are complex in their geomorphology and therefore more vulnerable to variations in temperatures and changes in patterns of hydrology. Both have a direct impact on mountain communities, adding fragility to lives already clinging tenuously to eco-systems for sustenance.

By

Arish Naseem

Research and Reporting Officer
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UNDP Pakistan

Also known as the Third Pole for its vast collection of glaciers and water reserves, the Hindukush Mountains (HKH) house several communities abiding in the shadow of its Karakoram Mountain range.

However, close proximity to water sources has become both a bane and a boon for these communities, who depend on melt-water for agriculture and domestic use. Its erratic variation, as a result of climate change, either accelerates melting that wreaks havoc through floods, or sometimes significantly reduces water quantity.

in food insecurity and extreme water shortage for domestic needs. The projects implemented by the Mountain and Glacier Protection Organization with the financial assistance of the Global Water Challenge and the support of UNDP (2016-2021), under the New World Programme, helped transform the lives of four such communities in Gilgit-Baltistan. The projects have positively impacted the lives of over eleven thousand un-served and under-served communities, by providing them with a reliable source of water. This not only managed to enhance their agricultural productivity, but also helped in restoring eco-systems, facilitating access to safe drinking water, and overall creating local stewardship to enable the communities to plot their own future development trajectory.

Today, the communities can rightfully claim to have an institutional platform for

participatory and inclusive decision making, with proportionate gender representation and youth participation. 859 hectares is now under productive use, which is contributing towards food security, reduction in poverty, income diversification and increase in household savings. The indirect benefits include giving voices to the voiceless, empowering women, and enabling growth opportunities for young girls to achieve their full potential.

Nearly 9.2157 billion liters of water tapped from nature has been ploughed back into nature and community to nurture lives and replenish ecosystems so that the communities could thrive in tandem. The cumulative impact of the projects has helped in restoring degraded ecology, protecting the environment, improving socio-economic conditions of communities, and creating an enabling environment for biodiversity to flourish.





© Water Aid Pakistan

There is No Planet B Innovating Climate Action

By
Dr. Abid Qaiyum Suleri

Executive Director, Sustainable Development Policy Institute
Member, Prime Minister’s Economic Advisory Council
Pakistan’s Climatic Innovations

Various Sources: Negotiations with bilateral donors for ‘debt swap for the nature’, Benefitting from carbon markets including from the REDD+ facility etc.

5. Focus on Green and Clean Pakistan: Projects relating to water, sanitation and hygiene (WASH) being given importance.

What Next?

On the International Front:

The biggest emitters should pro-actively start paying their contributions to the climate fund, thereby making it accessible to developing countries, such as Pakistan to continue their efforts. The world needs to act now, as 2030 – the deadline to achieve Sustainable Development Goals in order to build resilience of the world against climate change—is not far.

On the Domestic Front:

We would have to break the dichotomy between growth and environment. It is not an ‘either-or’ relationship. We must grow while taking care of our environment and remaining climate smart. This requires an alignment of policies and procedures, and a ‘whole of government’ approach in working towards a clean and green Pakistan. If that can be done, we can eradicate poverty, and reduce vulnerabilities.

Top 5 innovative solutions include:

1. 10 Billion Tree Tsunami Program: Flagship initiative; opens up doors for green and blue economy; key dividends include cut on GHG effects, lowering floods, rains and droughts, and protection of biodiversity and ecosystems.
2. Increasing Protected Areas for Forests and Mangroves: Supporting terrestrial and marine ecosystems; providing jobs to millions in terms of community engagement.
3. Shift towards Electric Vehicles and Renewable Energy Options: In order to cut Carbon Emissions.
4. Accessing Climate Finance through

Have these worked?

So far, these innovative solutions are working well, but there may be challenges if planned resources might not be accessed. Under global arrangements, the world has pledged to contribute to the Global Climate Fund, so that developing countries such as Pakistan, can access these funds and continue with their adaptation and mitigation efforts to build resilience against climate change. According to Asian Development Bank, Pakistan requires climate finance worth USD 7-14 billion per year for climate adaptation. The good news is that G-7 leaders have renewed their pledge to contribute their outstanding sums of USD 100 billion for developing countries. However, implementation in spirit still remains to be seen.

What Does the Future Look Like?

Changes in Weather Patterns

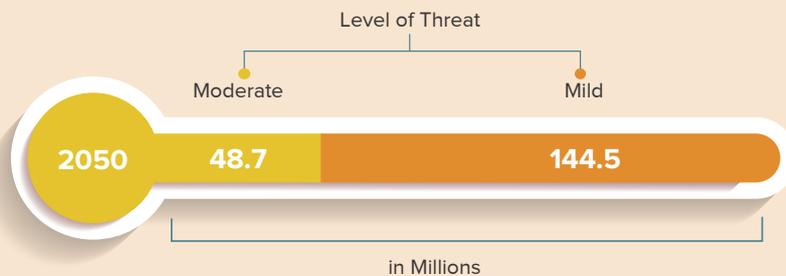
- Changes in average weather patterns will have a negative effect on living standards in Bangladesh, India, Pakistan, and Sri Lanka, but a positive effect on living standards in Afghanistan and Nepal.



Note: The model described by equation (3.1) is implemented for two-time frames (2030 and 2050) and two projection scenarios (climate-sensitive and carbon intensive). The national-level results are aggregated from the household predictions. Percentage change is calculated relative to the historic baseline.

Hotspots

Approximately 89% of the total population of Pakistan (216.6 million) are living in areas projected to become moderate or mild hotbeds.



Note: Estimates are based upon the carbon-intensive scenario by 2050. Data shows that currently, around 800 million people live in moderate or severe hotspots.

Rate of Emissions

- While from 1994 to 2015, emissions increased by about 123 percent, total emissions are expected to increase by about 300 percent between 2015-2030.



Energy

1994 → 85.8
2015 → 185.97
2030 → 898



Industrial Process

1994 → 13.29
2015 → 21.85
2030 → 130



Agriculture

1994 → 71.63
2015 → 174.56
2030 → 457



Land-Use Change & Forestry

1994 → 6.52
2015 → 10.36
2030 → 29



Waste

1994 → 4.45
2015 → 12.29
2030 → 89

TOTAL

1994 → 181.17
2015 → 405.07
2030 → 1603

Sources Consulted:

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- World Health Organization (2015). "Climate and health country profile - Pakistan." <http://apps.who.int/iris/bitstream/handle/10665/246150/WHO-FWC-PHE-EPE-15.28-eng.pdf;jsessionid=C65C70B12A378437312D491DAD93E531?sequence=1>
- World Bank (2018) "South-Asia's Hotspots." Available at <https://openknowledge.worldbank.org/bitstream/handle/10986/28723/9781464811555.pdf>
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