



Curtin University



Australian Government
Department of Foreign Affairs and Trade



Implementation of Nationally Determined Contributions in Pakistan: Updates, Issues and Options

WORKSHOP REPORT
2022



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List of Acronyms

ADPC	Asian Disaster Preparedness Center
AFOLU	Agriculture, Forestry and Land Use
AWD	Alternative Wetting and Drying
BUR	Biennial Update Report
CC	Climate Change
CI	Climate Infrastructure
COP	Conference of Parties
CSCCC	Civil Society Coalition for Climate Change
FFC	Federal Flood Commission
GHG	Greenhouse gas
GoP	Government of Pakistan
IPPU	Industrial Processes and Product Use
MoCC	Ministry of Climate Change
MRV	Measurement, Reporting and Verification
MtCO_{2e}	Metric ton of carbon dioxide emission
NAP	National Adaptation Plan
NBS	Nature Based Solutions
NDC	Nationally Determined Contributions
NDRMF	National Disaster Risk Management Fund
NEECA	National Energy Efficiency and Conservation Authority
NSC	National Steering Committee
PAI	Protected Areas Initiative
PES	Payment for Ecosystem Services
REDD	Reducing Emissions from Deforestation and Forest Degradation
TBTPP	Ten Billion Tree Tsunami Programme
TRC	Technical Review Committee
WG	Working Group

1. Summary of Event

Date and Venue:	17 March 2022, Marriott Hotel, Islamabad
Platform:	Hybrid (face-to-face and online)
Duration:	10:00 - 13:30 (3.5 hours)
Stakeholders:	Government and non-government organizations involved in the implementation of NDCs

2. Background and Introduction

Nationally Determined Contributions (NDCs) adopted under the Paris Agreement on Climate Change, 2015 are non-binding action plans on climate change targeted by each country as long-term goals towards reducing emissions and combating climate change impact. While NDCs form a critical piece towards climate action and pathways to a net-zero economy, it is essential to identify any current gaps as well as future needs at the country level to implement these actions effectively. Initiatives such as policy gaps and needs analysis interlinking with the updated NDC review process present opportunities for synergies in addressing these gaps and needs, through the alignment of critical processes such as the National Adaptation Plans, Sustainable Development Goals, and the Sendai Framework for Disaster Risk Reduction.

Pakistan submitted its NDC to the United Nations Framework Convention on Climate Change (UNFCCC) in November 2016, and later updated its NDC (in October 2021). This update encompasses decisions taken to enhance Pakistan's resilience and decarbonize the economy. These includes commitments to reduce the country's carbon footprint, as well as some landmark initiatives to increase adaptive capacity.

Against this backdrop, the Australian government's Department of Foreign Affairs and Trade (DFAT) has commissioned Curtin University Australia and Asian Disaster Preparedness Center (ADPC) to develop a framework for facilitating NDCs in the Indo-Pacific countries. In this connection, ADPC organized a workshop to discuss the current status of NDCs, key challenges, and capacity needs to successfully implement the NDCs over the next five years. This would eventually lead to developing a framework for how Australia can support countries in the Indo-Pacific region, in implementing their respective NDCs.

3. Workshop Objectives

The overall objective of the workshop was to understand the current status of country NDCs, the impact of climate change on key economic sectors, mitigation and adaptation targets, and the challenges faced by Pakistan in implementing NDCs.

The following were specific objectives:

- Stocktaking of Pakistan's enhanced ambition under the updated NDC (Mitigation and Adaptation)
- Discussion regarding capacity-building activities (e.g., trainings) around estimating the impact of climate change across economic sectors
- Discussion of key challenges (institutional and technical) and identification of capacity needs for implementing NDCs in Pakistan
- Identify best practices for implementation of NDCs in Pakistan (Ten Billion Tree Tsunami Project, Protected Areas Initiative, Electric Vehicles policy and renewable energy initiatives)

The workshop was expected to help draft a report on the situation analysis of NDCs for Paris Commitments that will include the following outcomes:

- i. Updates on the current status of implementation of NDCs as well as a summary of challenges and key capacity needs
- ii. Best practices for NDC implementation in Pakistan
- iii. A roadmap for enhanced climate ambition

4. Overview

i. Welcome remarks by Lt. General Nadeem Ahmad (retired), National Advisor, ADPC Pakistan

Mr. Nadeem Ahmad, National Advisor welcomed the speakers and participants, introduced the workshop objectives, and elaborated on the research project. He also provided a brief background on the Nationally Determined Contributions (NDC) of Pakistan and informed everyone regarding the updated NDC of 2021, which has higher-ambition targets than the first NDC.



ii. Opening address by Mr. Kazim Niaz, Secretary, Ministry of Climate Change

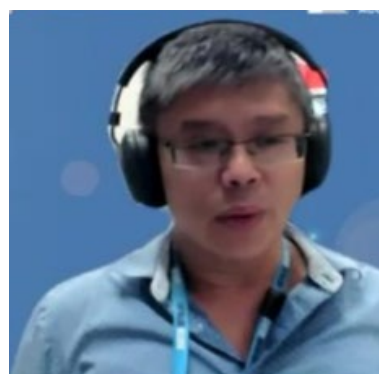
Mr. Kazim Niaz inaugurated the national workshop and informed participants that the updated NDC submitted by Pakistan to UNFCCC in November 2021 has high ambitions. He said that the process of decarbonization is a capital-intensive intervention from policy to implementation at the national level. There are links between research, academia, government, non-governmental organizations, and civil society, so as to integrate practical solutions into the process of formulating public policy.



Mr. Kazim Niaz stated that international climate finance is crucial to meeting the current NDC targets, coupled with further financial hurdles resulting from ongoing Covid-19 challenges. He highlighted his interest in the outcome of the workshop towards recommendations for policy actions for the government to undertake. Mr. Kazim Niaz acknowledged that such forums bring together and unite key stakeholders working on climate change, so as to identify solutions and recommendations. He expressed his appreciation for the Australian Government for their lead on this important issue, and ADPC and Curtin University for providing the platform with which to identify the gaps and opportunities that lie ahead for Pakistan.

iii. Opening remarks by Dr. Felix Chan, Associate Professor and Deputy Head of School of Accounting, Economics and Finance, Curtin University

In his opening remarks, Dr. Felix Chan mentioned the impacts of climate change and long-term development goals in reducing emissions to address these impacts. He further highlighted that Curtin University counts climate change research as its highest priority, and that the University's strategic plans are summarized under three priority areas: Partnerships; Planet; and People.



He remarked that this workshop is an excellent example of the kind of partnership that Curtin researchers undertake, and spoke about the importance of productive partnership and collaboration between different disciplines. He further mentioned that the key to achieving NDCs is commitment and knowledge of people and representatives in each country, and their overall contributions to the global goals committed to at Paris in 2015.

iv. Mr. Muhammad Irfan Tariq, Director General (Env./CC), Ministry of Climate Change (MoCC)

Mr. Muhammad Irfan Tariq stated that Pakistan has recently updated the National Climate Change Policy, which builds upon global agreements like the Sendai Framework for Disaster Risk Reduction and the Paris Agreement. He said that the National Adaptation Plan is being formulated, and that it will identify major interventions for adaptation. He further said that it is important to align development projects with national climate change policy.



Mr. Irfan Tariq highlighted two committees on Mitigation and Adaptation established under the lead of Mr. Ahmad Kamal and Dr. Mohazzam, to support the devising of the updated NDC. He said that the Ministry of Climate Change is in the process of establishing institutional structure for the implementation of targets as outlined under the updated NDC of Pakistan. He said that organizations like ADPC can support this process by providing technical inputs and facilitating climate finance through global multi-lateral and bilateral mechanisms, in collaboration with the Ministry of Climate Change.

v. Dr. Sardar Mohazzam, Managing Director, National Energy Efficiency & Conservation Authority (NEECA)

Dr. Sardar Mohazzam highlighted the mitigation priorities of Pakistan under the updated NDC as well as the role of the National Energy Efficiency & Conservation Authority in enhancing energy conservation efforts. He added that the Authority is working on energy efficiency to transform the energy sector and aim for a reduction in emissions.



Dr. Mohazzam added that a strategic plan for overall emission reduction, in alignment with the country's key policies, has been developed, and that it is in the process of getting approval from the board. The past three years have been spent on the institutionalization process, operational interventions and focus on implementation. He said that the NEECA Act can provide support in implementing mitigation measures in the energy, industry, power and agriculture sectors.

vi. Mr. Ahmad Kamal, Chairman, Federal Flood Commission

Mr. Ahmad Kamal said that the revised NDC consists of adaptation provisions regarding water resources, agriculture and livestock, human health, forestry, disaster preparedness, gender and biodiversity, and other vulnerable ecosystem sectors.

Mr. Ahmad Kamal said that a total of 21.65 billion USD per annum is required until 2030 to accomplish projects under the seven adaptation sectors. The focus of adaptation actions will be in three environmental areas: 1. Nature-based solutions; 2. Land use change and forestry; and 3. Community infrastructure.



vii. Mr. Bilal Anwar, Chief Executive Officer, National Disaster Risk Management Fund

Mr. Bilal Anwar remarked that the institutional procedural framework will be key to developing the potential of market and non-market-based mechanisms. He highlighted the importance of sectors such as energy, transport, waste management and forestry, as key higher emission mitigation potential for Pakistan.

Mr. Bilal Anwar spoke about Article 6 of UNFCCC, which seeks to reduce the impact of climate change by enabling society to be a part of the solution. He also presented the importance of the UNFCCC process with the aim of keeping the temperature rise well below 2 degrees Celsius and the importance of NDCs in meeting these planned targets, which have the potential to reduce half the planned emission reductions.



viii. Ms. Aisha Khan, Executive Director, Civil Society Coalition for Climate Change

Ms. Aisha Khan spoke about best practices, issues and opportunities in the implementation of NDCs. She stated that resourcing and climate finance are important for delivering NDCs, along with a comprehensive measurement reporting and verification system, which should comprise of emission inventory, climate finance flows, and governance.

Ms. Aisha Khan highlighted the three elements for NDC focus areas: evidence-based approaches for greenhouse gas emissions; an accounting mechanism for transparency; and alignment investments with national strategies. She remarked that science, society, and policy should be aligned with the strengthening of institutions, capacity, funding and advocacy, so as to meet climate ambition.



ix. Ms. Joanne Frederiksen, Australia's Deputy High Commissioner in Pakistan

Ms. Joanne Frederiksen mentioned the engagement of Australian programs in Pakistan and highlighted the importance of collective global action to address the climate change issue with enhanced cooperation.

She expressed appreciation of policy-makers, academia and civil society for being a part of the discussion to address economic prosperity while examining climate change impacts on sectors. Ms. Frederiksen further highlighted that Australia is committed to achieving net zero emission targets by 2050, and is decarbonizing its economy with new and emerging technologies, emphasizing that the country is ready to share these technologies with developing countries.



x. Dr. Habib Rahman. School of Economics, Curtin University

Dr. Habib Rahman spoke on the technical aspects of NDC and capacity-building activities towards estimating the impacts of climate change across economic sectors. He highlighted the need to focus on estimating the impact of the projects, identifying standard methodology to reduce greenhouse gas emissions.

Dr. Habib Rahman stated that in order to understand the effect of climate change through a loss and damage estimation framework, it is important to consider two variables - change in temperature and change in rainfall - which will indicate the effect on different economic sectors and further support the implementation of NDCs.



5. Recommendations and Way Forward

The following recommendations were put forth during the workshop:

- A robust Measurement, Reporting and Verification (MRV) systems needs to be set up. This should cater for strengthened greenhouse gas (GHG) inventory, devising emission trends and projections so as to support design mitigation strategies, defining sectoral adaptation priorities and identification of prioritized policy actions.
- Capacities need to be strengthened to access climate finance in priority sectors of mitigation, while adaptation remains a high priority for climate finance. The public sector expenditure on climate action needs to be updated, so as to streamline and analyze incremental public sector expenditure on climate response, including national development priorities, plans and implementation of national policy.
- Pakistan needs to devise an NDC Implementation Plan over the next eight years, with a focus on aligning NDC implementation and the Sustainable Development Goals (SDG), taking stock of the NDC, reviewing the analysis underpinning the NDC, and prioritizing policies and measures. This will ensure that Pakistan stays on course with its new NDC commitments.
- Effective implementation of commitments under NDC will also require costing of implementation options (mitigation commitments and adaptation targets). This needs to include sectoral strategies to finance NDC and scaling up climate finance. A well-defined plan needs to be prepared to meet Pakistan's net zero targets and international climate finance is needed to fill this gap.
- A dedicated fund for climate change under the National Disaster Risk Management Fund (DRFM) needs to be fully reinforced and operationalized. Currently, there appears to be a gap, which needs to be addressed on a priority basis.
- The role of the corporate sector needs to be encouraged in taking the climate agenda forward, particularly for mobilizing climate finance and to support mitigation actions.
- With the preparation, submission and commitment to the NDC and Paris Agreement, a strengthening of efforts to enhance the institutional capacities at federal and provincial levels was highlighted, with the key role of civil society organizations.
- A National Steering Mechanism needs to be established with provincial integration and civil society for stocktaking of performance against NDC commitments. It should include assessing capacities of institutions, and regulatory frameworks required for NDC implementation, and engaging stakeholders particularly civil society.
- A multi-stakeholder process should be initiated to contribute to government projects aligning NDC targets, with pivotal role for Ministry of Climate Change. Efforts needs to be strengthened to increase awareness to support implementation of the commitments.
- ADPC needs to strengthen engagement with the Ministry of Climate Change in Pakistan to support building scientific evidence, capacities, and institutional strengthening in meeting its NDC targets. The entry point could be representation of ADPC on NDC Implementation Committees being established by Ministry of Climate Change.

6. Annex: Workshop Agenda

Time	Program	Responsibility
09:30 - 10:00	Registration	
10:00 - 10:10	Welcome and Opening Remarks Workshop Introduction	Lt. General Nadeem Ahmad. Retd. National Advisor, ADPC
10:10 - 10:20	Inaugural Speech	Mr. Kazim Niaz, Secretary, Ministry of Climate Change
10:20 - 10:30	Introduction of Participants	
10:30 - 10:40	Keynote Presentation: Pakistan's enhanced Climate Ambition & National Priorities	Mr. Muhammad Irfan Tariq. Director General (Env./CC), Ministry of Climate Change
10:40 - 11:00	Pakistan's Mitigation Priorities	Dr. Sardar Mohazzam. Managing Director, NEECA
11:00 - 11:20	Pakistan's Adaptation Priorities	Mr. Ahmad Kamal. Chairman, Federal Flood Commission
11:20 - 11:40	Coffee Break	
11:40 - 12:00	Best Practices on Emission Reduction	Mr. Bilal Anwar. CEO, NDRMF
12:00 - 12:20	Best Practices, Issues and Opportunities	Ms. Aisha Khan. Executive Director, CSCCC
12:20 - 12:40	Capacity Building Activities on Estimating the Impacts of Climate Change Across Economic Sectors	Ms. Joanne Frederiksen. Deputy High Commissioner, Australian Government
12:40 - 12:50	Technical Aspects on NDC & Capacity Building Activities on Estimating the impacts of Climate Change Across Economic Sectors	Dr. Habib Rehman. Curtin University
12:50 - 13:10	Open Discussion (Implementation status: key challenges and identification of capacity needs for implementing NDCs)	Saadullah Ayaz. Climate Resilience Specialist, ADPC
13:10 - 13:15	Vote of thanks and wrap-up	Lt. Gen Nadeem Ahmed (Retd.) National Advisor, ADPC
13:15 - 14:00	Lunch	

7. Annex: Participants

S.N.	Name	Designation, Organization
1	Mr. Kazim Niaz	Secretary, Ministry of Climate Change (MoCC)
2	Dr. Muhammad Omar Raja	Deputy Inspector General of Forests, MoC
3	Ms. Anam Rathar	Technical Advisor Climate Finance, GIZ
4	Dr. Saima Shafique	National Manager (WASH), MoCC
5	Dr. Asif Sahibzada	Director EP, MOCC
6	Dr. Pir Shaukat	Scientist Global Change Impact Studies Center (GCISC)
7	Mr. Muhammad Amjad	Senior Scientific Officer, GCSIC
8	Dr. Shahbaz Mahmood	Head of Climatology, GCISC
9	Mr. Hasan Sukhera	Project Director, 10 Billion Tree Tsunami
10	Dr. Sardar Mohazzam	Managing Director, National Energy Efficiency & Conservation Authority (NEECA)
11	Mr. Sabih Haider	Head, Policy Research, NEECA
12	Dr. Irfan Yousaf	Advisor, National Electric Power Regulatory Authority (NEPRA)
13	Mr. Ahmad Kamal	Chairman, Federal Flood Commission
14	Dr. Ali Waqas Malik	Director (UN-III) Ministry of Foreign Affairs
15	Mr. Mahr Sahibzad Khan	Director General Pakistan Meteorological Department
16	Ms. Samia Akhtar	Pakistan Council of Renewable Energy Technologies (PCRET)
17	Ms. Aneeqa Ejaz	PCRET
18	Mr. Bilal Anwar	Chief Executive Officer National Disaster Risk Management Fund (NDRMF)
19	Mr. Muhammad Noman	Research Officer, National Transport Research Center
20	Dr. Bashir	Director. Climate, Energy & Water Research Institute (CEWRI) National Agricultural Research Centre
21	Dr. Ghulam Samad	Pakistan Institute for Development Economics
22	Dr. Shafqat Munir	Director Sustainable Development Policy Institute

S.N.	Name	Designation, Organization
23	Mr. Naeem Iqbal	United Nations Development Programme (UNDP)
24	Mr. Sohail Yousafzai	UNDP
25	Mr. Ali Jabir	Reporter APP
26	Mr. Kamran Naeem	Chief WASH, United Nations Children's Fund
27	Baptiste Chatre	Country Director, GIZ
28	Mr. Nadeem Ahmad	Political Section, FCDO
29	Mr. Syed Ali Hasan	Head Of Sustainability Finance, JS Bank
30	Mr. Ahmad Saeed	Head, Social and Environment Policy, Habib Bank Limited (HBL)
31	Mr. Hammad Saeed	Country Representative, IUCN
32	Ms. Aisha Khan	Chief Executive, Civil Society Coalitions for Climate Change
33	Mr. Shakeel Mukhtar	Chief Executive Officer, Pakistan Committee of the Red Cross (ICRC)
34	Mr. Muhammad Akhtar	Research Officer, MOCC
35	Mr. Hamza Tariq	Program Manager, Help in Need
36	Mr. Talal	Oxfam
37	Muhammad Kamran	National Coordinator, National Humanitarian Network
38	Mr. Hameed Akhtar	Chief, National Transport Research Center
39	Mr Khizar Javed	Deputy Chief, National Transport Research Center (NTRC)
40	Mr. Muhammad Nouman	Research Officer, NTRC
41	Sumera Javeed	Hands
42	Dr. M. Sarwat Mirza	Hands
43	Mr. Ms. Nismah Rizwan	Research Assistant SDPI
44	Mr. Irfan Tariq	Director General, MoCC
45	Mr. Ahmed Kamal	Chairman, FFC, MoWR
46	Mr. Abu Rehan	Australian Embassy
47	Ms. Aisha Khan	CSCCC
48	Ms. Joanne Frederiksen	Deputy High Commissioner Australian Embassy
49	Ms. Nazia Nur	First Secretary Development Australian Embassy
50	Mr. Jawad Rabbani	Deputy Chief Env. & CC, MOPDSI
51	Mr. Amar Najeeb	AD-IC NDMA

S.N.	Name	Designation, Organization
52	Mr. Qurban Ali	Senior Officer WWF
53	Mr. Ghulam Samad	Research Economist PIDE
54	Mr. Tahir Mahmood Awan	4th Pillar Reporter
55	Dr. Imran Khalid	Director Governance Policy WWF
56	Mr. Usman Manzoor	Program Officer, UNDP
57	Dr. Mazhar Hayat	Coordinator NAP Process, MOCC
58	Mr. Ahsan Javed	Research Fellow, SAARC Energy Center
59	Dr. Rabia Liaqat	HoD Energy System, NUST
60	Mr. Muhammad Kamran	National Coordinator, NHN
61	Lt. Gen Nadeem Ahmed (Retd.)	National Advisor ADPC
62	Brig. Sajid Naeem (Retd.)	Country Representative ADPC
63	Ms. Sana Zulfiqar	Project Coordinator, ADPC
64	Mr. Saad Ullah Ayaz	ADPC
65	Mr. Imran Muslim Zaidi	ADPC

8. Annex: Key Highlights of NDC Commitments

Pakistan submitted its NDC to the UNFCCC in November 2016 as its obligation under the Paris Agreement, in recognition of its responsibility to the comity of nations. It demonstrates the country's resolve to respect the COP21 mandate and to highlight its commitment to addressing the issues of climate change and associated challenges. Pakistan's NDC broadly articulates the major challenges faced by the country, which are likely to intensify in future as a result of climate-induced variability and natural disasters.

Under the Paris Agreement, Parties are obligated to submit a revised NDC every five years. As per Article 4(3), each Party's successive nationally determined contribution will represent progress beyond the Party's then current nationally determined contribution and reflect its highest possible ambition, addressing its common but differentiated responsibilities and respective capabilities in the light of different national circumstances; and, it is expected that every successive NDC will demonstrate a progress from the previous version, reflecting the national 'highest possible ambition'.

Pakistan's updated NDC (submitted in October 2021) encompasses some aspiring decisions taken to enhance Pakistan's resilience and decarbonize the economy. In addition—for enhanced contributions—new sectors and new gases have also been added to the updated document. Hence, Pakistan intends to set a cumulative, ambitious, conditional target of an overall 50% reduction in its projected emissions by 2030: of this, 15% would come from the country's own resources and 35% would be subject to the provision of international grant finance that would require USD 101 billion just for energy transition.

The GoP will follow the GHG emissions trajectory of 1603 million tons of carbon dioxide equivalent (Mt CO₂e.) for 2030 as communicated in Pakistan's initial NDC submission in 2016. However, there was a huge realization to reduce the GHG emissions under the Paris Agreement to limit the temperatures between 1.5 - 2°C, the GoP remains committed to reduce the emissions to the maximum possible extent. The GoP has taken a series of transformative initiatives.

Hence, Pakistan intends to set a cumulative ambitious aim of conditional and voluntary contributions of overall 50% reduction of its projected emissions by 2030, with a 15% drop below business as usual (BAU) from the country's own resources, and an additional 35% drop below BAU subject to international financial support.

So as to achieve the target under updated NDC, Pakistan aims to shift to 60% renewable energy, and 30% electric vehicles by 2030, completely banning imported coal. Moreover, Pakistan seeks to expand nature-based solutions (NbS) by implementation of 10 Billion Tree Tsunami (TBTP), Recharge Pakistan, and Protected Areas Initiative (PAI). Pakistan's emissions as per 2018 are 489.87 MtCO₂e; Billion Trees Afforestation Project (BTAP) and TBTP will sequester CO₂ around 500 Mt CO₂e by 2040, if implemented fully. Pakistan requires its scientific and technical capacities to be strengthened, to reach the set transition targets.

9. Annex: Template of NDC Implementation Plan for Pakistan

Updated NDC Commitments (2021)	Targets			Institutional Arrangement				Financial Requirements (\$)	
	Unconditional	Conditional	Sector Actions (by 2030)	National Steering Committee				Domestic Resources	International Climate Finance
				Line Federal Ministry	Supporting Federal/ Provincial Institutions	Civil Society/ Other Organizations	Development Partners		
Mitigation	50% reduction of its projected emissions by 2030	15% from the country's own resources 35% subject to provision of international grant finance	Shift to 60% renewable energy						
			30% electric vehicles by 2030						
			Completely ban imported coal						
Adaptation	Expand Nature-based Solutions		Ten Billion Tree Tsunami: sequester 148.76 MtCO _{2e} emissions over the next 10 years						

			<p>Recharge Pakistan: By 2030, the project envisages the reduction of flood risk and enhanced water recharge at six sites in the Indus Basin, building the resilience of 10 million people.</p>						
			<p>Protected Areas Initiative: Enhance protected area so it makes up 15% by 2030.</p>						



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