



# Net Zero strategy in Pakistan



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# Lay out of presentation

- Introduction
- Pakistan's contribution to GHG emissions/Carbon footprint
- Pakistan's vulnerability to climate change
- Despite having a small carbon footprint, Pakistan is bearing the brunt of climate change: Reasons
- Unique strategies and platforms Pakistan must implement to achieve Net Zero
- The social, economic impacts, and benefits achieved through the implementation of Net Zero policy in Pakistan
- Progress and achievements of key policies for carbon neutrality measurement and monitoring system in Pakistan



# Introduction: Pakistan

## Neighboring countries

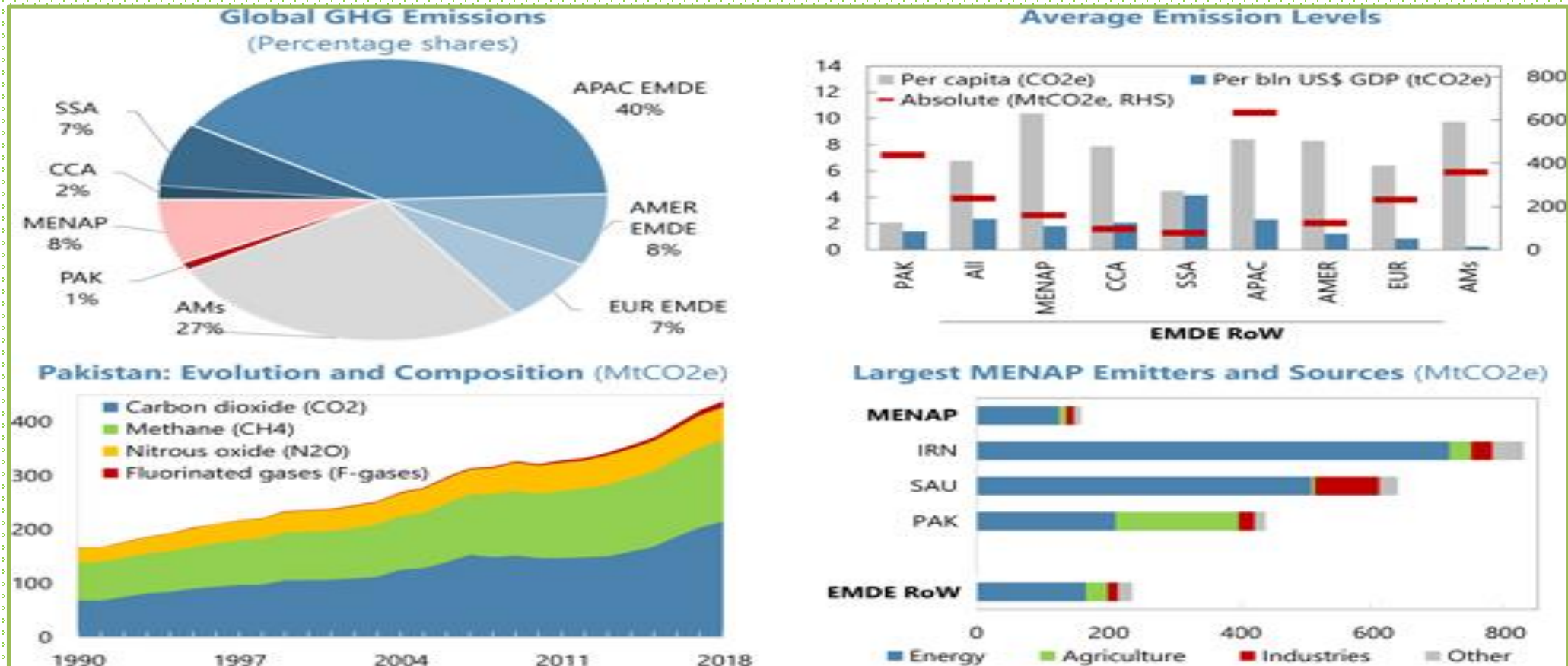
## Provinces



# Introduction: Pakistan

- Pakistan came into being on 14<sup>th</sup> August 1947
- Current population of Pakistan: 241.49 million (5<sup>th</sup> most populated country of the world)
- Annual growth rate of population: 2.55%
- Area of Pakistan: 881,913-sq. km
- Three Tiers of Government (Federal, Provincial and District)
- Agriculture: 21% of GDP and 43% of labour force, 60% contribution to export
- Highest point: K-2 (8,611 m), Lowest point: Arabian sea (0 m)
- Four seasons in a year?
- Four climatic regions or zones i.e.
  - i. High land climate:** (Northern, north-western or western highlands) mild short summers and long cold & snowy winter, altitude associated rainfall
  - ii. Low land climate:** (The climate of Indus plain in Punjab & Sindh) hot, arid and sometime extreme summers while winters are mild & cool, Monsoon rainfall during summers
  - iii. Arid climate:** (The climate of desert areas) Summers days are dry & with hot winds while evenings are cool, winters are cold, very little or scanty rainfall in monsoon or winters.
  - iv. Coastal climate:** (Coastal strip of Pakistan in two provinces) sea breeze, warm winds, high level of humidity and scanty rainfall

# Pakistan and Peers Greenhouse gas (GHG) emissions 2018



Source: <https://www.elibrary.imf.org/view/journals/002/2022/027/article-A008-en.xml#A008fig01>

# Pakistan's vulnerability to climate change

- Pakistan has always remained in first ten climate change vulnerable countries of the world.

**Pakistan not a big GHG emitter but vulnerable to climate change**



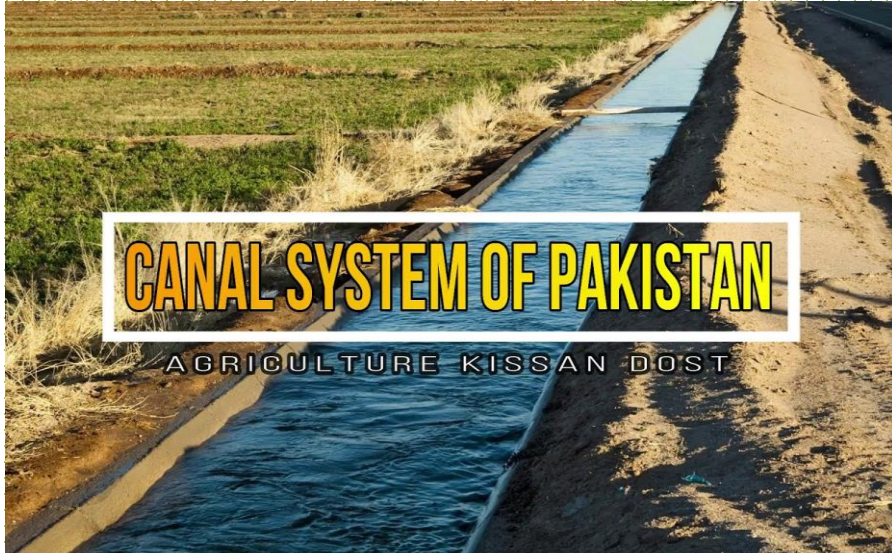
# Reasons of Pakistan's vulnerability to Climate Change

## Geography/Topography



# Reasons of Pakistan's vulnerability to Climate Change

Greater dependence on water: Irrigation & Power generation





# Reasons of Pakistan's vulnerability to Climate Change



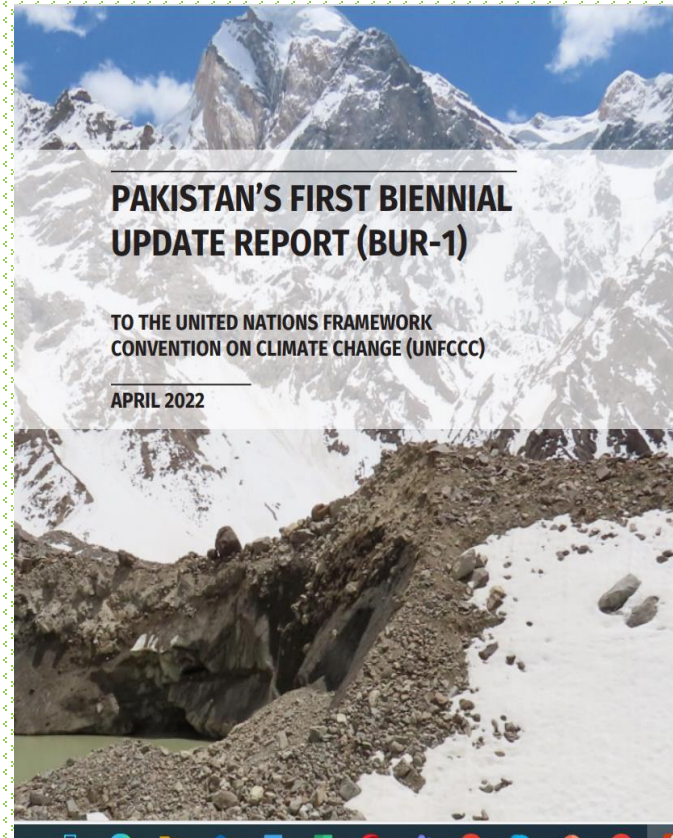
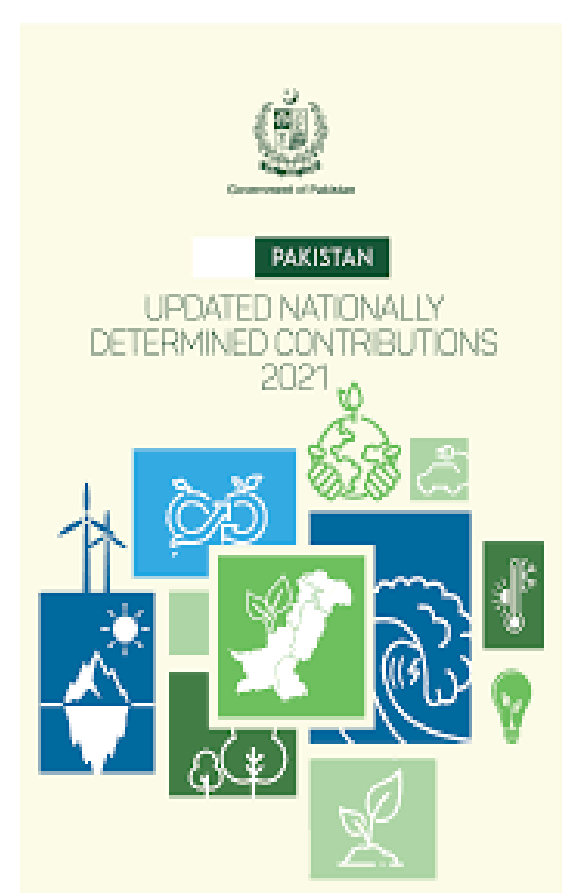
Pakistan a developing country having:

- Less climate change preparedness
- Less climate change adaptive capacity
- Lack of climate change resilient infrastructure
- Less trained human resource for tapping green climate finance

## Pakistan's strategies and platforms to achieve Net Zero

- In 2012, National Climate Change Policy, highlighting all the major sectoral issues relevant to climate change, was approved. The policy outlines two types of interventions – adaptation and mitigation – to address environmental issues
- The National Disaster Risk Reduction (DRR) Policy 2013
- Net Zero Pakistan is a national coalition that takes a sector-by-sector approach to decarbonization, a roadmap and framework through which Pakistan's private sector can accelerate its sustainability transition and deliver its net zero goals

# Pakistan's strategies and platforms to achieve Net Zero



Pakistan updated its climate pledge in 2021, to set a “cumulative conditional target” of limiting emissions to 50% of what it expects its business-as-usual levels to be in 2030.

# Pakistan's strategies and platforms to achieve Net Zero

GHG Emissions	Policy Initiatives	Plans and Targets
Energy		
<p>Biggest source of GHG emissions in Pakistan with 218.9 MT CO eq. in 2018</p>	<p>ARE Policy (2019)</p>	<p>The policy sets the specific target of at least 20% RE generation by 2025 and at least 30% by 2030</p>
	<p>NEECA Draft Strategic Plan (2020-2023)</p>	<p>Sectoral actions account for 6.4 MtCOe emissions reduction by 2030</p>
Transportation		
<p>Major energy demand sector contributing to GHG emissions of 51.3 MT CO eq. in 2018</p>	<p>NEVP 2019 for two and three wheelers as well as heavy vehicles</p>	<p>The policy sets the specific target of at least 20% RE generation by 2025 and at least 30% by 2030</p>
	<p>Switch to Euro 5 (in process) Improve Air quality</p>	<p>Goal is to lower vehicular emissions from combustion and improving urban air quality Improve air quality standards as well as monitoring in provincial capital and other major cities</p>

Agriculture	Policy Initiatives	Plans and Targets
Second highest emitting sector with 198.59 MT CO eq. in 2018	Punjab Smog Policy (2017)	Complete ban on open burning of rice stubble, solid waste and other hazardous materials Disposal of crop residue in an environmentally friendly manner
	Climate Change Policy Azad Jammu & Kashmir AJ&K (2017)	Climate Change Action Plan (2019–2030)
Industrial Processes		
Third largest emitting sector which releases 25.76 MT CO eq. in 2018	Pakistan’s National Action Plan on Sustainable Development Goal-12 (SDG-12) (2017)	Mitigation measures to encourage adoption of clean production technologies, implementation of eco-standard, incentivize carbon trading between industries to limit the production of GHGs Promote bottom up actions by private sector, and develop plans for emissions reductions form major sectors particularly cement and textile

# Pakistan's strategies and platforms to achieve Net Zero

GHG Emissions	Policy Initiatives	Plans and Targets
LULUCF		
Fourth GHG emitting sector calculated to be 24.86 MT CO eq. in 2018	National Forest Policy (2018)  Land Degradation Neutrality (LDN)	Conserve existing forests, increase tree cover through community participation, and meet international obligations related to forests  Identify policy priorities for protecting soil quality for nutrition and micronutrients and piloting approaches on LDN in various ecosystems.

## Pakistan's strategies and platforms to achieve Net Zero

GHG Emissions	Policy Initiatives	Plans and Targets
<p>Waste</p>		
<p>Ranked lowest emitting sector in Pakistan that contributes 21.72 MT CO eq. to total GHG emissions in 2018</p> <p>Methane is the major component with a share of 19.2 MT CO eq</p>	<p>Clean Green Pakistan Index (CGPI–2019)</p> <p>Banning of single-use plastics</p>	<p>Strengthening municipal service delivery by the local governments. Includes a composite index of five pillars i.e. water, sanitation, hygiene, solid waste management and plantation</p> <p>Strengthening municipal service delivery by the local governments. Includes a composite index of five pillars i.e. water, sanitation, hygiene, solid waste management and plantation</p> <p>Promote reuse and source reduction of waste</p>

# Social, economic impacts, and benefits achieved through the implementation of Net Zero policy

- The country's high share of GDP and jobs are relying mostly on sectors dependent on fossil fuel as major source of energy, shifting to renewable sources of energy will have implications
- Pakistan, will need to invest 1.5 times more than advanced economies to develop low-carbon infrastructure that supports economic growth in the journey towards achieving net zero emissions<sup>1</sup>
- Many international companies that have pledged to carbon neutrality are looking for manufacturing and supplying partners who are adopting cleaner technologies, Pakistan by adopting/implementing net zero strategy specially in sectors with high share of GDP can attract these companies.
- Natural resource based green jobs
- Billion Tree Tsunami an example of using Nature Based Solution for social, economic impacts, and benefits alongside implementing net zero targets.



# Progress and achievements of key policies for carbon neutrality measurement and monitoring system in Pakistan

- Pakistan has considerably improved and strengthened its climate governance structure over time to achieve the objectives of different policy initiatives. In order to strengthen the monitoring and surveillance process, Economic Coordination Committee (ECC) of Cabinet approved the establishment of monitoring unit in some ministries, with the responsibilities to: monitor implementation of the relevant policies and plans, set up benchmarks and key performance indicators and make public disclosure of the monitoring reports.
- After the release of the NCCP, the government prepared and released other important documents such as the Framework for Implementation of Climate Change Policy and Work Program on Climate Change Adaptation and Mitigation in Pakistan. The onus of achieving climate change objectives has been placed on the relevant ministries, agencies, and provinces, who are required to prepare their own detailed action plans to achieve their specific targets and goals.
- The implementation time frame ranks action strategies into priority action (within 2 years), short term (5 years), medium term (10 years), and long term (20 years), with identification of the relevant organizations and ministries to play a role in each.
- However, the framework does not assign clear roles and responsibilities to these organizations and, most importantly, does not itemize how coordination among these would be effective regarding institutional power and authority

# Progress and achievements of key policies for carbon neutrality measurement and monitoring system in Pakistan

- Ministry of Climate Change (MoCC) has been working towards developing standards to make the climate change monitoring process efficient and effective has launched a five-years joint project of “National Initiative for Sustainable Development Goals” to institutionalize 2030 Agenda. Periodic monitoring and evaluation of various strands of the SDGs framework remains an important priority. Baseline and targets for all SDG indicators have been determined since 2018. National data collection tools have been modified to improve data availability with a focus on equity and sustainability aspects of SDGs.
- MoCC and the Technical Working Group will be involved in this track to provide country's vision and strategies. Each organization related to GHG emissions would have an MRV unit reporting for quantifying the actual GHG reduction after implementation of mitigation actions. This track also includes the adaptation policies and actions which would be implemented across all the relevant organizations.
- Each organization will submit an Annual Report directly to the coordinating entity viz. MoCC providing information about the status of implementation mitigation and adaptation actions

