POST COVID FUTURES

PAST THE TIPPING POINT: WHY PAKISTAN'S LOW EMITTER ARGUMENT WON'T WORK

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Chapter 2: Past the Tipping Point: Why Pakistan's Low Emitter Argument Won't Work

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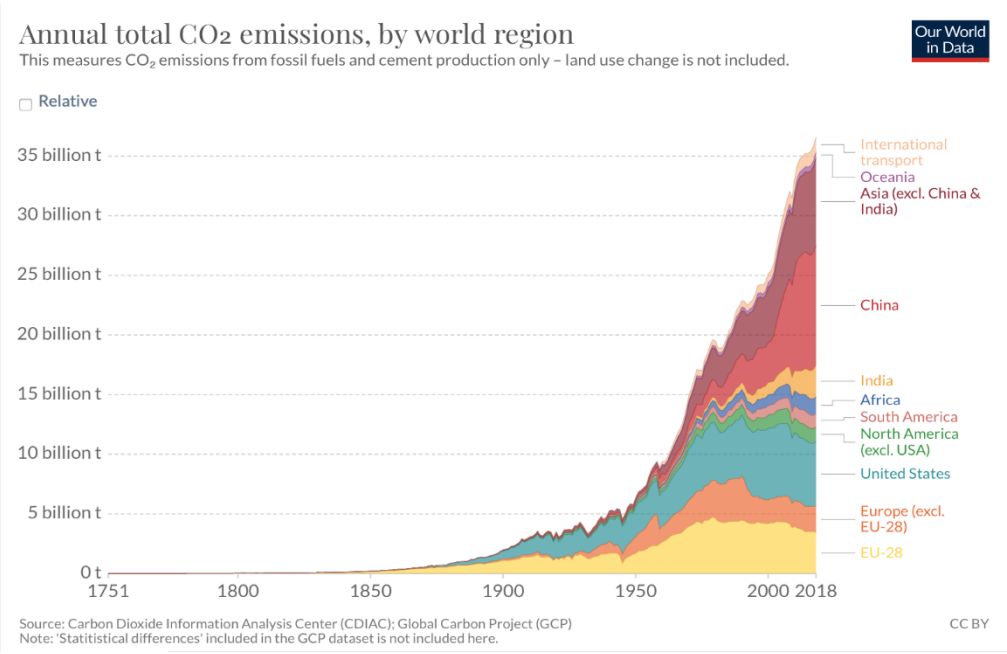
July's flash flood in Islamabad was triggered by a "cloudburst" that swept cars away in high tide across an affluent neighbourhood, and killed two persons. For a city that prides itself for keener urban design, planning and resources to expend, the monsoon levelled the national capital with lesser cities in Pakistan, and served a reminder that climate induced stress will be universal afterall. It also confirmed that climate vigilance needs to be a constant exercise to prevent disaster and inform adaptive practice.

July 2021 was a month of extreme weather events across the globe: catastrophic flooding in Europe, China and India; heatwaves and drought in North America; and wildfires in the remote subarctic. Climate data had predicted these scenarios with increased global warming, but the speed and scale at which the summer of 2021 is erupting into continental disasters has taken aback experts working with the data. These are clearly compound events, with interconnections between them and surpass systemic capacities to cope in almost all cases.[2]

Decisionmakers in Pakistan and elsewhere are reverting their attention from COVID emergencies to the climate crisis, and for good reason. With COP-26 scheduled in a few months from now, evaluating the climatic events of this year in relation to policy progress is essential to gauge where we stand. Pakistan's climate policy roadblocks have not gone away, although there have been commendable initiatives that make qualitative improvements to the environment. This policy brief assesses these initiatives in relation to Pakistan's overall position at UNFCCC, and makes a case for recasting our domestic climate priorities in



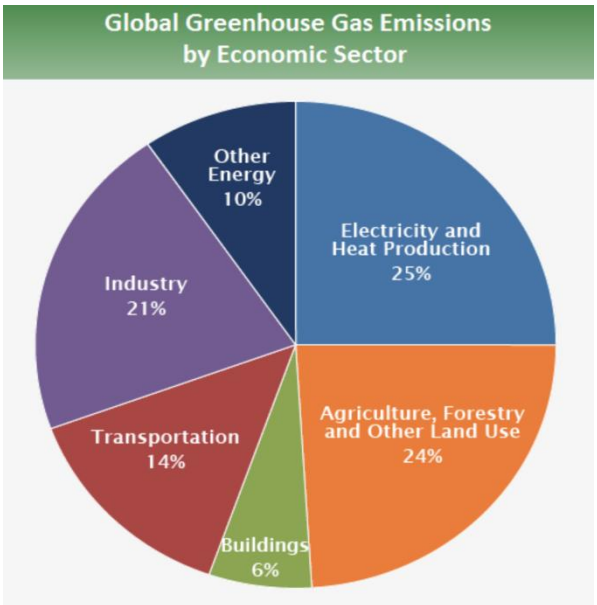
[1] Partner, Saleem, Alam & Co and Member of the (as of yet unconvened) Pakistan Climate Change Council.

[2] 'How summer 2021 has changed our understanding of extreme weather', The Conversation, 30th July 2021 available at https://theconversation.com/how-summer-2021-has-changed-our-understanding-of-extreme-weather-165268

consonance with federal and provincial implementation mandates.

Climate Change: Rehashing the Basics

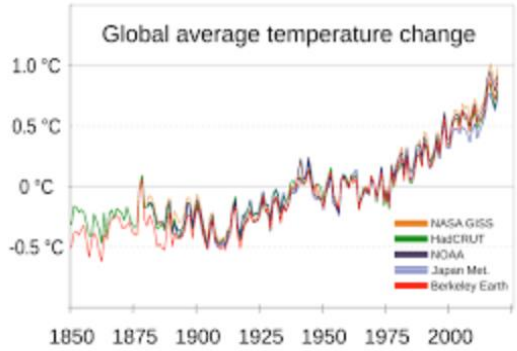
Climate change is caused by the release of GHGs into the atmosphere. With global dependence on fossil fuels for energy and transport and with increasing conversion of land for agriculture and use of livestock, GHG emissions have grown steadily since the dawn of the Industrial Revolution.



(Source: IPCC 2014)

GHGs, mainly Carbon Dioxide, Methane, Nitrous Oxide, Ozone and water vapour, trap the sun's heat in the earth's atmosphere and result in global warming. Global warming, in turn, threatens to disrupt established weather patterns resulting in floods, droughts, water and food security issues and ecosystem collapse.

The United Nations Framework Convention on Climate Change signed in Rio in 1992 is the international legal instrument that seeks to stabilise greenhouse gas emissions to levels that will prevent dangerous human interference with the earth's climate system. Under the Convention, the Kyoto Protocol of 1996 aimed to achieve this objective by aiming to keep global temperature rise to less than 2C compared to pre-Industrial levels through a system of carbon trading; and the Paris Agreement of 2016 raised this ambition by seeking to keep the global temperature increase less than 1.5C compared to pre-Industrial levels through a system of nationally determined contributions representing a country's "highest possible ambition" of GHG emissions reduction. While these ambitions are laudable, two points need to be kept in mind.



First, there is no "safe" climate change or global warming. The 2°C and 1.5°C ambitions of the international community are not thresholds which, once crossed, will result in climate disaster. As of 2020 - which is the hottest year ever recorded - temperature levels have increased in the region 1-1.2°C compared to pre-Industrial levels. Even at this stage of global warming, the earth stands at the beginning of a Sixth Extinction Event,[3] oceans are heating up and acidifying, coral reefs are bleaching, there have been historical wildfires in the Amazon, Australia, California and the Arctic Circle and record-breaking tornadoes and hurricanes. The threat to the earth's

[3] "Are we really in a sixth extinction event: Here's the science" Science Alert 18 November 2019 available at https://www.sciencealert.com/here-s-how-biodiversity-experts-recognise-that-we-re-midst-a-mass-extinction

ecosystem is clear and present. These 1.5°C and 2°C are better understood as the politically acceptable costs of climate change that governments around the world are willing to bear. To put this into context, an increase in global temperatures from 1.5°C to 2°C has been estimated to cost upwards of 150 million lives, mostly in Asian and African countries as a result of air pollution linked to GHG emissions. That's more than four times the death toll of the First and Second World Wars combined.

Second, the objectives of the UNFCCC, Kyoto Protocol and Paris Agreement have not been met. There has been no stabilisation of GHG emissions as a result of these legal instruments and agreements. Instead, more GHGs have

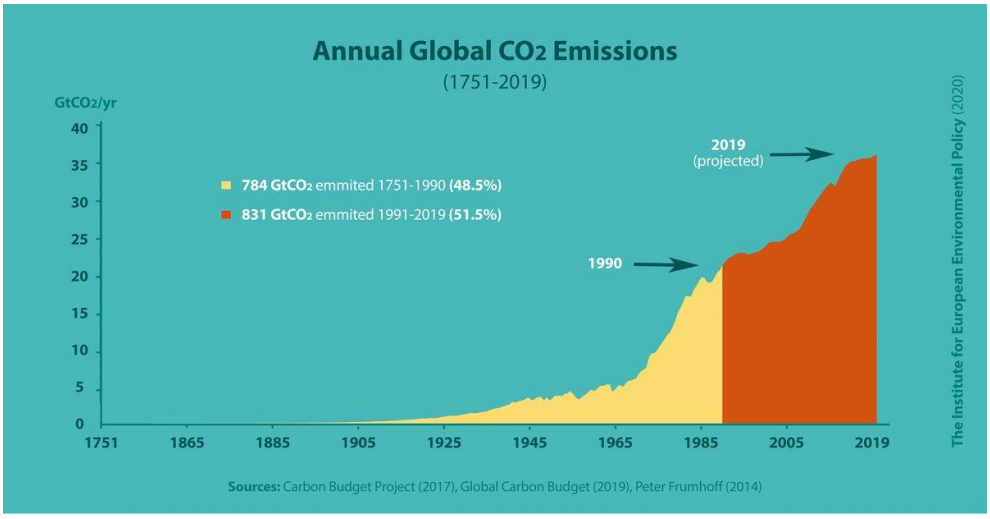
been emitted since the signing of the UNFCCC than before. According to Climate Action Tracker, the cumulative impact of all nationally determined contributions under the Paris Agreement (along with the impacts of the US re-entering the Paris Agreement under the new Biden Administration) *could* see a global warming limit of 2.1°C by the end of this century.[4] However, this seemingly good news is only feasible if major world economies deliver on their Paris Agreement pledges. This is not an easy task, as the Climate Action Tracker observes that these pledges amount to the fastest, most complex industrial and technological revolution in human history. On the other hand, there are a number of studies that point to a 2°C temperature increase by 2050 and a 3°C-4°C increase by the end of this century. This would be indescribably catastrophic as beyond 3°C global food systems are likely to collapse leading to mass starvations.

Climate Change Policy in Pakistan

In this backdrop of global warming and climate crisis, Pakistan's historic policy response can be summarised by the following statements:

- Pakistan is signatory to the UNFCCC, Kyoto Protocol and Paris Agreement and complies with all its international climate commitments;

- Pakistan's GHG emissions are negligible compared to economies of the global north and the real climate challenge is to have



[4] "Turning Point: Global climate pledges put world on 2.1C warming pathway, analysis suggests" Businessgreen.com 1 December 2020 available at https://www.businessgreen.com/news/4024211/point-global-climate-pledges-world-1c-warming-pathway-analysis-suggests

large GHG emitters meet their climate commitments;[5]
- Pakistan needs foreign assistance to finance its adaptation and mitigation targets.[6]

The present government has a number of climate-related initiatives, including:

- The Billion and Ten Billion Tree Tsunami Projects;
- Approval of the first Electric Vehicle Policy;
- Notification of import of Euro V fuels.

But all of these, individually or collectively, fail to appreciate the severity of the climate crisis and how it will impact Pakistan. These policy positions and initiatives fall short of Pakistan's responsibility to its citizens and as a responsible member of the international community.

It is frequently observed that Pakistan is a country most vulnerable to climate change.[7] This is true because each of the diverse ecosystems that finds home in Pakistan is uniquely threatened by climate change and also because we are a poor nation. Affluence is the test of a community's resilience against a climate event: the richer you are, the more likely you are not to be devastated by a sudden downpour or a flash flood. Pakistanis are not a resilient nation because we are a poor nation.

What's the point of pointing out that we're signatories to the UNFCCC, Kyoto Protocol or Paris Agreement when there's acceptance that achieving the target of no more than 1.5°C global warming is on the brink of the impossible? Isn't something bigger, bolder and more ambitious the need of the hour?

It's true that Pakistan's carbon emissions recorded in 2015 of 400 million metric tonnes

4.3 Overall Projected Emissions for 2030

Projected levels of GHG emissions and their comparison with the last two GHG inventory years (1994 and 2015) are as follows:

Table 7: **Sector Wise Projection of Emissions (*MT CO2-equivalent)***

Sectors	1994	2015	2030
Energy	85.8	185.97	**898**
Industrial Process	13.29	21.85	**130**
Agriculture	71.63	174.56	**457**
Land-Use Change and Forestry	6.52	10.39	**29**
Waste	4.45	12.29	**89**
Total	**181.7**	**405.07**	**1603**

While from 1994 to 2015 the emissions increased by about 123 percent, the total emissions are expected to increase by about 300 percent for the projected period (2015-2030).

(Source: Pak INDC)

[5] See, for example, Prime Minister Imran Khan's article for WEF Covid Action Platform of 25 November 2020 available at https://www.weforum.org/agenda/2020/11/leading-by-doing-pakistani-pm-imran-khan-on-climate-change/

[6] Pakistan Initial National Determined Contribution filed with the United Nations under the Paris Agreement, Chapter 5.2 available at https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Pakistan%20First/Pak-INDC.pdf

[7] The source of this statistic is the Global Climate Risk Index published by Germanwatch.org. The 2020 report is available at https://germanwatch.org/sites/germanwatch.org/files/20-2-01e%20Global%20Climate%20Risk%20Index%202020_10.pdf

per year were nothing compared to the 9 and 5 billion metric tonnes produced by China and the US the same year. But at the time Pakistan made its initial Nationally Determined Contribution (INDC) under the Paris Agreement in 2016 it had also set sail towards CPEC and its many coal-fired energy projects. The INDC records Pakistan's projected CO2 emissions by 2030 would be a staggering 1.6 billion metric tonnes, placing it firmly in the ranks of major global GHG emitters.

It's another story that Pakistan's INDC ambitions were thwarted by an economy flailing from one crisis to another. Its projected GHG emissions will remain, like so many Pakistani policy assertions: firmly limited to the paper they were written on.

What the INDC does reveal is how Pakistan is using its position as a developing country under the Principle of Common but Differentiated Responsibilities. This Principle of the UNFCCC allows developing countries like Pakistan to commit to "peaking" their GHG emissions post-2030 in deference to the prerogative of economic development.

With there now enough GHGs in the earth's atmosphere to 'lock-in' a temperature increase of over 2°C by mid-century,[8] putting the blame on the global north and their historical emissions is no longer a credibly defensible policy position. The principle of Common but Differentiated Responsibilities won't be enough anymore for developing countries like Pakistan (but also India, Brazil and China) to argue they may be allowed a lag-time before enforcing GHG emission reductions in their economies.

And indeed, international financing for mitigation and adaptation plans is crucial. But with the number of climate events Pakistan faces every year - the recent flash floods in Islamabad and the catastrophic locusts plague are fresh in memory - relying on foreign funds alone is no strategy either. Domestic climate financing is needed, not Covid-19-related economic stimulus packages to the construction industry.[9]

Green Sustainability of Global COVID-19 Response

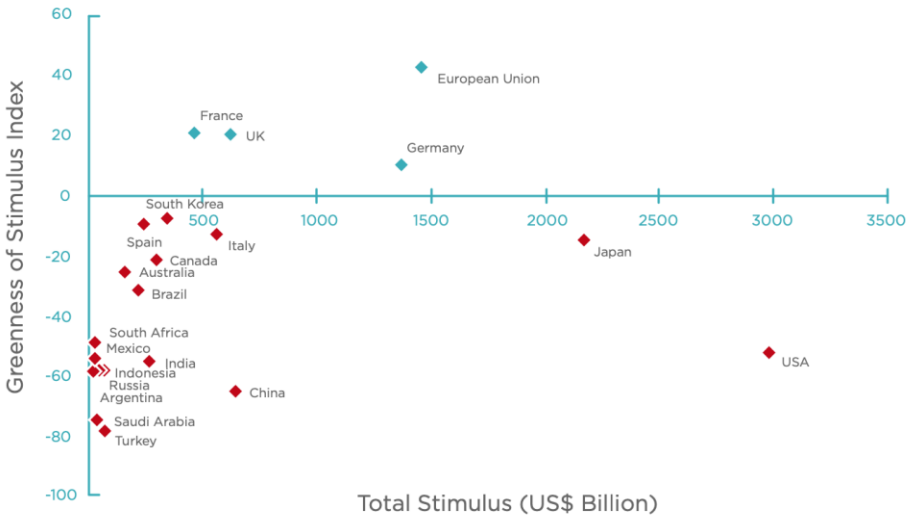
The Green Sustainability Index (GSI)[10] assesses the effectiveness of COVID-19 related economic stimulus packages announced by G20 and other major global economies against parameters such as sustainable growth opportunities, resilience building and the protection of the climate and biodiversity. These stimulus packages come in at approximately US$ 12.7 trillion, making them the largest-ever transfer of wealth in history. Unfortunately, very few economies perform well on the GSI and Pakistan will not be alone in missing the once-in-a-lifetime opportunity to provide sustainable and climate resilient investments to the economy.

[8] United Nations Environment Program Emissions Gap Report 2019 available at https://www.unenvironment.org/interactive/emission s-gap-report/2019/

[9] 'Imran unveils construction industry package" Dawn 11 July 2020 available at https://www.dawn.com/news/1568259

[10] Maintained by Vivid Economics available at https://www.vivideconomics.com/wp-content/uploads/2020/10/201028-GSI-report_October-release.pdf and accessed on 5 December 2020.

Figure 5 | **GSI score and total size of fiscal stimulus: G20 economies plus Spain**



Source: Vivid Economics using IMF Policy Tracker and other sources
Note: Updated August 28, 2020.

Reframing the Climate Debate in Pakistan

Debating climate change policy of and between nation states has its limitations. Understanding which countries emit more GHGs in absolute terms (China) or per capita (Saudi Arabia) is useful in the diplomacy that lubricates the workings of the UN Conference of Parties to the UNFCCC. This is because climate change doesn't respect international boundaries. It's helpful therefore to consider that the impacts of climate change aren't just felt by nation states but by people, communities and ecosystems.

Not all Pakistanis are impacted by the same climate event the same way. When a heatwave in 2014 in Karachi took 1400 lives, those in the city with interrupted electricity and air conditioning hardly felt a thing. September 2020's flooding in Karachi was devastating and took the city weeks to recover, but flooding in rural areas washed away schools and condemned a generation of children to illiteracy. The impact of climate change must be understood both as a game of realpolitik between nation states and critically, a life-and-death struggle along a scale of affluence.

Nor is Pakistan's landscape impacted by climate change the same way. With its varied ecosystems - from the cryosphere in the Gilgit Baltistan and KP till the Indus Delta in Sindh, each part of the country is experiencing different climate events. There are glacier lake outburst floods in the North and droughts in the plains. Cities are flooding from increasingly erratic monsoons. Crops are suffering on account in global warming. These examples of climate impact illustrate how they cut across the roles and responsibilities of the Federation and the Provinces.

While Pakistan is responsible for adapting to climate change - a pledge made by the Federation when it ratified the Paris Agreement - the implementation of adaptation initiatives such as flood protection, irrigation efficiency, the provision of clean drinking water are all areas where Provincial administration plays the dominant role. To date, there is no formal mechanism in place to coordinate the execution of international

agreements between federal and provincial mandates.

This intersection and gray area between and limits of the role of Pakistan's federating units expose the weaknesses of its National Climate Change Policy of 2012 and Pakistan Climate Change Act of 2017.

The Climate Change Policy was approved by the Federal Government in 2012. Regardless of its merits, it was approved at the time the 18th Amendment to the Constitution devolved responsibility for the subject of climate change, amongst others, to the provinces. Since then, the policy has never been implemented and no province has moved to formulate its own provincial climate policy.[11] Without a localised understanding of climate impact, it is impossible to develop nuanced climate policies. Recall that the provinces of Sindh and Balochistan have a coastline that will be affected differently from the forests and green cover that characterise much of KP and Gilgit Baltistan.

The Pakistan Climate Change Act of 2017 was passed by exploiting a Constitutional loophole that allows Parliament to pass laws on any subject on which Pakistan has signed an international treaty. Since Pakistan is signatory to the UNFCCC and has ratified the Paris Agreement, Parliament sought to pass national legislation on the subject. Regardless, the Act is valid law on the statute books for over three years. Despite this, it has not been operationalised. The Climate Change Council which the Act established and which is responsible for formulating and implementing national climate policies, has never been convened. Not once. This is despite the fact that the present government even notified its members in early 2019. The Climate Change Authority established by the Act to implement the policies of the Council has been hit by the government's austerity drive and has not recruited any of its positions. While this law remains in force, none of the provinces have moved any legislation on climate change.

The reality is that most of the legwork related to climate adaptation and even mitigation in Pakistan is the job of the provinces with the federal government monitoring their work and reporting it back to the UNFCCC Secretariat.

The climate debate in Pakistan must move beyond the work of the federal government in monitoring the implementation of international agreements like the Paris Accord. It must now focus equally on the responsibility of the provinces to formulate their own understanding of the climate crisis, ideally through local climate risk assessments.

Analysing the PTI Government's Climate Actions

Pakistan was recognised by the UN Development Program as having met its climate targets under SDG 13, which urges countries to "take urgent action to combat climate change and its impacts."[12] The present government rightly lauds its various climate initiatives, which include the 10 Billion Tree Tsunami Project, Clean Green Pakistan Initiative, Protected Areas Initiative, an

[11] The Punjab Environment Protection Council in its 4th meeting held on 4 January 2020 Directed the EPA, Punjab to initiate the process towards adopting a provincial climate change policy. However, the direction has, to date, not been complied with. The Province of Sindh has an Environment, Climate Change and Coastal Development Department, but no provincial climate policy.

[12] "Pakistan meets UN climate goal a decade ahead of deadline" The News, 13 July 2020 available at https://www.thenews.com.pk/print/685979-pakistan-meets-un-climate-change-goal-a-decade-ahead-of-deadline

Electric Vehicle Policy, import of cleaner Euro V fuels and the Ecosystem Restoration Fund. However, it is important to recognise that SDG 13 evaluates a country's commitment to climate action in terms of what's set out in its policies and not the effect of measurable outcomes.

Furthermore, the Prime Minister of Pakistan announced that by 2030, 60% of Pakistan's energy will be "clean",[13] signalling a shift from coal-based energy to renewables in line with the Alternative and Renewable Energy Policy introduced by this Government in 2019.

We may not be a high GHG emitter; we are scarcely an industrial economy. Nevertheless, industrial air pollution, fossil fuel energy and low-quality fuels in transport have resulted in an average loss of two years of life expectancy in Pakistani cities on account of air pollution. Lahore's air quality is routinely ranked the worst in the world - nothing to be proud of especially when there simply aren't air quality monitors in other cities to tell us whether they're better or worse off.

Similarly, the existence of a Clean and Green Cities Index is laudable, but Pakistani cities remain dirty and polluted (the Index does not, surprisingly, measure air quality!). And while the planting of trees on the scale of the Billion and Ten Billion Tree Tsunami will be recorded as one of the great acts of carbon sequestration by a developing country, adding more and more coal-fired power and cement plants simply negates the whole exercise. If our INDC ambitions aren't checked by the ongoing review of Pakistan's nationally determined contributions, we are set to join the ranks of global GHG emitters at a time major countries are transitioning their economies towards net-zero carbon emissions.

A National Emergency was declared in 2020 because of an invasion of locusts into parts of Sindh and Punjab.[14] Plagues of locusts grew because of years of wet winters increasing their breeding periods; and are as much the result of climate change as the forest fires in South America, Australia, the USA and the Arctic this year. The locusts have devastated crops and will impact productivity, farming income and even food supplies. As it is, two years of unexpected rains affected wheat production which, coupled with poor political decisions, has resulted in wheat shortages year on year.[15]

None of the government's climate-related initiatives account for the variety and severity of climate events Pakistan is already experiencing and will face in the future. Given the peril which planet earth confronts today, simply having a climate policy or climate law is meaningless unless it's acted upon.

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[13] "60pc of Pakistan's energy will be 'clean': PM Imran" Dawn, 12 December 2020 available at https://www.dawn.com/news/1595373/60pc-of-pakistans-energy-will-be-clean-by-2030-pm-imran

[14] "National emergency declared over locusts: Dawn, 1 February 2020 available at https://www.dawn.com/news/1531824

[15] "Climate change, rainfall: Wheat production has fallen: PM" Business Recorder, 10 August 2020 available at https://www.brecorder.com/news/40010906/climate-change-rainfall-wheat-production-has-fallen-pm

Lessons to guide a way forward

All the same, by taking a position that Pakistan is not obligated to act like major GHG emitting countries, policymakers are underestimating the impact the climate crisis is having and will continue to have. The UNFCCC was signed at a time the carbon concentration in the atmosphere was 359 parts per million. It had never crossed 400ppm in over 10 million years. It's 2021 and the carbon concentration is 415ppm. The ambitions of the UNFCCC lie in tatters and will no longer suffice to claim, as Pakistani policy does, that developing countries are to shoulder the burden of GHG reductions. It's now all hands on deck, and even less developed countries must face the reality that their economic development paradigm cannot mimic that of the West. Every country on earth, Pakistan included, must fight climate change as a top-tier priority.

The centralisation of Pakistani climate policy and legislation also makes it difficult to make the local and provincial climate assessments necessary for a nuanced approach. Pakistan is a democratic federal system and this system cannot be bypassed for the logic of any policy response. Climate policy must follow the Constitution and the law and encourage the provinces to independently formulate their own assessments and responses. The Federation's responsibilities, however, do not end just because provinces formulate and implement their own policy: it must continue to monitor implementation of Pakistan's commitments under international law.

Beyond policy and institutional design to meet the climate challenge, this government must learn from its COVID-19 response and apply some lessons to improve its climate action.

1. **The severity of the climate crisis should not be underplayed**. New Zealand, for example, has declared a climate emergency and set ambitious targets for GHG emissions reductions.[16] For Pakistan's part, while the efforts of the Ministry of Climate Change are laudable, simply claiming compliance with the Paris Agreement is not enough, especially when it is increasingly clear the ambitions of the Paris Agreement may well be out of reach.

2. **The messaging on climate change must focus on individual and collective action**. In order to secure the buy-in of the public on climate issues, it must not be misled to believe that all is well as long as Pakistan is fulfilling its climate commitments. Pakistan's compliance, nevertheless, should be leveraged internationally to secure climate funding and to establish negotiation blocs with other nations to persuade the countries of the global north to take their climate commitments seriously.

3. **Centralisation of policy and institutional responses is not the way forward** with climate change, as our COVID response amply demonstrated. The impact of climate change will be felt locally, and it is crucial to develop a bottom-up response to climate change. This will require the government to trust

[16] "New Zealand declares a climate emergency" The Guardian, 2 December 2020 available at https://www.theguardian.com/world/2020/dec/02/new-zealand-declares-a-climate-change-emergency

the devolution process and work with the federating units to increase their capacity to deal with climate issues.

4. **The Pakistan Climate Change Council and Climate Change Authority must be activated** under the Climate Change Act, 2017 in order to develop such decentralised capacity. The representation of the provinces in the Council[17] and in the Authority[18] will establish the federal-provincial linkages necessary to seed climate policy into the provinces. Further, as the Council is the statutory body assigned with formulating and implementing climate policies, the federal government would do well submitting its climate initiatives for consideration and approval. Its implementation of climate policies approved by the Council will develop and strengthen provincial capacity to understand and adapt to the climate crisis.

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[17] The Council is Chaired by the Prime Minister and includes the provincial Chief Ministers, amongst others.

[18] The Authority comprises the Director-General, four Directors of Adaptation, Mitigation, Finance and Coordination and a Director from each of the provinces.