***Health Department***

Pakistan NDC implementation framework template Document

# Background

Pakistan is a lower middle-income country with GDP at USD 284 billion. Pakistan’s contribution to global greenhouse gas emissions is meager however the impacts of climate change faced in the country are abundant. Pakistan has been ranked 8th most vulnerable country to the impacts of climate change[[1]](#footnote-1) and adaptation is biggest domestic climate change challenge faced by Pakistan today. ND-Gain Index[[2]](#footnote-2) has placed Pakistan as the 27th least ready’ country in the world to address the impacts of climate change. The increased temperatures, varied precipitation and monsoon patterns, and increased emissions have resulted in increased frequency of extreme weather events (floods, tropical cyclones, droughts, landslides, Glacial Lake Outburst Floods (GLOFs)); consequently impacting livelihood and food security. In addition, Pakistan’s air quality has been significantly worsening accounting for PKR 62-65 Billion losses annually. Government of Pakistan (GoP) has lately taken multiple actions to respond to air pollution and climate change in an integrated manner and plans to continue the efforts through focused interventions.

## Paris Agreement and Pakistan’s Contribution

Pakistan ratified the Paris Agreement in 2016 and as an obligation under Article 4 of the Paris Agreement’s Nationally Determined Contribution (NDC) update process, the Ministry of Climate Change, Government of Pakistan (MoCC) submitted Pakistan’s updated NDCs in 2021. Aimed at achieving reduced poverty and ensuring stable economy, the updated NDCs commit to abate overall 50% of Pakistan’s projected GHG emissions by 2030. The enhanced commitment will be contributed by the shift to 60% renewable energy for electricity generation, and 30% to electric vehicles by 2030 and complete ban on the use of imported coal. The success of restoring the forest cover and conservation efforts was corroborated when the latest GHG inventory of 2018 reported an 8.7% decline in projected GHG emissions for the year 2018 (sequestration of 8.4 Mt CO2e). Encouraged by these analytics, Pakistan commits to enhance its reliance on Nature-based Solutions (NbS) underpinned by the fact that Ten Billion Tree Tsunami program (TBTTP) will alone sequester 148.76 MtCO2e if fully implemented.

To achieve these set commitments, it is estimated that transition to renewable energy will cost Pakistan US$ 101 billion by 2030 plus additional US$ 65 billion by 2040 given costs involved in completing in-progress renewable energy projects, building additional hydropower (US$50 Billion by 2030 and US$80 Billion by 2040) and transmission lines (US$ 20 billion), and phasing out coal (US$ 18 billon to buy out Pakistan’s coal power plants and US$ 13 billion to replace the energy production capacity of coal power plants with solar). Pakistan’s adaptation cost ranges of between US$ 7–14 billion per annum to 2050. Financing these initiatives is considered a challenge in NDCs and Pakistan in the NDCs commits to employing the instruments on enhanced ambition provided in Article 6 of the Paris Agreement, public-private partnerships and international climate finance opportunities including Green Climate Fund (GCF), Global Environment Fund (GEF) etc.

# NDC Implementation

## Strategic objectives

It illustrates a pathway for implementing outlined activities and articulates aspects of the enabling environment that may need strengthening to reach the targets set out in the updated NDC. To achieve this goal, following **objectives** are pursued:

* Strengthening enabling environment (e.g., policies, regulations, institutional arrangements) to overcome articulated challenges and barriers to implementing activities committed
* Identify possible sources of funding and Monitoring Reporting and Verification (MRV) for the implementation of the NDC in all economic sectors, with a view to develop a financial investment plan
* Increasing awareness among stakeholders[[3]](#footnote-3) about what is required to achieve the NDC targets by seeking technical expertise, increasing buy-in for action in new areas and building knowledge capital in key institutions

### Provincial Chapters

The 18th amendment to Pakistan’s constitution in 2010 has led to delegating more power to provinces. MoCC being the national entity, is responsible for formulating the national policies and provinces are responsible to adopt these policies into their planning and operations in different economic sectors. Since climate change is a cross sectoral subject and in some cases provincial and local capacities are limited on climate change concepts, MoCC understands the need for provinces to adopt NDCs in to a form of a roadmap with monitoring and evaluation mechanism. This activity is a subsequent action to “Priority actions, Implementation schedule and Costs” which will essentially provide a good evidence on what actions to prioritize in what sectors based on the costs and logistics and when to implement. The **provincial roadmap formulation** will follow following proposed steps:

* *Taking stock of the NDC sectors at sub-national level which will essentially cover the understanding of what targets are being committed in NDCs and how provincial level policy instruments and actions will be implemented. This will also require identification of gaps for regular stock-taking to report back to UNFCCC.*
* *Assessing the human and information capacities required for NDC implementation for prioritized actions in priority sectors which will help devise a plan to build capacity in both short and long terms.*
* *Assessing the policy instruments and institutional readiness for implementing the NDC which will cover analysis of different mitigation and adaptation policy instruments and deciding most suitable approach to attain desired NDC outcomes. This will also require an overhaul of existing practices in terms of policies as well as roles and responsibilities among different economic sectors based on addressing bottle-necks to NDC implementation.*
* *Assessing the regulatory framework to review regulatory frameworks to ensure that these can help drive NDC implementation and bring about the agreed policy objectives*
* *Mapping the financial support which will then inform national climate finance framework*
* *Monitoring progress and reporting back to MoCC on decided set of indicators consistent and captured within the national inventory, BTR reporting, and feed into the Paris Agreement’s global stocktake*

The proposed steps will require extensive stakeholder consultations to ensure larger political buy-in and ownership among various actors involved in successful implementation of the roadmap. Through literature and data collected during NDC update process, following impacts are recognized in provinces:

**Gilgit Baltistan and Azad Jammu and Kashmir**: Just like KPK, GB and AJK are responsible for the supply of electricity for the entire country from its hydro-power stations. The regions are responsible for the operation and maintenance of these infrastructures and require additional resources to convert these to climate resilient infrastructure. In addition, region is also prone to GLOFs, flash floods, avalanches, heatwaves etc.

Provinces will undergo the stages highlighted under **provincial roadmap formulation** to prioritize areas of intervention for short, medium and long-term. Based on these prioritization, MoCC will be coordinating with provinces and will regularly monitor and evaluate their progress. The quarterly progress reports submitted by provinces will also be a way for provinces to communicate their needs like finances, technical assistance etc. to MoCC to make necessary arrangements. These financial needs will then inform financial framework covered in next section.

Based on the national and sub-national situation analysis, following actions with responsibilities and targets were committed in updated NDCs:

**Table 1: Supporting Adaptation Actions & Indicators**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Objective | Supporting Actions | Lead Organization | Indicators | Priority by Provinces (H,M,L) |
| Incorporate health and environment in climate and disaster risk reduction related policies and vice versa. | Enhance research regarding impacts of climate change on health | Ministry of National Health Services, Regulations and Coordination.(MoNHSR&C)/ Provincial department | Number of research studies conducted |  |
| Increase monitoring of climate-sensitive diseases and introduce forecasting systems to increase effective planning prior to pandemic and disease outbreaks | MoNHSR&C/ Provincial department | Number of monitoring and forecasting systems developed |  |
| Establish mechanisms to facilitate collaboration between health, nutrition and energy professionals, including dialogue and collaboration between Ministries of Health, Climate and Energy as well as multi-sectoral co-operations | MoCC, GCISC and MoNHSR&C/ Provincial department | Number of multi-sectoral collaboration mechanisms operationalized |  |
| Obtain reliable data on health co-benefits of climate ambition in Pakistan to inform policies in various sectors- energy and carbon pricing  | MoCC/ Provincial department | Number of relevant studies undertaken |  |
| Adoption of One Health mechanism | MoCC/ Provincial department | One Health mechanism adopted |  |
| Develop Geographic Information System (GIS) mapping to identify climate change/health impacts hotspots and implement specified health adaptation prevention and control programs | MoNHSR&C/ Provincial department | Number of health adaptation programs implemented with support of GIS tools |  |
| Develop standardize emergency procedures and stockpiling of essential medicines in advance | NDMA& PDMAs/ Provincial department | Number of standardized emergency procedures developed |  |
| Ensure and adopt measures to improve child mortality rates and associated women's health issues | MoNHSR&C/ Provincial department | Number of measures adopted to improve child mortality rate |  |
| Adopt a Health in All Policies (HiAP) approach to energy policy | MoNHSR&C/ Provincial department | HiAP approach to energy policy adopted |  |

## **Template to be completed by Department**

**Table 2: Adaptation Actions**

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| --- | --- | --- | --- | --- | --- | --- |
| Objective | Indicators | Priority by Provinces (H,M,L) | Immediate Action/ Long term Action | Activity Cost | Timeframe | Stakeholders |
| Incorporate health and environment in climate and disaster risk reduction related policies and vice versa. | Number of research studies conducted |  |  |  |  |  |
| Number of monitoring and forecasting systems developed |  |  |  |  |  |
| Number of multi-sectoral collaboration mechanisms operationalized |  |  |  |  |  |
| Number of relevant studies undertaken |  |  |  |  |  |
| One Health mechanism adopted |  |  |  |  |  |
| Number of health adaptation programs implemented with support of GIS tools |  |  |  |  |  |
| Number of standardized emergency procedures developed |  |  |  |  |  |
| Number of measures adopted to improve child mortality rate |  |  |  |  |  |
| HiAP approach to energy policy adopted |  |  |  |  |  |
| Ensure targeted health initiatives regarding women health, hygiene and WASH services | Number of awareness sessions |  |  |  |  |  |
| Number of women trained |  |  |  |  |  |
| Number of actions operationalized |  |  |  |  |  |

# Ministry of Climate Change- Climate Change Implementation Framework

Goal: Streamline the implementation of National Climate Change Policy and Nationally Determined Contribution (Pak-NDC) to ensure that climate change is mainstreamed in the economically and socially vulnerable sectors of the economy and to steer Pakistan towards climate compatible development.

**Objectives:**

The main objectives include:

1. To pursue sustained economic growth by appropriately addressing the challenges of climate change;

2. To integrate climate change policy with other inter-related national policies;

3. To focus on pro-poor gender sensitive adaptation while also promoting mitigation to the extent possible in a cost-effective manner;

4. To build climate-resilient infrastructure;

5. To track impact of climate change on water, food and energy security of the country, and to implement remedial plans to support water, energy and food policies;

6. To minimize the risks arising from the potential increase in frequency and intensity of extreme weather events such as floods, droughts and tropical storms;

7. To develop climate-resilient agriculture and food systems for all agro-ecological zones in the country;

8. To promote country’s transition to cleaner, lower emission and less carbon intensive development;

9. To accelerate the policy coherence and integration to achieve the United Nations’ Sustainable Development Goals (SDGs) in the light of its Sustainable Development Report 2020 (SDR2020) and our Nationally Determined Contributions;

10. To strengthen inter-ministerial and inter-provincial decision making and coordination mechanisms on climate change;

11. To facilitate effective use of the opportunities, particularly financial, available both nationally and internationally;

12. To foster the development of appropriate economic incentives to encourage public and private sector investment in adaptation and mitigation measures;

13. To enhance the awareness, skill and institutional capacity of relevant stakeholders;

14. To promote tree plantation, conservation of natural resources, nature-based solutions and long- term sustainability

15. Improve NDC planning, policy, strategy, and legislation

16. Strengthen an enabling environment for NDC implementation

17. Accelerate the policy coherence and integration to achieve the United Nations’ Sustainable Development Goals (SDGs) in the light of its Sustainable Development Report 2020 (SDR2020)

18. Enhance NDC measurement, reporting and verification, and transparency of climate action.

# Implementation targets and priority objectives

The implementation framework presents the targets and objectives of NCCP and NDC divided under three broad categories of adaptation, mitigation and cross-cutting issues. The framework is informed by the NCCP and NDCs where the localized actions to achieve these objectives and reporting mechanisms will be decided by provinces.

**Sectors:**

1. **Adaptation**
* **Water Resources**
* **Agriculture and Livestock**
* **Human Health**
* **Forestry**
* **Biodiversity**
* **Other Vulnerable Ecosystems**
* **Disaster Preparedness**
1. **Socio Economic Measures**
* **Gender**
* **Youth**
1. **Mitigation**
* **Energy Generation**
* **Energy Efficiency and Energy Conservation**
* **Transport**
* **Urban Planning and waste management**
* **Industries**
* **Agriculture and livestock**
* **Caron Sequestration and forestry**

## **Template to be completed by Department**

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| --- |
| **Legend** |
| Pak-NDC 2021 Stop |
| NCCP 2021Stop |
| Immediate In 2 years |
| Medium-term In 5 years |
| Long-term In 10 years |

| **Sectors** | **Objectives****(NCCP and NDCs 2021)** | **Stakeholders** | **Activities*****(Options for the provinces to select from or they can add more relevant activities )*** | **Indicators** | **Timeline** | **Tentative Cost** |
| --- | --- | --- | --- | --- | --- | --- |
|  | **Immediate** | **Medium-term** | **Long-term** | **Implementation** | **Performance tracking**  | **Reporting** |  |  |  |  |
| **Adaptation** |  |  |  | **IMMEDIATE, MEDIUM-TERM AND LONG-TERM** |  |  |  |
| **Human Health** | Assess the health vulnerabilities of communities and build adaptive capacities Stop | Upgrade and extend disease outbreak monitoring and forecasting systems Stop Stop |  |  |  |  | **Immediate:*** Assess the country’s vulnerability including identifying those populations and regions that are most vulnerable to vector borne diseases.
* Identify the vulnerable population groups with each urban and rural locality that might be directly affected by natural calamities like floods and cyclones.
* Establish baseline conditions of human health risk of current climate variability and recent climate change.
* Design health systems out-reach programs that could reach the designated areas for quick emergency health services.
* Built effective infrastructures and means of communications to quickly counter any epidemic spreading due to climate change induced natural hazard.
* Research climate change and prevalence of diseases, food security and malnutrition.
* Development and implementation of a Heatwave Management Plan
* Conducting an in-depth study to identify shortcomings in climate change-induced vulnerability assessment in Pakistan as well as the least attention to vulnerable systems, vulnerable communities, causes, environmental insecurity, funding, the adaptive capacity of systems, and implementation priority.
* The study may be followed by solutions to identified radical issues for adaptation.

**Medium-term:*** Identify financial resources and personnel training facilities within new national health plans, particularly, focused on climate change related health hazard requirements.
* Estimate the possible additional burden of adverse health issues (future risk) likely to change over the coming decades due to climate change.
* Assess the current capacity of health and other sectors to manage the risks of climate sensitive health outcomes.
* Design health plans that not only have out-reach components, but are able to provide first aid medical help to a large number of injured and sick during a natural disaster.
 |  |  |  |
| Adoption of One Health mechanism Stop | Adopt a Health in All Policies (HiAP)approach Stop |  |  |  |  | **Immediate:*** National Environmental Quality Standards for Indoor air quality.
* Design and build emergency vaccines and medication storage facilities near each DCO’s office to be used in case of injuries and epidemics due to natural hazard.

**Medium-term:*** Collaborative activities of Health, equity and sustainability with all ministries for all development projects
* Intersectoral collaboration and engaging stakeholders for revision of policies.
* Consultations around HiAP for all new policies and plans.

**Long-term:*** Development of a One Health Unit at the Ministry of Climate Change to coordinate these activities.
 |  |  |  |
| Inform, sensitize, educate and train health personnel and the public about climate change related health issues Stop | Obtain reliable data on health co-benefits of climate action to inform policies in various sectors- energy and carbon pricing Stop |  |  |  |  | **Immediate:*** Design communication strategies to inform the general public of climate change related health hazards and its geographical span, particularly, alerting health personnel in the vicinity.
* Use media and civil society organizations to educate and sensitize public as well as health personnel to the climate change related health issues particularly arising during the natural disasters.
* Conduct assessments on the impacts of climate change on vector/waterborne and nutritional diseases.

**Medium-term:*** Surveillance systems for climate sensitive diseases in areas facing significant fluctuations in temperature and rainfall.
* Air pollution monitoring technologies (research for indigenous technology development and innovation).
 |  |  |  |
| identifying technology andinfrastructure options to improve resilience in the Water, Sanitation and Hygiene (WASH) sector Stop Stop | Water and sanitation safety plans forrural and urban areas Stop Stop |  |  |  |  | **Immediate:*** Smart infrastructure promotion and development
* Harnessing the power of [nature-based solutions](https://iwa-network.org/projects/nature-for-water-and-sanitation/) (nature-mimicking systems for stormwater management, water reuse and recycling, wastewater treatment).

**Medium-term:*** Design and build emergency vaccines and medication storage facilities near each DCO’s office to be used in case of injuries and epidemics due to natural hazard.
* Keep mobile water purification facilities ready to be shifted to disaster stricken areas at short notice.
* Develop and promote household water treatment options.
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1. GermanWatch Climate Risk Index 2021 Available at: https://germanwatch.org/en/19777 [↑](#footnote-ref-1)
2. ND-Gain Index Available at: https://gain-new.crc.nd.edu/country/pakistan [↑](#footnote-ref-2)
3. Public, private, donors/investors, academia, development banks, etc. [↑](#footnote-ref-3)