



**Ministry of Climate Change and Environmental Coordination**

# **PROVINCIAL INPUT REPORT KHYBER PAKHTUNKHWA**

National Adaptation Plan for Pakistan



**WATER**



**AGRICULTURE**



**URBAN**



**ECOSYSTEMS**



**FINANCIAL**

**“Adapting Today for Sustainable Tomorrow”**

**31 January 2024**



## Report on KP Awareness and Training Workshop for National Adaptation Plan Process in Pakistan with the support GIZ



This report was commissioned by the GCF PAK-RS-003 Project “Building capacity to advance National Adaptation Plan Process in Pakistan” which aims to support the Federal Ministry of Climate Change and Environmental Coordination (MOCC&EC) and its partners at Federal and Province levels to implement the National Adaptation Plan (2023). The Delivery Partner is the United Nations Environment Programme (UNEP).

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**Khyber Pakhtunkhwa - Provincial Awareness and Training  
Workshop for National Adaptation Plan Process in  
Pakistan- January 31, 2024, Serena Peshawar, Pakistan**



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## **Provincial Awareness and Training Workshop in Khyber Pakhtunkhwa for National Adaptation Plan Process in Pakistan**

### **Executive Summary:**

The Urgency of addressing Climate Change in Khyber Pakhtunkhwa calls for immediate climate action to formulate Provincial Adaptation Plan.

This report delves into the critical aspects of the awareness workshop emphasizing the need for addressing climate change in Khyber Pakhtunkhwa (KPK). It outlines a strategic pathway for the formulation of a Provincial Adaptation Plan.

The interactive sessions highlight urgency of climate action by taking into account the unique vulnerabilities of KPK and emphasizing the imperative for collaborative efforts among stakeholders.

The report provides a comprehensive analysis of stakeholder inputs and key entry points for provincial actors in the National Adaptation Plan (NAP), issues and solutions in vulnerable sectors, and a detailed strength, weakness, opportunity and threat (SWOT) analysis.

The way forward section offers practical recommendations to guide the formulation of effective adaptation plans at provincial and local level governments for sustainable and resilient development in Khyber Pakhtunkhwa.



## **List of Abbreviations:**

BMZ - Bundesministerium für wirtschaftliche Zusammenarbeit und Entwicklung

BHVs - Biodiversity Hotspots Vulnerability Assessments

CBOs – Community Based Organizations

CLIMADA: Climate Impact Modeling Application for Disaster Assessment

CRCC - Climate Resilient Construction Codes

CWC-IMS - Center for Water Conservation - Institute of Management Sciences

CZU - Czech University of Life Sciences Prague

District C&W (C&WD) - District Communication and Works Department

EBAs – Ecosystem Based Solutions

ECA: Extreme Climate Index for Agriculture

EPA - Environmental Protection Agency

FWD - Forests, Wildlife, and Fisheries Department

GCISC - Global Change Impact Studies Centre

GIZ - Deutsche Gesellschaft für Internationale Zusammenarbeit (German Agency for International Cooperation)

GIZ-SAR - German Technical Cooperation - South Asia Region

GLOF-I&II- Glacial Lake Outburst Floods - Phase I & 2

ISIMIP - Inter-Sectoral Impact Model Intercomparison Project

IPCC - Intergovernmental Panel on Climate Change

IRSF - InsurResilience Solutions Fund

IUCN - International Union for Conservation of Nature

JICA - Japan International Cooperation Agency

KPCSW - Khyber Pakhtunkhwa Commission on Status of Women

LG&RD - Local Government and Rural Development

MoCC - Ministry of Climate Change

NAGP-UNDP - National Agriculture Growth Programme - United Nations Development Programme

NAP-UNEP - National Adaptation Plan - United Nations Environment Programme

NBS – Nature Based Solutions

NFTPs - Non-Timber Forest Products

PEDO - Pakhtunkhwa Energy Development Organization

PFM - Public Financial Management

P&DD-KP - Planning and Development Department - Khyber Pakhtunkhwa

PHED - Public Health Engineering Department

PIK-Germany: Potsdam Institute for Climate Impact Research

PMU – Project Management Unit

SAR - Strengthening Climate Adaptation and Resilience

SBP – State Bank of Pakistan

SRSP - Sarhad Rural Support Program

SSPs - Shared Socioeconomic Pathways

SWOT - Strengths, Weaknesses, Opportunities, Threats

RCPs - Representative Concentration Pathways

UNCDF - United Nations Capital Development Fund

UNFCCC - United Nations Framework Convention on Climate Change

UNDP - United Nations Development Programme

WASA - Water and Sanitation Agency

WASH - Water, Sanitation, and Hygiene

WDD - Women Development Department

WDOs – Women Development Organizations

WWF-Pakistan - World Wide Fund for Nature – Pakistan

WWOs – Women Welfare Organizations

## Acknowledgement:

We extend our heartfelt gratitude to all participants, stakeholders, and organizers who contributed to the success of the workshop on climate change NAP process in Khyber Pakhtunkhwa province. Your dedication, expertise, and valuable insights have been instrumental in shaping discussions, identifying key issues, and proposing actionable solutions to address climate resilience in this region.

Heartful thanks to UNEP – NAP Islamabad, Ministry of Climate Change, and Planning and Development Department – Government of Khyber Pakhtunkhwa for hosting and facilitating the workshop, and providing a collaborative platform for knowledge sharing and stakeholder engagement. We also acknowledge the support and cooperation of government agencies, international organizations such as GIZ team, non-governmental organizations, academicians, local media ‘Mashriq TV’, and community representatives whose active participation enriched the dialogue and contributed to the formulation of innovative strategies.

Your commitment to addressing climate change impacts, fostering sustainable development, and building resilience in Khyber Pakhtunkhwa is truly commendable. We look forward to continued collaboration and collective efforts towards implementing the outcomes of this workshop and creating a more resilient and sustainable future for our communities.

Thank you once again for your invaluable contributions and commitment to climate action.

Special Gratitude for;

**The NAP Team:** With special gratitude to Project Management Unit (PMU-UNEP) dedicated team of experts and professionals especially Mr. Arshad Samad Khan and Mr. Khan Ghulam whose guidance and meticulous inputs have helped in accomplishing this input report, ensuring that it reflects the aspirations and resilience objectives of Khyber Pakhtunkhwa Province.

**The Ministry of Climate Change:** By acknowledging the crucial help from focal points of concerned ministry at the federal level, DG Environment - Mr. Asif Sahibzada for his crucial help during and after workshop by highlighting critical role of the MoCC in gathering concerned provincial officials on one platform and supporting provinces to advance NAP process in the wake of regional climatic challenges and risks.

**International Organizations:** With appreciation for the engagement of the international organizations’ local offices, in particular the UNEP and GIZ-SAR project team for the inputs highlighting NAP document and NAP project, key assessments, risk management, integration and implementation aspects of the NAP to consider vital information validation for the successful implementation of NAP process.

This collective effort has laid the foundation for a robust and inclusive NAP process in Khyber Pakhtunkhwa province that will enable provincial and local governments to effectively formulate the adaptation plans to address the challenges posed by climate change, protect their vulnerable communities and ecosystems, and build a sustainable and climate-resilient future.

We look forward to continued collaboration and partnership as we move forward with the implementation of the NAP, turning it into impactful actions that benefit our country and people.

Thank you for your unwavering commitment and support to a climate-resilient Pakistan.

Waseem Gulzar,

Climate Change Adaptation Expert

NAP – UNEP, Pakistan,

Date: 19 February, 2024

## Introduction:

The vulnerability of Khyber Pakhtunkhwa (KPK) to climate change necessitates a comprehensive approach to adaptation, involving key provincial stakeholders in the National Action Plan (NAP). The report aims to delve into key sessions of the workshops pertinent to NAP implications in the province, climate challenges and solutions, efforts of federal ministry and provincial line departments with group-based inputs of the provincial actors.

It further explains specific entry points for provincial actors in the NAP components based on inputs of the provincial stakeholders. The stakeholder groups identify issues and solutions within vulnerable sectors, and conduct a nuanced SWOT analysis for a clearer understanding of KPK's climate resilience landscape. Furthermore, the report offers a strategic way forward for the formulation of provincial adaptation plans.

## 1. Awareness and Training Event:

The Provincial Awareness and Training Workshop for National Adaptation Plan – Pakistan in Khyber Pakhtunkhwa province was convened in Serena Hotel, Peshawar on 31<sup>st</sup> January, 2024. The agenda is attached in Annex-1. The NAP process is part of the ongoing UNEP NAP-Project, supported by the Ministry of Climate Change.

**Provincial Collaboration** - Mr. Asif Sahibzada (DG Environment, MoCC) appreciated the Planning and Development Department (P&DD), Government of Khyber Pakhtunkhwa for the support, and stressed the importance of involving provincial, district and local stakeholders in the adaptation planning process. Partnering with the P&DD - KPK ensures effective implementation at district and local government levels.

**Chief Guest** - Dr. Syed Sarfaraz Ali Shah, Advisor to Chief Minister (P&DD), Govt of KPK chaired the plenary session emphasizing role of the line department in Khyberpakhtunkhwa development while engaging with all government departments to advance NAP process in the province.

**Participants** - Over 70 representatives of; (i) Provincial line departments - Agriculture Department, CRCC, District C&WD, Education Department, EPA, Food Department, FWD, Health Department, KPCSW, LG&RDD Swat, PEDO, P&DD-KP, PHED, Population Welfare Department, SRSP, Tourism Department, Transport Department, and Wildlife Department; (ii) Academia - CWC-IMS, SBBWU, and University of Peshawar; (iii) International organizations and NGOs - GIZ, GIZ-SAR, Khwendo KP, Lasoona Organization, NAGP-UNDP, NAP-UNEP, Sabawon, UNCDF, and WWF-Pakistan; and (iv) Local media – Mashriq Tv participated in this all day workshop. The list of participants is attached in Annex–2.

### 1.1 Aim:

The workshop aimed to raise awareness and build capacity among all major provincial stakeholders regarding climate change adaptation. It focused on the National Adaptation Plan (NAP) process, integrating adaptation measures into development planning. Key points covered included climate risks in KPK, accessing climate finance, and the need for resilience-building. The workshop emphasized involving provincial and local stakeholders, and translating NAP into regional actionable strategies for climate action and resilience in the province. Two major objectives lead the workshop sessions to an outcome and wayforward.



## 1.2 Objectives:

- 1- **Raise Awareness:** Aware the participants about climate change adverse impacts and beneficial strategies while informing the stakeholders about the NAP developed for Pakistan by MoCC&EC.
- 2- **Capacity Building:** Educate and train participants on integrating climate change, understanding climate financing, with a focus on developing adaptation plans at provincial and local levels.

## 2. Introductory Session:

The introductory session was convened to welcome and introduce 70 participants representing various provincial government departments, civil societies and international development organizations. It was followed by the chief guest and other venerable guests.

1. **Advisor P&DD** - This session was convened to highlight views of the chief guest Dr. Syed Sarfraz Ali Shah, Advisor, Planning and Development, Department, who remarked about climate change developments, urgencies and emphasis to expedite efforts to find solutions and nature-based resolve in order to adapt to challenges such as glacial melt and floods in the Khyber Pakhtunkhwa region.
2. **Secretary P&DD** - Secondly, Additional Chief Secretary Planning and Development Department ‘Mr. Syed Imtiaz Hussain Shah’ highlighted efforts of the provincial government department to coordinate and bring stakeholders together to discuss planning and financing options for adaptation related activities and plans, which he solicited to render coordination assistance in future for NAP implementation in the province by joining hands with district and local governments.
3. **Director General Environment** - ‘Mr. Asif Khan - Ministry of Climate Change’ further elaborated Federal government efforts and fundamental support for adaptation planning in provinces by providing auxiliary and technical support to line provincial departments and local governments in order to develop local adaptation plans and interventions that could build up knowledge base, sharing and monitoring at various levels.
4. **National Coordinator NAP** – explained the technicalities related to NAP process in essence with international conventions and frameworks, Pakistan climate challenges and needs, financing of adaptation efforts and agenda to build capacity of stakeholders at all levels during the project timeline.

## 3. Formal Sessions:

The Formal session consists of six individual sessions convened by the resource persons and experts from NAP-UNEP team, GIZ-BMZ team, and Climate Resourcing Coordination Center (CRCC) in coordination with P&DD team. The details are given below;

### 3.1 Session 1: Advancing NAP Project in Pakistan

National Coordinator (NAP-UNEP), Mr. Arshad Samad Khan initiated the formal session and explained the NAP project in Pakistan. He presented that the NAP Project Pakistan aims to build capacity to advance the National Adaptation Plan (NAP) process in Pakistan.

1. **Purpose** - of the presentation was to inform the audience about the progress and achievements of the NAP Project Pakistan, and to highlight the challenges and opportunities for advancing the NAP process in Pakistan. The project presentation outlined the objectives, outcomes, and activities of the project. The presentation also aimed to solicit feedback and suggestions from the stakeholders and partners involved in the project. The presentation covered the following aspects of the project:

**2. NAP Project Objectives** - The objectives of the project, which are to reduce vulnerability, facilitate integration of adaptation into development, and mobilize resources for adaptation. They aim to reduce vulnerability to climate change and facilitate the integration of adaptation into development processes in Pakistan.

**3. NAP Process** - The NAP process is a framework for countries to plan and implement adaptation actions to reduce vulnerability and increase resilience to the adverse impacts of climate change. It highlights the current status of the NAP process in Pakistan that includes the formulation and approval of the NAP document by the MoCC and Cabinet respectively, review of climate change impacts and vulnerabilities, the stakeholder mapping, and engagement strategy and plan, the policy and legal framework, the climate risk and vulnerability assessment, and the climate change impact storylines prepared by national and international climate experts respectively.

**4. Completed Activities** - involve such as national inception workshops, stakeholder consultations, consultative and validation workshop, recruitment of staff, finalization of NAP document, and mapping of adaptation interventions by other organizations.

**5. Planned Activities** - The ongoing and planned activities involve; awareness-raising events, updating website, developing proposals, costing of adaptation measures, preparation of provincial and district adaptation plans, integration of adaptation into development processes, consultations with provincial P&DD, capacity building, communication strategy, resource mobilization strategy, economic appraisal, monitoring and reviewing system, and documentation of lessons learned. The list of the planned activities for the NAP project, includes developing national, provincial, and district adaptation plans, capacity building, resource mobilization, project proposal preparation, adaptation integration, and monitoring and reviewing.

**6. NAP Project Focus** - is to support the preparation of national, provincial, and district adaptation plans, capacity building, resource mobilization, project proposals, integration of adaptation into development, and monitoring and reviewing system. It summarizes the main areas of focus for the NAP project, such as climate risk and vulnerability assessments, training and awareness-raising, costing of adaptation needs, project proposals and concept notes, adaptation integration, and monitoring and reviewing.

## **3.2 Session 2: National Adaptation Plan Document: A National Guideline for Adaptation Planning**

**1. NAP A Strategic Framework** - The Project Officer (NAP-UNEP), Mr. Khan Ghulam presented the National Adaptation Plan for Pakistan. It is a strategic framework to address the challenges and risks posed by climate change. He explained the need, vision, goal, guidelines, process, and institutional arrangements for the formulation and implementation of the NAP. The NAP also outlines the adaptation strategies and sectoral priorities for six vulnerable sectors: agriculture-water nexus, urban resilience, natural capital, human capital, disaster risk management, and gender, youth, and social inclusion.

**2. Awareness and Training** - The purpose of the presentation was to raise awareness and provide training for provincial stakeholders in Khyber Pakhtunkhwa province, which is one of the most climate-vulnerable regions in Pakistan. It aimed to inform the stakeholders about the NAP's objectives, benefits, and opportunities, as well as to solicit their feedback and inputs for the NAP's implementation and monitoring. It further highlighted the role and responsibilities of the provincial and local governments, as well as the key advisory and implementing bodies, in the NAP process.

### **3.2.1 NAP Key highlights:**

#### **1. Project Background:**

He also highlighted the NAP salient features for the awareness of the broader audience covering government, civil society, international organizations, and community representatives. This presentation serves as a vital step toward enhancing climate resilience in KPK by empowering stakeholders with knowledge and actionable strategies for addressing climate-induced; by covering following aspects;

## **2. Content Covered:**

- **Climate Risks and Vulnerabilities in KPK** - Participants were informed about the specific challenges faced by the province due to climate change.
- **Accessing Climate Finance** - Presentations highlighted approaches and methodologies for accessing international climate finance.
- **Integration into Development** - Emphasized the need to integrate adaptation planning into development processes.

## **3. Key Messages:**

- **Ownership** - Involvement of district representatives, local governments, and community leaders is crucial for ownership of adaptation interventions.
- **Resilience Building** - Given current natural disasters in KPK, resilience-building efforts are essential for communities, systems, and infrastructure.

## **4. Implication:**

- **District-Level Plans** - Additional Chief Secretary suggested developing adaptation plans at the district level.
- **Action Beyond Documentation** - Advisor P&DD emphasized that the NAP should serve as a platform for tangible actions.

# **3.3 Session 3: Supporting Implementation of National Adaptation Plan**

GIZ team presented the key achievements of the project on Strengthening Climate Adaptation and Resilience (SAR). Its implication involves supporting of NAP implementation.

**1. NAP Implementation** - The presentation is about the project “Supporting the Implementation of the National Adaptation Plan (NAP) in Pakistan”, which is commissioned by the German Federal Ministry for Economic Cooperation and Development (BMZ) and executed by the Ministry of Climate Change & Environmental Coordination (MoCC&EC) in collaboration with the Planning Departments of Khyber Pakhtunkhwa and Punjab.

**2. Implementation Process** - The objective of the project is to strengthen the process of implementing the NAP at the national level and in selected regions of Pakistan, focusing on three outputs; i) strengthening institutional capacities at the federal level, ii) strengthening technical capacities of P&D authorities in KPK and Punjab, and iii) piloting of climate-resilient projects at the regional and local level.

**3. Key Achievements** - The presentation provides an overview of the NAP, the key achievements of the project so far, the focal areas and activities of each output, and the contribution of the project to the global 2030 Agenda and the Sustainable Development Goals (SDGs). It also outlines the next steps for the project, which include separate consultations with the government partners at the federal and provincial levels, and the specific sectors in KPK and Punjab.

**4. Implications** - The purpose of the presentation was to raise awareness and provide training for the provincial stakeholders in KPK, especially the Planning Department and the relevant sectors, on the NAP implementation process, the sectoral guidelines for project preparation, the climate proofing of infrastructure investments, and the demonstration projects of climate resilience and gender sensitivity. The presentation aimed to enhance the capacities and skills of the provincial stakeholders to plan and implement climate-resilient and gender-equitable projects in line with the NAP.

### 3.4 Session 4: Climate Risk Management

Dr. Muhammad Abid from GIZ Pakistan shed light on climate risk assessments and its linkage to NAP. GIZ is working in tandem with GCISC to develop the climate scenarios. The projections were presented to highlight climate imminent risks and management to avert loss and damage.

**1. Supporting NAP** - The presentation is about how comprehensive climate risk management may support the implementation of the National Adaptation Plan in Pakistan, with a focus on the Khyber Pakhtunkhwa province. The presentation covers the following topics:

**2. Need for CRM** - The adverse impacts of climate change on Pakistan and the need for comprehensive climate risk management to avert, minimize and address loss and damage, as stated in the Paris Agreement Article 82.

**3. GIZ Approach** - on comprehensive climate risk management, which consists of three steps: climate risk profiles, deep dive/ detailed risk assessments, and mainstreaming.

**4. Country Climate Risk Profile** - for Pakistan, which summarizes the existing information on current and projected climate conditions and sector-specific climate risk assessments for water resources, agriculture, infrastructure, ecosystems and human health, based on ISIMIP data and scenarios.

**5. KPK Risk Profile** - The sub-national climate risk profile for KPK, which is being developed jointly with the Global Climate Change Impact Studies Centre (GCISC) using an integrated approach combining the RCPs and SSPs, and covering the same sectors as the country profile.

**6. Risk Assessment** - The detailed climate risk assessments in KPK, which are being carried out for agriculture drought, hydrological drought, meteorological drought, floods, health, and economics of climate adaptation, using the ECA methodology and CLIMADA modeling, in partnership with InsurResilience Solutions Fund, PIK-Germany, CZU, GCISC and relevant public actors.

**7. Awareness Raising** - The knowledge exchange and awareness raising activities, such as summer school/ exchange visits, networking, expert working groups, capacity building/ trainings, and digitalization/ tool development.

**8. Progress Sharing** - The purpose of the presentation was to share the findings and progress of the GIZ project on climate risk assessment and management for adaptation to climate change in Pakistan, and to solicit feedback and validation from the provincial stakeholders in KPK. The presentation also aimed to raise awareness and build capacity on the concepts and methods of comprehensive climate risk management, and foster collaboration and learning among the different actors involved in the implementation of the NAP.

### 3.5 Session 5: Integrating Climate Change into Development Planning

**Integrating Climate Change** - Mr. Sohail Malik as a Climate Finance Expert from the Climate Resourcing Coordination Center (CRCC) outlined the integration of climate change into development planning, with a focus on adaptation projects. The purpose of the presentation was to raise awareness and provide training for provincial stakeholders in Khyber Pakhtunkhwa province on; how to plan and develop bankable adaptation projects that can access climate finance from various sources. The presentation covers four main topics;

**1. Why to integrate climate change into sustainable development planning** - explains the need to consider the current and future impacts of climate change on sectors and policies, and to align the adaptation actions with the national and provincial plans and strategies. It also highlights the benefits of integrating climate change into the public sector development programme and the manual for development projects.

**2. What is an adaptation project** - defines an adaptation project as one that contributes to the global goal of enhancing adaptive capacity, strengthening resilience and reducing vulnerability to climate change, as well as



the IPCC recommendations for adaptation planning. It also outlines the criteria for demonstrating the climate rationale and the alignment with the climate fund investment criteria, such as paradigm shift, impact potential, country ownership, needs of recipients, efficiency and effectiveness, and sustainable development.

**3. Climate rationale and funds' investment criteria** - elaborates on how to develop the climate rationale, which is the overarching narrative of the adaptation proposal that shows how it addresses climate change and meets the funds' investment criteria. It also provides examples of how to apply the criteria to different types of adaptation projects, such as agriculture, forestry, water, urban and cross-sectoral.

**4. Planning and developing a bankable adaptation project** - The process describes the steps and tools for planning and developing a bankable adaptation project, from identification to feasibility study to a proposal. It also emphasizes the importance of data, stakeholder engagement, alignment with national plans and climate strategies, and monitoring and evaluation.

**5. Group Exercise** – An hour group work exercise, where the participants were divided into five working groups based on the vulnerable sectors mentioned above. The objective of the group work was to identify the specific challenges and barriers and their possible solutions in developing bankable adaptation projects for Khyber Pakhtunkhwa province. Each group was expected to brainstorm for 30 minutes and make a presentation and discussion on the outcome to the ministry panel.

### 3.6 Session 6: Climate Financing

**1. Understanding Climate Finance** – Mr. Sohail Malik – CRCC explained climate financing. The presentation is about understanding climate finance, which is the local, national or transnational financing for mitigation and adaptation actions that address climate change. It explains the financial mechanisms under the UNFCCC and other multilateral institutions, as well as the domestic sources and funds for climate finance. It also discusses the challenges and opportunities for accessing climate finance in the global and local contexts.

**2. Building Capacity** - The purpose of the presentation was to raise awareness and build capacity among provincial stakeholders in Khyber Pakhtunkhwa province, Pakistan, on the concepts and sources of climate finance, and how to access and utilize them effectively. The presentation aimed to enhance the knowledge and skills of the participants on climate finance, and to foster collaboration and coordination among different actors and sectors involved in climate action.

**3. Financing Essentials** - The presentation is divided into six sections: (i) What is climate finance, (ii) What is the financial mechanism, (iii) Climate finance in context, (iv) Climate finance contributors, (v) Accessing climate finance, and (vi) Conclusions. Each section provides an overview of the key concepts, facts, figures, and examples related to climate finance, as well as key questions and exercises for the participants to engage and interact. The presentation also includes some references and resources for further learning and action.

### 3.7 Sessions Outcome:

**1. Output Based** - The aforementioned sessions can be turned into various outputs from inputs of detailed question answer session between practitioner, participants and climate experts during and after each session.

**2. Inclusive Debate** where an informed debate accentuated regional vulnerabilities and climate challenges in Khyber Pakhtunkhwa province, raised discussion on NAP provincial and local level objectives, understanding of challenges, discussion on existing efforts, solutions and prospective adaptation interventions, implementation challenges and overcoming reluctance.

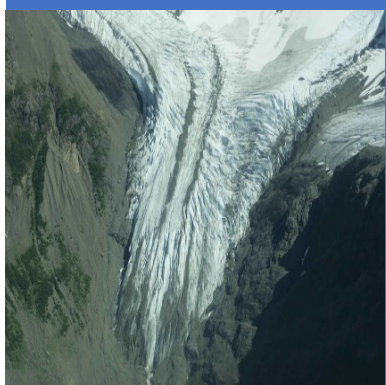
**3. Using Inquisitive Approaches** - through various practical approaches to abridge gaps and accessing finance, key interlinkages of NAP with policies, transforming strategies into tangible actions, and reviewing and evaluation of impacts.

**4. Modes and Methods** - The modes of communication and materials used were delivered to the target audience keeping in view their needs, preparation and expected outputs and outcomes in terms of developing local adaptation plans, and formulation of strategies and approaches to enhance adaptation funding through interactive public financing, public private partnerships, and involving private sector into climate investment opportunities for developing technological solutions.

**5. Outcome** - A detailed overview of the outcome of the workshop is reflected below with a complete session overview on risks and vulnerabilities, NAP, and climate financing and discussion on developing funding opportunities in the province through a comprehensive collective effort.

**6. Group Activity** – Workshop ended with a comprehensive group session. Various government officials of line departments representing core vulnerable sectors highlighted major challenges such as climate vulnerabilities and measures such as interventions and required solutions, as proved by empirical evidence.

## Climate Challenges Key Highlights



### 4. Khyber Pakhtunkhwa Climate Challenges

#### 4.1 Recent Climate Calamities:

The province of Khyber Pakhtunkhwa faces significant climate challenges such as flood vulnerability, extreme weather events, and susceptibility to climate change, emphasizing the urgent need for comprehensive climate adaptation and resilience measures in the region. The province has been impacted by recent climate calamities, as highlighted below;

#### 4.2 Flood Vulnerability:

- Impact of catastrophic floods on agriculture, livelihoods, and environment.
- KPK has experienced catastrophic floods in recent times, including in 2007, 2008, 2010, and 2012, with the Swat and Kabul Rivers and their tributaries causing frequent flooding, resulting in human casualties, destruction of property, disruption of daily life, and environmental degradation.
- The province is characterized by its hazard-prone rivers, flood-prone areas, and recurring floods that have significantly impacted the region's agricultural resources and population, making it highly vulnerable to flood risks<sup>1</sup>.

#### 4.3 Impact of Extreme Weather Events:

- Devastation caused by unusual melting of glaciers and extreme weather.
- Unusual melting of glaciers in northern areas of Pakistan due to extreme temperatures has led to the partial collapse of infrastructure, such as the Hassanabad bridge, highlighting the substantial impact of extreme weather events on the region.

<sup>1</sup> <https://www.frontiersin.org/articles/10.3389/fenvs.2024.1303976>



- The province has faced extraordinary floods, devastating agriculture, livestock, and infrastructure, resulting in substantial economic losses estimated at billions of US dollars.

#### 4.4 Vulnerability to Climate Change:

- Susceptibility to changing weather patterns and rising temperatures.

- KPK, along with other regions in Pakistan, is highly vulnerable to the adverse impacts of climate change, evidenced by the region's susceptibility to unusual weather patterns, rapid melting of glaciers, and unprecedented monsoon rains, leading to catastrophic floods and strategic challenges<sup>2</sup>.

- Changing seasonal weather patterns, rising temperatures, variability of monsoons, and melting of glaciers in the north have compounded the vulnerability of KPK to climate change, posing significant challenges for the province<sup>3</sup>.

#### 4.5 Long-Term Impacts of Recent Climate Calamities:

- **Health Crisis and Disease Outbreaks** - Increase in water-borne and vector-borne diseases.

- **Economic Consequences** - Substantial economic losses and impact on GDP. Flood Damages and Economic Losses Over USD 30 billion and Reconstruction Needs Over USD 16 billion<sup>4</sup>.

- **Environmental Resilience and Climate Change Adaptation** - Need for embedding resilience into development planning. The calamitous floods have underscored the urgent need for systemic resilience to natural hazards and climate change in Pakistan's overall development planning. The reconstruction and rehabilitation efforts present an opportunity to embed climate resilience and adaptation<sup>5</sup>.

- **Social and Humanitarian Consequences** - Disproportionate impact on vulnerable populations and increase in poverty to push a substantial number of people below the poverty line and increase multidimensional poverty, thus necessitating sustained support for affected communities (WBG, 2022).

<sup>2</sup> <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9708371/>

<sup>3</sup> <https://reliefweb.int/report/pakistan/climate-crisis-pakistan-voices-ground>

<sup>4</sup> <https://www.worldbank.org/en/news/press-release/2022/10/28/pakistan-flood-damages-and-economic-losses-over-usd-30-billion-and-reconstruction-needs-over-usd-16-billion-new-assessme>

<sup>5</sup> <https://reliefweb.int/report/pakistan/climate-crisis-pakistan-voices-ground>

## 5. Provincial SWOT Analysis and Measures for Climate Challenges:

### 5.1 SWOT Analysis of Khyber Pakhtunkhwa:

#### a. Strengths:

- Recognizing the rich biodiversity, diverse ecosystems, and traditional knowledge of communities in sustainable practices.
- Leveraging existing strengths like policies, plans and projects for the development of climate-resilient strategies.

#### b. Weaknesses:

- Acknowledging challenges like inadequate infrastructure, limited financial resources, and a need for enhanced technical expertise.
- Proposing targeted interventions and capacity-building programs to address identified weaknesses.

#### c. Opportunities:

- Identifying potential economic opportunities through sustainable practices, renewable energy, and eco-tourism.
- Recommending policies that capitalize on these opportunities for inclusive and sustainable development.

#### d. Threats:

- Addressing risks associated with extreme weather events, water scarcity, food security and the socio-economic impact of climate change on vulnerable communities.
- Proposing early warning systems, community-based risk reduction initiatives, and policies to mitigate identified threats.

### 5.2 Climate Issues and Solutions

#### a. Water Resources:

**Issues** - Highlighting issues related to water scarcity, quality, and variability in the region.

**Solutions** - Proposing solutions such as national-provincial policies alignment, political ownership, long term plans for the development of water storage infrastructure, gender sensitization & equity, community-based water management, and promotion of water-efficient practices, recycling, wetlands, rainwater-harvesting, check-downs.

#### b. Agriculture:

**Issues** - Addressing issues like crop yield variability, soil degradation, and pest outbreaks.

### 5.3 Future Challenges and Adaptation Interventions:

#### 1. Water Scarcity and Drought:

**Challenge** - Decreasing water availability due to erratic rainfall patterns, glacier melt, and increased demand from growing population and agriculture sector.

**Adaptation Interventions** - Implement water conservation measures, promote efficient irrigation techniques, construct rainwater harvesting systems, and develop drought-resistant crop varieties.

#### 2. Floods and Flash Floods:

**Challenge** - KPK is prone to seasonal flooding and flash floods, leading to loss of lives, damage to infrastructure, and displacement of communities.

**Adaptation Interventions** - Construct flood defenses such as embankments and levees, improve early warning systems, promote afforestation to reduce soil erosion, and implement land-use planning to avoid flood-prone areas.

#### 3. Glacier Retreat and Avalanches:

**Challenge** - Accelerated melting of glaciers in the Himalayan region increases the risk of glacial lake outburst floods (GLOFs) and avalanches.

**Adaptation Interventions** - In addition to GLOF I&II, monitor glacial lakes for early warning, implement engineering interventions to stabilize vulnerable slopes, and develop community-based disaster preparedness plans.

#### 4. Heatwaves and Urban Heat Island Effect:

**Challenge** - Rising temperatures exacerbate heatwaves, leading to heat-related illnesses and discomfort, particularly in urban areas due to the urban heat island effect.

**Adaptation Interventions** - Planting trees and green spaces to mitigate the urban heat island effect, implementing heatwave preparedness plans, and providing cooling centers in vulnerable communities.

#### 5. Loss of Biodiversity and Ecosystem Degradation:

**Challenge** - Deforestation, habitat loss, and unsustainable land use practices threaten biodiversity and ecosystem services.

**Adaptation Interventions** - Promote reforestation and afforestation initiatives, establish protected areas and wildlife corridors, and integrate biodiversity conservation into land-use planning and development projects. BHVS, NBS & EbA approaches, CBOs, WDOs and WWOs engagement, NFTP's value-adding, Eco-tourism, Curriculum revision Activity-based education and Incentives. Payment of eco-system services, Community based conservation for forests and wildlife.

#### Agricultural Vulnerability:

**Challenge** - Changing precipitation patterns and temperature extremes affect crop yields, livestock productivity, and food security.



**Solutions** – Proposing water use efficiency, drip irrigation, controlling aquatic pollution and over-retraction of water, resilient farming techniques, introduction of drought-resistant crop varieties, and improved irrigation methods. Integrated approaches, academia roles in conducting research and case-studies.

#### **c. Infrastructure & Urbanization:**

**Issues** - Identifying vulnerabilities in existing infrastructure, including roads, bridges, and energy systems. Population sprawl, rural migration, waste and affluent issues.

**Solutions** - Suggesting climate-resilient design standards, incorporating nature-based solutions, and fostering innovation in infrastructure development. Population management and intersectoral coordination, green vertical construction, resilient master plans, green building codes and land-use plans, and Urban Forestry.

**Adaptation Interventions** - Introduce climate-resilient crop varieties, promote sustainable agricultural practices such as conservation agriculture and agroforestry, and provide farmers with access to weather information and agricultural insurance.

#### **8. Health Impacts:**

**Challenge** - Climate change exacerbates health risks through increased incidence of vector-borne diseases, heat-related illnesses, and malnutrition.

**Adaptation Interventions** - Enhance disease surveillance and response systems, implement public health campaigns on climate-related health risks, and improve access to clean water and sanitation facilities.

#### **9. Infrastructure Vulnerability:**

**Challenge** - Weak infrastructure is susceptible to damage from extreme weather events, posing risks to public safety and economic stability.

**Adaptation Interventions** - Retrofit infrastructure to withstand climate extremes, incorporate climate resilience criteria into infrastructure planning and design, and diversify energy sources to reduce dependence on vulnerable infrastructure.







## 6. A Comprehensive NAP Awareness Raising Workshop:

The workshop for stakeholders in Khyber Pakhtunkhwa province offered a comprehensive plan for successful training and awareness raising initiative at the provincial level. It intended to empower stakeholders across sectors to navigate climate change challenges and build a more resilient Khyber Pakhtunkhwa.

### 6.1 Target Audience:

- **Government officials** - Policymakers, planners, and decision-makers across ministries and departments.
- **NGOs and civil society** - Organizations working on climate change, environment, and women development.
- **Private sector** - Businesses and industries vulnerable to climate impacts.
- **Community leaders and representatives** - Individuals with firsthand experience of climate challenges.
- **Technical experts** - Scientists, engineers, and practitioners with expertise in climate change adaptation.
- **Media** - Provincial electronic media representatives to participate and conduct interviews of experts for regional tv shows<sup>6</sup>.

### 6.2 Program Objectives:

- **Demystifying the NAP** - Explain the basic framework, stages, and objectives of the NAP. Analyze how the NAP aligns with global and national development strategies. Discuss challenges and opportunities in implementing the NAP effectively.
- **Vulnerability Unveiled** - Map Pakistan's specific climate vulnerabilities across sectors (water scarcity, agricultural risks, health impacts, infrastructure challenges). Equip participants with tools and methodologies for vulnerability assessments at local and regional levels. Analyze case studies of vulnerable communities and explore ways to build their resilience.
- **Sector-Specific Solutions** - Identify the unique challenges and opportunities for adaptation in key sectors like water management, agriculture, health, and infrastructure. Analyze case studies of successful adaptation interventions in each sector. Explore innovative solutions tailored to each sector's needs and challenges.

<sup>6</sup> Mashriq Tv, <https://www.facebook.com/PnDKPGovt>



- **From Strategy to Action** - Provide practical skills for developing and implementing effective adaptation strategies. Train participants on cost-benefit analysis, mainstreaming adaptation into sectoral policies, and building multi-stakeholder partnerships. Facilitate the development of concrete action plans for specific sectors or regions.

### 6.3 Key Interlinkages:

- **Knowledge Sharing** - Foster interactive sessions for sharing existing coping strategies, indigenous knowledge, and local solutions. Encourage collaboration and co-creation of innovative adaptation approaches across sectors and communities. Establish a network for ongoing knowledge exchange and peer support.
- **Cross Sectoral Approaches** - Promote cross-sectoral collaboration and knowledge sharing within Pakistan. Explore international best practices and lessons learned from other countries facing similar challenges. Build a robust network of stakeholders committed to integrated, multi-dimensional adaptation across sectors.
- **Monitoring and Evaluation** - Equip participants with tools and techniques for monitoring and evaluating the effectiveness of adaptation strategies. Train on setting indicators, measuring progress, and adapting approaches based on learnings. Develop systems for ongoing monitoring and evaluation at national and regional levels.
- **Workshop Impact** - Ensure the program's impact extends beyond the training sessions. Establish a network for ongoing communication, knowledge exchange, and peer support. Provide ongoing technical assistance and capacity-building opportunities to maintain momentum and ensure long-term adaptation success.

### 6.4 Interaction Methods:

- **Interactive workshop and lectures** - Engaging sessions with experts and practitioners, tailored to different knowledge levels and practices.
- **Best practices sharing** - Learning from real-world indigenous experiences and successes across sectors from developing countries with climate gender equity.
- **Expert discussions** - Fostering collaboration, problem-solving skills, and critical thinking.



- **Cross Sectoral Interaction** – Sharing experience of the impacts of climate change firsthand.
- **Gender Inclusion** - Learning from local communities' adaptive strategies by highlighting women role.
- **Group Discussions and Exercises** - Putting theory into practice and exploring different perspectives on adaptation challenges and solutions.
- **Learning Resources** - Providing additional learning opportunities beyond the training sessions and catering to group learning styles.

### 6.5 Workshop Materials:

- **Comprehensive Training Presentation** – A resource with key concepts, case studies, tools, and references, adapted to different knowledge levels.
- **Sector-specific Discussions** - Deep dives into each sector's vulnerabilities, challenges, and successful adaptation solutions.
- **Adaptation planning interventions** - Practical tools for developing and implementing adaptation plans at various levels.
- **Discussion of relevant organizations and initiatives** - Connecting participants with resources and support networks for ongoing engagement.



## 7. National Climate Financing Paradigm:

The climate financing discussions revolve around; understanding climate financing and impacts in Pakistan involves (i) navigating financial mechanisms, (ii) addressing challenges, and (iii) implementing strategies to build resilience against climate change-induced risks. This holistic financial paradigm encompasses efforts to secure funding, enhance capacity, and mitigate the socio-economic and environmental consequences of climate-related events. The structured overview provides a concise understanding of climate financing initiatives, challenges, and impacts in Pakistan, with a focus on Khyber Pakhtunkhwa.

### 7.1 NAP addressing Climate Impacts:

In national perspective, the NAP addresses climate change impacts through strategies focused on strengthening resilience, fostering collaboration, and leveraging financial mechanisms for sustainable adaptation measures. It aims to enhance capacity, promote nature-based solutions, and align with international commitments to ensure a climate-resilient future for Pakistan. The NAP covers;

- **Strengthening Climate Resilience** – Focus on income inequality, social disparities, local community capacity, green jobs, sustainable infrastructure, technology, and collaboration.
- **Financial Mechanisms** – Utilization of government and foreign funds by overcoming concerns about clarity in financing mechanisms.
- **Creation of National Climate Change Fund** – Curtail uncertainties in availability and design, particularly for local level projects.
- **Challenges in Implementation** - Emphasis on improving existing practices and provincial ownership of project design and approval.
- **Nature-Based Solutions** - Utilization of ecosystem-based adaptation strategies<sup>7</sup>.
- **Alignment with Nationally Determined Contributions (NDCs)** - Coherent implementation and submission of revised NDCs before COP to UNFCCC.
- **Capacity Building and Knowledge Sharing** - Establishing systems for generating and sharing adaptation knowledge.

### 7.2 Climate Financing in Pakistan:

Pakistan leverages both domestic and international funds to address climate change challenges and promote sustainable development.

- **SBP's Initiatives** - Comprehensive approach including renewable energy, energy efficiency, and green housing<sup>8</sup>.
- **Collaboration with Financial Institutions** - Synergy with financial institutions to incentivize eco-friendly approaches.
- **Green Climate Fund (GCF)** - Agreement with GCF for projects enhancing climate resilience.

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<sup>7</sup> <https://www.unep.org/resources/toolkits-manuals-and-guides/guidelines-integrating-ecosystem-based-adaptation-eba>, 2021

<sup>8</sup> <https://www.sbp.org.pk/smefd/circulars/2019/C10-Annex-I.pdf>



### 7.3 Financing Challenges for Provincial Government:

The individual and group discussions also highlight that provincial governments face financing challenges due to limited capacity and unclear mechanisms in accessing funds for climate resilience projects. The missing link such as ownership of project design and approval processes is crucial for effective utilization of resources. The discussions further elaborate;

- **Limited Capacity** - Institutions at provincial level have limited logistical and technical understanding.
- **Ownership of Project Design and Approval** - Provincial planning departments are urged to take more ownership.
- **Insufficient Clarity in Mechanisms** – Need for public financial management exists due to lack of clear understanding among provincial and local government officials on strategies and governance in NAP for streaming provincial finance.

### 7.4 Optimal Climate Financing in Khyber Pakhtunkhwa Government:

The provincial financing opportunities involve enhancing capacity for understanding financial mechanisms, ensuring efficient project design and approval processes, and establishing clear governance and transparency in fund utilization to address climate challenges effectively.

- **Capacity Building** - Enhancing understanding of climate financing mechanisms.
- **Project Design and Approval** - Ensuring ownership and efficiency in project processes.
- **Clear Strategies and Mechanisms** - Developing actionable strategies for resource allocation and community engagement.
- **Governance and Financial Mechanisms** - Establishing transparent system such as PFM and clear governance mechanism for fund utilization.

### 7.5 Fulfilling Climate Financing Commitments for Vulnerable Sectors:

The discussions conclude key factors such as capacity building for officials, integrating climate considerations into sectoral planning and budgeting, channeling domestic financing to access international funds like the GCF to support vulnerable sectors' resilience.

- **Capacity Building and Training** - Comprehensive training for public officials.
- **Integration of Climate Considerations** - Mainstreaming climate considerations into sectoral planning such as annual development plans, and budgeting.
- **Collaboration and Partnership** - Establishing partnerships with provincial and district government stakeholders.
- **Transparent Reporting and Accountability** - Implementing transparent monitoring and reporting mechanisms.
- **Accessing International Climate Funds** – streaming domestic finance to seeking funds from international sources like GCF.

## 7.6 Climate Finance Matrix:

### 1: NAP addressing Climate Impacts

- The NAP addresses climate change impacts through strategies focused on strengthening resilience, fostering collaboration, and leveraging financial mechanisms for sustainable adaptation measures.
- It aims to enhance capacity, promote nature-based solutions, and align with international commitments to ensure a climate-resilient future for Pakistan.

### 2: Climate Financing in Pakistan

- Pakistan leverages both domestic and international funds to address climate change challenges and promote sustainable development.
- SBP's Initiatives include a comprehensive approach including renewable energy, energy efficiency, and green housing. Collaboration with Financial Institutions synergizes with financial institutions to incentivize eco-friendly approaches.
- The Green Climate Fund (GCF) agreement supports projects enhancing climate resilience.

### 3: Financing Challenges for Provincial Government

- Provincial governments face financing challenges due to limited capacity and unclear mechanisms in accessing funds for climate resilience projects.
- Limited Capacity - Institutions at provincial level have limited logistical and technical understanding.
- Ownership of Project Design and Approval - Provincial planning departments lack ownership. Lack of project design and approval processes which are crucial for effective utilization of resources.
- Insufficient Clarity in Mechanisms - Lack of clear strategies and governance in NAP for provincial financing.

### 4: Optimal Climate Financing in Khyber Pakhtunkhwa Government

- Finding 'Financing Opportunities' involve enhancing capacity for understanding financial mechanisms, ensuring efficient project design and approval processes, and establishing clear governance and transparency in fund utilization to address climate challenges effectively.
- Capacity Building - Enhancing understanding of climate financing mechanisms.
- Project Design and Approval - Ensuring ownership and efficiency in project processes.
- Clear Strategies and Mechanisms - Developing actionable strategies for resource allocation and community engagement.
- Governance and Financial Mechanisms - Establishing transparent and clear governance for fund utilization.



## 8. Climate Financing Session



### Climate Financing:

Using financial mechanisms and domestic sources and funds for climate finance that pave the way for finance-access from other multilateral institutions, under the UNFCCC

**Sectoral Group Activity** - with responsible government departments on NAP Vulnerable Sectors

*Activity Aim - Line departments and responsible representatives were asked to identify all such channels and sources domestically that could enhance adaptation efforts, hence increase chances for international opportunities for achieving funding to increase resilience in future.*

**Discussion Mode** - The group activity was convened and moderated by UNEP team, and forming five cohorts based on NAP themes and highlighting crosscutting roles of disaster management and gender inclusion into the NAP components.

**Gender Role** – Discuss women role in crosscutting interventions and action planning to dynamically involve their traditional role in agriculture in tandem with water conservation.



**Output** - Rural majority of women are drivers of change. Recognizing their conventional roles in water harvesting techniques used at household and field level activities can only help attain climate change gender equity to leverage resilience of whole society.

## 9. Findings:

### 9.1 Key Entry Points for Provincial Stakeholders in NAP Components:

The workshop concludes key entry points in the National Adaptation Plan process which are associated with engagement of provincial and district government stakeholder, sharing information, and securing finance. It emphasizes that the NAP process enables the government to formulate and implement national, provincial and local NAPs that identify medium and long-term adaptation needs, and develop and implement strategies and programmes to address those needs<sup>11</sup>. Key findings are;

#### 1. Policy Development:

- Assessing the degree of provincial involvement in shaping climate policies within the broader NAP framework.
- Examining the alignment of provincial policies with national goals and international best practices.

#### 2. Resource Allocation:

- Analyzing coordination and financing mechanisms for equitable and efficient resource allocation, ensuring the optimal execution of climate adaptation strategies.
- Identifying potential funding sources and innovative financing models to bolster adaptation efforts.

#### 3. Capacity Building:

1. Evaluating the current capacity of provincial institutions to actively contribute to the NAP process.
2. Recommending strategies for enhancing institutional and human capacities through training and knowledge exchange.

### 9.2 Key Highlights of Issues and Solutions in Vulnerable Sectors:

**1. Water Resources** - Highlighting challenges related to water scarcity and proposing solutions such as efficient water management practices and infrastructure development.

**2. Agriculture** - Addressing issues like crop yield variability and proposing resilient farming techniques, drought-resistant crop varieties, and improved irrigation methods.

**3. Infrastructure** - Identifying vulnerabilities in existing infrastructure and suggesting climate-resilient designs and construction practices.

## 10. Conclusion:

The Input Report concludes;

**1. Active Involvement** - The urgency of addressing climate change in Khyber Pakhtunkhwa requires a holistic and proactive approach. The report underscores the importance of collective efforts, informed decision-making, and strategic planning to build resilience and ensure sustainable development in the province. By actively involving key stakeholders and implementing the proposed strategies, KPK can navigate the challenges posed by climate change and emerge as a model for effective adaptation.

**2. Proactive Measures** - The report concludes by underlining the urgency of initiatives in addressing climate change challenges in Khyber Pakhtunkhwa. It emphasizes the need for concerted efforts from all stakeholders to develop and implement effective adaptation plans, fostering resilience and sustainable development in the province.

**3. Inputs Implications** - The inputs gathered from the workshop sessions provide a comprehensive foundation for formulating Provincial Adaptation Plans in Khyber Pakhtunkhwa. Through stakeholder consultation, vulnerability assessment, and identification of adaptation measures, the plans can be



tailored to address the region's specific climate challenges. Prioritization and resource allocation can ensure efficient implementation, while a robust monitoring and evaluation framework facilitates ongoing progress assessment.

**4. Capacity and Knowledge** - Moreover, capacity building initiatives and knowledge sharing efforts strengthen the province's resilience to climate change impacts. By integrating these inputs, Khyber Pakhtunkhwa is better equipped to navigate the complexities of climate adaptation and build a sustainable future for its communities.

**5. Interventions** - The Forestry Environment & Wildlife Department Khyber Pakhtunkhwa has formulated a Climate Change Policy 2022<sup>9</sup> approved by the Provincial Cabinet. The department has also prepared a Climate Change Action Plan along with a Climate Change Diagnostic and Investment Plan<sup>10</sup>. This is a significant step towards the formulation of provincial adaptation plans in Khyber Pakhtunkhwa.

**6. Assessments** - An assessment of primary health care facilities in Khyber Pakhtunkhwa revealed that the facilities are currently insufficient to meet the needs of local communities at times of disaster<sup>6</sup>. A SWOT analysis revealed that these centers have much potential to fulfill this role if they were provided with proper infrastructure, trained human resources, and financial resources<sup>11</sup>.

**7. Programs and Gaps** - The World Bank has approved \$236 million in grants and credits to support Pakistan's efforts to enhance learning and healthcare, and address COVID-19 threats to human capital accumulation in Khyber Pakhtunkhwa. The projects aim to increase the productive capacity of the workforce to bolster future economic growth in Khyber Pakhtunkhwa. However, there are significant gaps in education and health services, particularly among low-income and vulnerable communities<sup>12</sup>.

## **11. Way Forward:**

### **a. Multi-Stakeholder Engagement:**

- Promoting collaboration among government bodies, non-governmental organizations, private sector entities, and local communities.
- Establishing platforms for continuous dialogue, knowledge exchange, and joint decision-making.

### **b. Data and Research:**

- Emphasizing the importance of accurate and up-to-date climate data for effective decision-making.
- Advocating for ongoing research initiatives to inform evidence-based adaptation strategies.

### **c. Policy Integration:**

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<sup>9</sup> [https://few.kp.gov.pk/uploads/2022/09/KP\\_Climate\\_Change\\_Policy\\_20221.pdf](https://few.kp.gov.pk/uploads/2022/09/KP_Climate_Change_Policy_20221.pdf)

<sup>10</sup> [https://few.kp.gov.pk/uploads/2022/09/KP\\_Climate\\_Change\\_Diagnostic\\_and\\_Investment\\_Plan1.pdf](https://few.kp.gov.pk/uploads/2022/09/KP_Climate_Change_Diagnostic_and_Investment_Plan1.pdf)

<sup>11</sup> An Assessment of Primary Health Care Facilities and Their Preparedness Level in Khyber Pakhtunkhwa Province of Pakistan: Strengths, Weaknesses, Opportunities, and Threats (SWOT), [https://link.springer.com/chapter/10.1007/978-981-15-0924-7\\_16](https://link.springer.com/chapter/10.1007/978-981-15-0924-7_16)

<sup>12</sup> <https://www.worldbank.org/en/news/press-release/2020/06/23/most-vulnerable-households-in-balochistan-and-khyber-pakhtunkhwa-to-benefit-from-improved-learning-healthcare-and-covid-19-response>

- Recommending the integration of climate adaptation considerations into existing provincial policies, development plans, and sectoral strategies.
- Ensuring a cohesive and harmonized approach to climate resilience across all levels of governance.

#### **d. Public Awareness and Education:**

- Advocating for comprehensive public awareness campaigns to educate communities about climate change.
- Promoting climate-resilient practices at the grassroots level through targeted educational programs.

## **12. Implications:**

The workshop implications are multidimensional in nature based on stakeholder discussions and inputs. However, the significant implication keeping in view the objectives of the workshop is;

### **12.1 Formulation of Provincial Adaptation Plans in Khyber Pakhtunkhwa:**

Based on stakeholder views and inputs, formulating Provincial Adaptation Plans in Khyber Pakhtunkhwa entails essential factors to advance NAP process in the province. Key factors include processes such as; (i) assessing regional vulnerabilities, (ii) engaging stakeholders for input, and (iii) outlining actionable strategies tailored to address climate impacts in key sectors like agriculture, water resources, and infrastructure.

The process of formulation of Provincial Adaptation Plans in Khyber Pakhtunkhwa involves a structured approach based on comprehensive steps aimed at addressing the region's climate vulnerabilities, as delineated below;

- 1. Stakeholder Consultation** - Engagement with key stakeholders including government agencies, local communities, NGOs, and experts to identify priority areas for adaptation planning.
- 2. Vulnerability Assessment** - Conducting a thorough assessment of the province's vulnerability to climate change impacts, considering factors such as extreme weather events, water scarcity, and agricultural challenges.
- 3. Identification of Adaptation Measures** - Brainstorming and collaborative discussions to identify adaptation measures suited to Khyber Pakhtunkhwa's specific needs and vulnerabilities, considering both medium to long-term strategies.
- 4. Prioritization and Resource Allocation** - Prioritizing adaptation measures based on their feasibility, effectiveness, and potential impact, and allocating resources accordingly to ensure efficient implementation.
- 5. Monitoring and Evaluation Framework** - Developing a robust framework for monitoring and evaluating the implementation of adaptation measures, including indicators for measuring progress and effectiveness.
- 6. Capacity Building and Knowledge Sharing** - Conducting training sessions and workshops to build the capacity of government officials and stakeholders involved in implementing the adaptation plans, and fostering knowledge sharing to enhance resilience across sectors.

Through these structured steps, the formulation of Provincial Adaptation Plans in Khyber Pakhtunkhwa can aim to address the region's climate challenges systematically and effectively, ensuring sustainable development and resilience in the face of climate change impacts.

## Annex 1: Workshop Agenda

### Agenda of the Workshop on 31<sup>st</sup> January, 2024 Serena Hotel, Peshawar

| Time                 | Agenda/Activity                                                                                                 | Responsibility                              |
|----------------------|-----------------------------------------------------------------------------------------------------------------|---------------------------------------------|
| 09:00 – 9:30         | Arrival & registration of participants                                                                          | UNEP NAP Team                               |
| 09:30 – 09:35        | Recitation of the Holy Quran                                                                                    |                                             |
| 09:35 – 10:00        | Welcome Remarks by UNEP, Senior Joint Secretary/DG MoCC, and Additional Chief Secretary P&DD, KPK               | Mr. Syed Hussain                            |
| 10:00 – 10:15        | Opening Remarks by Chief Guest - Advisor for Planning & Development, KPK                                        | Dr. Syed Sarfraz Ali                        |
| 10:15 – 10:45        | An overview of climate risks and vulnerability in KPK                                                           | Dr. Muhammad Abid GIZ SAR                   |
| <b>10:45 – 11:00</b> | <b>Tea Break</b>                                                                                                |                                             |
| 11:00 – 11:15        | Presentation on Pakistan NAP document                                                                           | Mr. Khan Ghulam, UNEP NAP Project           |
| 11:15-11:50          | Process of Developing Climate Change Adaptation Plans                                                           | Mr. Arshad Samad Khan, UNEP NAP Project     |
| 11:50-12:20          | Overview of UNEP NAP and GIZ SAR Projects, Pakistan                                                             | Mr. Khan Ghulam, UNEP NAP Project & GIZ SAR |
| 12:20 – 13:15        | Climate Finance/ Resource Mobilization for Adaptation                                                           | Mr. Sohail Malik                            |
| <b>13:15 – 14:15</b> | <b>Lunch and prayer break</b>                                                                                   |                                             |
| 14:15-15:00          | Integration of climate change into development planning                                                         | Mr. Sohail Malik                            |
| 15:00-16:00          | Group discussions on challenges and opportunities on climate change adaptation integration into the development | UNEP NAP                                    |
| 16:00                | Concluding Session and Refreshments                                                                             | P&DD and UNEP                               |



## Annex 2: List of Participants

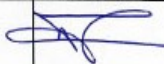
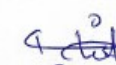
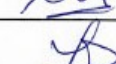
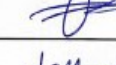
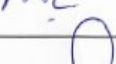
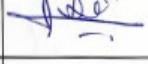
| WORKSHOP ON CLIMATE CHANGE ADAPTATION PLAN PROCESS, PESHAWAR SERENA HOTEL, 31- JAN- 2024 |                               |                                        |                                                    |                |           |
|------------------------------------------------------------------------------------------|-------------------------------|----------------------------------------|----------------------------------------------------|----------------|-----------|
| S.No                                                                                     | Name & Designation            | Deptt/Organization                     | Email                                              | Contact Number | Signature |
| 1                                                                                        | Waseem Gulzar (Consultant)    | NAP- UNEP                              | gulwaseemfa@gmail.com                              | 03335136502    | Waseem    |
| 2                                                                                        | Khan Gulam                    | NAP- UNEP                              | khan.gulam@UNEP.org                                | 0333-9861999   | Khan      |
| 3                                                                                        | Khurshid Khan                 | NAP- UNEP                              | Khurshid.Khan@unep.org                             | 0333-5467985   | Khurshid  |
| 4                                                                                        | Muhammad Zakaria Jan          | CWC - Institute of Management Sciences | Zakaria.cwc@imsciences.edu.pk                      | 0333-8495957   | Zakaria   |
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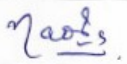
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