



Ministry of Climate Change and Environmental Coordination

STAKEHOLDER ENGAGEMENT PLAN

National Adaptation Plan for Pakistan



WATER



AGRICULTURE



URBAN



ECOSYSTEMS



FINANCIAL

“Adapting Today for Sustainable Tomorrow”

November 2023

Authored by : Waseem Gulzar



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).

Disclaimer: The views, thoughts, and opinions expressed in this report are solely those of the author(s) and do not necessarily reflect the official policy or position of the Ministry of Climate Change and Environmental Coordination (MoCC&EC), or that of UNEP and GCF.



Table of Contents

Executive Summary:	6
List of Abbreviations:	7
Acknowledgement:	7
1. Stakeholder Engagement Plan:	8
Preface:	8
Aim and Scope:	8
Objectives:	8
1.1. Methodology:	8
Table 1: Study Methodology	8
1.2 Stakeholder Consultation:	10
1.2.1 Consultation Schedule:	10
1.2.2 Survey Questionnaire:	10
1.2.3 Survey Overview:	10
1.2.4 Stakeholder Participation:	10
1.2.5 Level of Engagement:	12
Figure 1: Stakeholder Engagement Level.....	13
1.2.6 Needs Assessment:	13
1.2.7 Response Parameters:	15
Figure 2: Responses Assessment	15
1.2.8 Response Distribution:	16
1.2.9 NAP Component Response Rate:	16
1.2.10 Key Observations:	17
1.2.11 Findings and Results:	18
1.3 Stakeholder Input Integration:	19
Table 2: Stakeholder Input Integration	19
2. NAP Promotion Opportunities:	29
2.1 The Planned and Standing Events:	29
Table 3: NAP Promotion Opportunities	29
2.2 The Event Type:	30
Table 4: Types of Promotion Opportunities	30

3 Engagement Integration:.....	32
3.1 Mapping and Engagement	32
3.2 NAP Communication:.....	32
3.2.1 Communication Approaches:.....	33
Table 5: NAP Communication.....	33
3.3 Strategy Contribution:.....	35
Table 6: Engagement Strategy Interaction.....	35
3.4 Interaction Analysis:	36
3.4.1 Role Clarity:.....	36
3.4.2 Communication Elements:.....	36
Table 7: Interaction Analysis	36
4. Risk Analysis:	37
4.1 Major Risks:.....	38
4.2 Risk Management:	38
Table 8: Risks and Mitigation.....	38
5. Comprehensive Engagement:	39
5.1 Engagement Framework:	41
Table 9: Engagement Framework.....	41
5.2 Institutional Arrangement:	42
5.2.1 Situation Analysis:	42
5.3 NAP Governance Proposal:	43
Table 10: Proposed NAP Governance Structure	44
5.4 Vertical Integration:	45
Table 11: Sector-wise Vertical Integration	45
5.4.1 Implementation:	46
5.5 Proposed Institutional Arrangement:	47
5.5.1 Need for Institutional Arrangement:	47
Table 12: Proposed Institutional Arrangement	47
6. Inclusive Engagement:.....	49
6.1 Gender Inclusion:.....	49
6.2 Integrating Gender Role:.....	49
6.3 Gender Sensitive Engagement:	49

Figure 4: Addressing Gender in NAP Components.....	51
6.4 Addressing Social Inclusiveness:.....	52
7. NAP Roadmap	54
7.1 National Adaptation Planning:.....	54
7.2 Engagement Assessment Integration:	54
7.3 Adaptation Framework:	54
Table 15: Strategic Framework for Adaptation	54
7.4 Roadmap Function:	55
7.5 Roadmap Key Stages:.....	56
Table 14: Overview of the NAP Roadmap for Adaptation Planning	56
7.6 Stakeholder Entry Points:	57
Figure 5: Stakeholder Entry Points in NAP Process.....	58
7.7 The NAP Roadmap:.....	59
Table 16: Comprehensive NAP Roadmap.....	59
Conclusion:	67
Recommendations:.....	68
Annex 1: Consultations Schedule for Needs Assessment	70
Annex-2: Questionnaire for Needs Assessment	71

Executive Summary:

In response to the urgent need to address climate change impacts, the Government of Pakistan is embarking on the development of a comprehensive National Adaptation Plan. This initiative recognizes the significance of stakeholder engagement as a pivotal element in formulating, implementing, and monitoring adaptation measures. It emphasizes inclusive collaboration among government, civil society, academia, and communities.

The National Adaptation Plan (NAP) process prioritizes inclusive stakeholder engagement, involving a diverse range of actors to ensure a holistic understanding of priorities. The Needs assessment in the NAP process involves comprehensive stakeholder engagement to identify adaptation priorities. Data gathered during these consultations informs evidence-based decision-making for comprehensive national adaptation planning. An adaptive approach to needs assessment ensures continuous relevance to evolving climate risks.

This document provides a concise overview of the process of developing a stakeholder engagement plan and NAP roadmap for advancing National Adaptation Plan Process in Pakistan. The approach aims to enhance collaboration and coordination among diverse stakeholders at different levels for effective engagement to internalize adaptation. It aims to facilitate a unified and collaborative effort towards climate resilience. It further highlights national stakeholder capacities to position Pakistan for harnessing international support and using best practices in the arena of climate change adaptation.

The stakeholder engagement strategy prioritizes inclusivity, transparency, and active involvement of diverse stakeholders, spanning government, civil society, academia, private sector, and vulnerable communities. It provides a structured adaptation framework for engagement at all levels, ensuring their expertise shapes adaptation planning.

The roadmap outlines key steps, prioritization criteria, and resource strategies to create a comprehensive and coordinated NAP for enhancing Pakistan's climate resilience.

List of Abbreviations:

AEDB - Alternative Energy Development Board	MoST - Ministry of Science and Technology
CABI - Centre for Agriculture and Biosciences International	MoWR - Ministry of Water Resources
CDA - Capital Development Authority	NARC - National Agricultural Research Centre
EAD - Economic Affairs Division	NCSW - National Commission on Women Status
FFC - Federal Flood Commission	NDRMF - National Disaster Risk Management Fund
FSC&RD - Federal Seed Certification & Registration Department	NDMA - National Disaster Management Authority
GCISC - Global Change Impact Studies Centre	Pak-EPA - Pakistan Environmental Protection Agency
IRSA - Indus River System Authority	PARC - Pakistan Agriculture Research Council
MoC - Ministry of Communication	PBS - Pakistan Bureau of Statistics
MoCC - Ministry of Climate Change	PCCA - Pakistan Climate Change Authority
MoE - Ministry of Energy	PCCC - Pakistan Climate Change Council
MoF - Ministry of Finance	PCRWR - Pakistan Council of Research in Water Resources
MoFE&PT - Ministry of Federal Education and Professional Training	PEC - Pakistan Engineering Council
MoHR - Ministry of Human Rights	PFM - Public Financial Management
MoNHSR - Ministry of National Health Services and Regulations	PMD - Pakistan Meteorological Department
MoHW - Ministry of Housing and Works	PPRA - Public Procurement Regulatory Authority
MoIB - Ministry of Information and Broadcasting	PSDP - Public Sector Development Programme
MoNFS&R - Ministry of National Food Security & Research	UNFCCC - United Nations Framework Convention on Climate Change
MoPD&SI - Ministry of Planning, Development and Special Initiatives	

Acknowledgement:

We would like to express our sincere gratitude to all individuals and organizations who have contributed their valuable views and opinions during needs assessment consultations. Their inputs are crucial for the development of the Engagement Strategy and NAP Roadmap for the National Adaptation Plan (NAP) process in Pakistan. Their expertise and dedicated support are instrumental in shaping a comprehensive and effective framework for climate adaptation in the country.

We extend our heartfelt thanks to:

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 developing the Stakeholder Engagement Plan, ensuring that it reflects the aspirations and resilience goals of Pakistan.

Government Agencies: By acknowledging the crucial role played by focal points of concerned government ministries, departments, and agencies at the federal level for their active participation and support throughout the consultation process.

Public and Private Sector Organizations: With appreciation for the engagement of the other public and private sector organizations for the consultation, whose collaboration is vital for the successful implementation of adaptation measures.

This collective effort has laid the foundation for a robust and inclusive NAP process that will enable Pakistan to effectively address the challenges posed by climate change, protect our 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 these strategies into impactful actions that benefit our country and its people.

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

Waseem Gulzar

Climate Change Adaptation Expert

Ministry of Climate Change

Date: 30-11-2023

1. Stakeholder Engagement Plan:

Preface:

The stakeholder engagement plan encompasses a stakeholder engagement strategy and NAP roadmap. To develop a comprehensive engagement strategy, it is important to define clear objectives and interest-based roles of key stakeholders. The engagement plan begins with stakeholder consultations that reflect on the overall engagement process while identifying roles, assessing needs and capacities, successes and challenges, and lessons learned. It integrates stakeholder inputs to validate their mandated roles, responsibility contribution and statutory participation in NAP process. It further outlines a diverse range of opportunities and communication means to build relationships and trust which forms a cohesive national engagement that can facilitate collaborative adaptation decision-making at national level. The plan develops key output activities and outcomes forming a NAP roadmap that reflect on regular monitoring, evaluation and updates for ongoing effectiveness of the engagement. It incorporates stakeholder feedback, acknowledges their contributions while reflecting on the NAP process. Overall, the stakeholder engagement plan ensures inclusive and transparent policy development, and enhance action planning in the country's adaptation efforts against climate change challenges.

Aim and Scope:

The stakeholder engagement plan aims to develop a stakeholder engagement strategy and NAP roadmap in order to create a structured and inclusive approach for climate change adaptation in Pakistan, involving diverse stakeholder engagement while fostering resilience, gender equality, and sustainable development.

Objectives:

The key objective is to prioritize gender-sensitive, diverse, and inclusive stakeholder engagement, and conducting needs assessment with a focus on vulnerability, resources, and gender considerations. The consultation objective is to integrate stakeholder insights across all NAP components, and leverage opportunities for progress of the NAP process. Furthermore, the purpose is to align engagement strategy with the NAP communication and do a proactive risk analysis to ensure a sustained impact. The study will also suggest institutional recommendations, and design and shape the NAP roadmap.

1.1. Methodology:

The structure of the methodology for this study ensures active stakeholder participation in the NAP process. It adopts a comprehensive step-by-step approach, promoting inclusive collaboration, and an effective engagement which is detailed in table-1;

Table 1: Study Methodology

Step	Description
1. Consultations and Needs Assessment	- Conduct comprehensive consultations for needs assessment to understand stakeholder expectations, capacity, and resources. - Identify key gaps in knowledge and capacity

	related to climate change adaptation. - Prepare schedules and details of consultations - Synthesize findings on needs of stakeholders.
2. Stakeholder Input Integration	- Collecting stakeholder inputs, and using findings in various NAP components to ensure validation of interest-based roles in NAP process.
3. Promotion Opportunities	– Design opportunities for promoting the NAP process with specifying the types of promotion opportunities (national, provincial and local events).
3. Engagement Integration	- Engagement strategy integration by linking various processes i.e., Set clear interest-based roles for assessments - Communication to foster cooperation, and gender and social inclusion – Get perspective on readiness and preparedness for NAP process.
4. NAP Communication	- Detail a sector-wise NAP communication to collaborate key stakeholders. - Design a basic communication plan for disseminating information with respective communication activities - Integrate stakeholder feedback into NAP communication.
5. Strategy Contribution	- Analyze how the engagement strategy contributes to the NAP communication. - Interaction Analysis of the communication strategy elements with stakeholder engagement strategy and opportunities in NAP project.
6. Strategic Framework for Adaptation	- As a result of stakeholders' engagement, the expected outcome outlines a strategic framework highlighting key adaptation actions, responsibility, and localization of data sources for a continuous NAP cycle (assessment and prioritization, continuous engagement, action planning, resource allocation, implementation, data collection and localization, capacity building, evaluation and review, reporting and communication, continuous learning and improvement).
7. Risk Analysis	- Analysis presenting the potential risks of disenfranchisement or lack of ownership of the NAP process on: i) weakened progress; and ii) weakened impact and how to avert or minimize those risks – Integrate stakeholder feedback into risk analysis by identifying potential consequences and mitigation strategies. - Design of institutional engagement to capture potential opportunities for the NAP process so to minimize risks and maximize the impact.
9. Institutional Arrangement	- Integration of stakeholder functional roles and enabling legislation to foster collaboration and partnerships with relevant line ministries, institutions and provincial governments. Design of vertical sectoral integration of federal line ministries, national institutions and provincial government departments. – Propose institutional arrangement for coordination at federal, provincial and local levels.
10. NAP Governance Proposal	- Design structure of NAP Governance to effectively mainstream climate adaptation into national, provincial, and local levels of governance. - Clarify role of Pakistan Climate Change Authority, Sectoral Climate Change Adaptation Cells, and National Working Groups.
11. Inclusive Engagement	- Integrate stakeholder feedback for gender inclusion and mainstreaming for an inclusive NAP process.
12. NAP Roadmap	- Design of national adaptation framework and NAP roadmap with step-by-step processes, timelines, and responsibilities. – Alignment of need assessment and

	engagement strategy with the roadmap. - Include a range of adaptation activities, outputs and outcome with timelines on national adaptation landscape.
--	--

1.2 Stakeholder Consultation:

This section gives the account of the consultation schedule with various stakeholders at federal level including government ministries, departments and national institutions, and details of how the consultation findings will be integrated into each of the four components of the NAP process.

1.2.1 Consultation Schedule:

National stakeholders at federal level were selected by identifying their interest-based roles with respect to their power and interest in NAP process. These stakeholders also constitute the NAP committees, and are comprised of focal points from their respective institutions. The NAP working group is comprised of Ministry of Climate Change, Ministry of Planning, Development and Special Initiatives, Ministry of Finance, Ministry of Food Security, Agriculture and Livestock, and Ministry of Science and Technology. However, national key stakeholders with power have been sifted and consulted for all vulnerable sectors. Some NAP stakeholders have eminent or cross cutting roles across all sectors. The stakeholders have been consulted in the form of key informant interviews for the need assessment through personal correspondence at federal level as shown in consultation schedule in Annex-1.

1.2.2 Survey Questionnaire:

The questionnaire reflects stakeholders' statutory positions, stipulations and standing on NAP process. It also highlights indicative activities on NAP roadmap in all eight vulnerable sectors undertaken by stakeholders at federal level and/or at local levels. The questions help understand stakeholders' viewpoint. Based on responses, the synthesized information and findings are integrated into NAP components to validate stakeholder responses and role clarity for contributing to the NAP process. The findings are synthesized from responses and discussions with stakeholders as the consultation process completed. The questionnaire is also appended as Annex-2.

1.2.3 Survey Overview:

In this survey, a total of 32 stakeholders at the national level were engaged to gather crucial insights related to climate change adaptation in Pakistan. These stakeholders represent a diverse range of institutions and ministries, each contributing a unique perspective to the assessment of climate risks, vulnerabilities, and adaptation needs.

1.2.4 Stakeholder Participation:

These statistics indicate a varied but generally high level of involvement from different stakeholders, reflecting their understanding of the significance of climate change adaptation in Pakistan. Each stakeholder's level of participation aligns with their respective areas of expertise and responsibilities in the NAP process.

- Forestry and Biodiversity Wing - Ministry of Climate Change (MoCC):** An eighty percent (80%) involvement of the stakeholder, indicating a high level of engagement in assessing climate change adaptation needs related to forestry and biodiversity.
- Ministry of Planning, Development and Special Initiatives (MoPD&SI):** With an 84% involvement rate, the Ministry of Planning demonstrated strong commitment to understanding and addressing adaptation needs, emphasizing the importance of effective planning and development.

3. **National Disaster Risk Management Fund (NDRMF):** Similar to the Ministry of Planning, the NDRMF also had an 84% involvement rate, showing its active role in addressing climate-related risks and vulnerabilities.
4. **Ministry of Finance (MoE):** While the involvement rate was 44%, it is still noteworthy as the Ministry of Finance plays a crucial role in resource allocation and financial planning for climate adaptation.
5. **Ministry of Communication (MoC):** With an 84% involvement rate, the Ministry of Communication actively contributed to the survey, recognizing the significance of communication infrastructure in adaptation efforts.
6. **Ministry of Science and Technology (MoST):** Seventy-six percent (76%) of stakeholders from this ministry participated, signifying their commitment to leveraging science and technology in climate adaptation.
7. **Ministry of Water Resources (MoWR):** This ministry had an 80% involvement rate, indicating its active role in addressing climate change impacts on water and power resources.
8. **Federal Commission on Indus Water Treaty:** Although with a lower rate of 24%, the commission still provided valuable insights regarding the Indus Water Treaty's implications for adaptation.
9. **Indus River System Authority (IRSA):** With a 72% involvement rate, IRSA actively participated in the survey, emphasizing the importance of managing river systems in climate adaptation.
10. **Pakistan Council of Research in Water Resources (PCRWR):** PCRWR achieved full participation with 100%, highlighting its central role in water resource research for adaptation.
11. **Ministry of National Food Security & Research (MoNFS&R):** This ministry participated with 16 responses, indicating a 64% level of involvement. While not the highest, this level of engagement demonstrates a significant contribution to the needs assessment process.
12. **National Energy Efficiency and Conservation Authority (NEECA), Ministry of Energy (MoE):** NEECA and MoE showed a strong commitment with 20 responses, resulting in an 80% involvement rate. This demonstrates robust engagement in understanding and addressing climate change adaptation needs.
13. **Ministry of Federal Education and Professional Training (MoFE&PT):** With 20 responses, this ministry also achieved an 80% involvement rate, showcasing a substantial commitment to the needs assessment survey.
14. **Ministry of National Health Services and Regulations (MoNHSR):** MoNHSR demonstrated significant engagement with 22 responses, resulting in an 88% involvement rate. This level of involvement suggests a comprehensive understanding of adaptation needs related to health services.
15. **Ministry of Human Rights (MoHR):** MoHR contributed 16 responses, showing a 64% involvement rate. While not the highest, their participation indicates a commitment to addressing climate change adaptation within the context of human rights.
16. **National Commission on Women Status (NCSW):** NCSW displayed a high level of engagement with 21 responses, resulting in an 84% involvement rate. This indicates a strong focus on ensuring gender mainstreaming in adaptation efforts.
17. **Ministry of Housing and Works (MoHW):** MoHW also achieved an 80% involvement rate with 20 responses. This level of engagement is indicative of a comprehensive understanding of adaptation needs in housing and infrastructure.

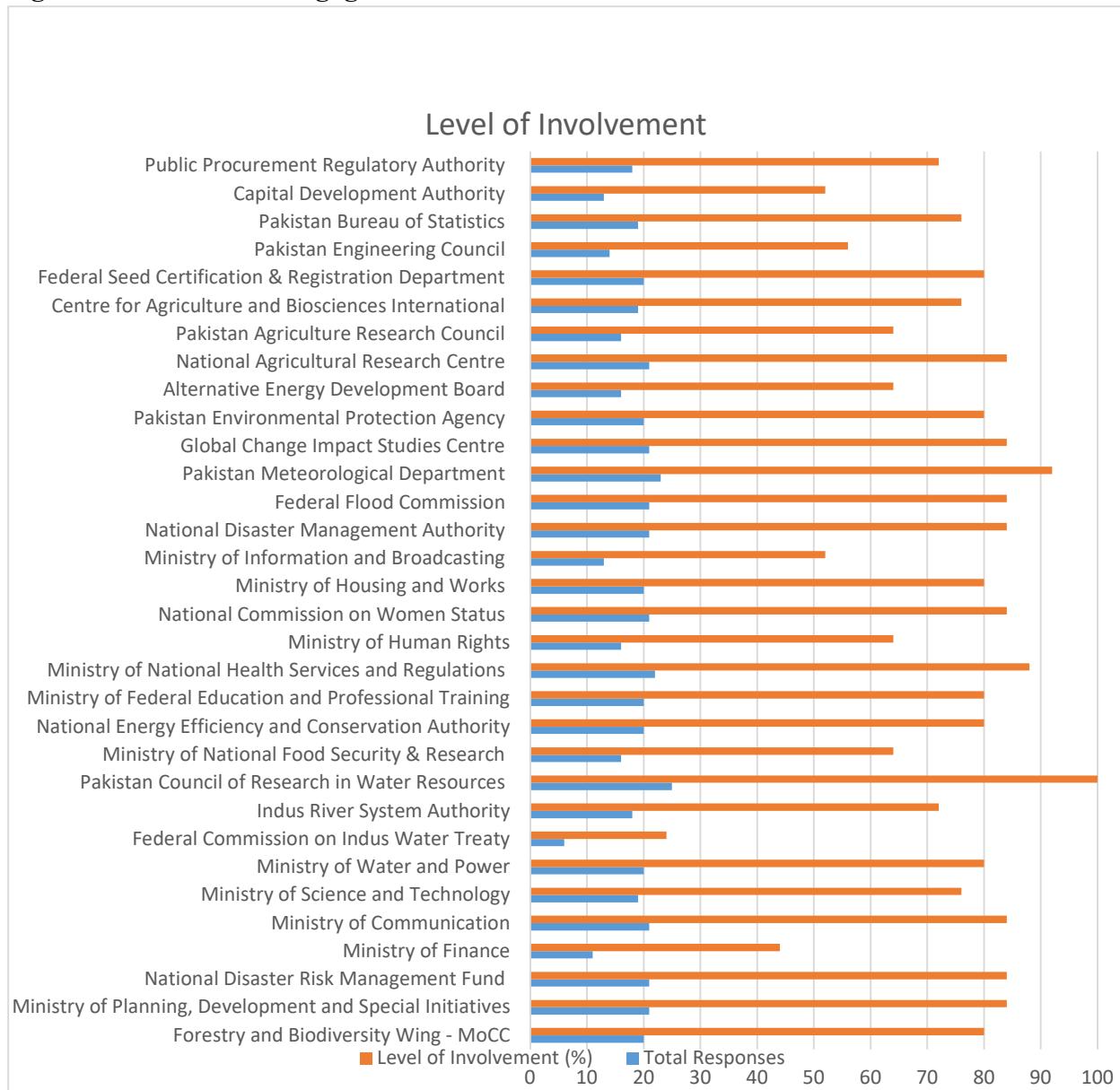
18. **Ministry of Information and Broadcasting (MoIB):** MoIB provided 13 responses, resulting in a 52% involvement rate. While their involvement is moderate, they have contributed insights into adaptation planning and communication.
19. **National Disaster Management Authority (NDMA):** NDMA demonstrated a high level of engagement with 21 responses, resulting in an 84% involvement rate. This signifies a strong commitment to addressing disaster-related adaptation needs.
20. **Federal Flood Commission (FFC):** FFC also showed an 84% involvement rate with 21 responses, indicating a thorough understanding of adaptation needs related to flood management.
21. **Pakistan Meteorological Department (PMD):** PMD displayed a robust commitment with 23 responses, achieving a 92% involvement rate. This is one of the highest levels of involvement, suggesting comprehensive insights into climate data and meteorology's role in adaptation.
22. **Global Change Impact Studies Centre (GCISC):** GCISC contributed 21 responses, resulting in an 84% involvement rate. This highlights their strong engagement in assessing climate change impacts.
23. **Pakistan Environmental Protection Agency (Pak-EPA):** Pak-EPA achieved an 80% involvement rate with 20 responses. This indicates a comprehensive understanding of environmental aspects in adaptation planning.
24. **Alternative Energy Development Board (AEDB/PPIB):** AEDB participated with 16 responses, showing a 64% involvement rate. Their contributions emphasize the role of alternative energy sources in climate adaptation.
25. **National Agricultural Research Centre (NARC):** NARC demonstrated an 84% involvement rate with 21 responses, signifying a strong focus on adaptation needs in the agricultural sector.
26. **Pakistan Agriculture Research Council (PARC):** PARC provided 16 responses, resulting in a 64% involvement rate. While not the highest, their participation reflects a commitment to agricultural research in adaptation.
27. **Centre for Agriculture and Biosciences International (CABI):** CABI displayed a 76% involvement rate with 19 responses, showing active participation in climate-resilient agriculture.
28. **Federal Seed Certification & Registration Department (FSC&RD):** FSC&RD achieved an 80% involvement rate with 20 responses, indicating an understanding of the importance of certified seeds in adaptation.
29. **Pakistan Engineering Council (PEC):** PEC participated with 14 responses, resulting in a 56% involvement rate. Their contributions emphasize engineering standards in adaptation.
30. **Pakistan Bureau of Statistics (PBS):** PBS displayed a 76% involvement rate with 19 responses, showcasing their role in providing climate statistics for policy development.
31. **Capital Development Authority (CDA):** CDA provided 13 responses, resulting in a 52% involvement rate, focusing on urban development in adaptation.
32. **Public Procurement Regulatory Authority (PPRA):** PPRA achieved a 72% involvement rate with 18 responses, emphasizing the role of procurement processes in adaptation.

1.2.5 Level of Engagement:

The analysis in figure-1 presents an overview of stakeholder engagement level, total responses and response rates represented as a percentage, in the needs assessment survey. This information highlights

the extent to which different stakeholders actively participated in the survey and their commitment to the National Adaptation Plan (NAP) process.

Figure 1: Stakeholder Engagement Level



1.2.6 Needs Assessment:

1. Roles and Focal Points:

A significant majority of the stakeholders (81%) confirmed the presence of a focal point for national adaptation within their respective ministries or institutions. This focal point serves as a key contact responsible for facilitating and coordinating adaptation efforts. This level of engagement in terms of focal points demonstrates a structured approach to adaptation at the national level.

2. Climate Change Risks and Vulnerabilities:

Nearly all of the surveyed stakeholders (94%) provided valuable information regarding their perceptions of climate-related risks and vulnerabilities. These insights help in identifying areas of concern and potential challenges associated with climate change in Pakistan.

3. Vulnerable Sectors and Communities:

A high percentage (81%) of respondents identified specific sectors and communities that they believe are particularly vulnerable to climate change. This awareness is essential for tailoring adaptation strategies to address the needs of these susceptible areas.

4. Adaptation Interests and Roles:

The majority of stakeholders (81%) expressed a keen interest in national adaptation. Moreover, over half (63%) defined their specific roles in adaptation planning and implementation. This commitment from key institutions and individuals underscores the significance of climate adaptation in national policy and planning.

5. Responsible Sectors and Ongoing Programs:

Stakeholders (81%) shared insights into the sectors for which they are responsible. Additionally, a substantial number (91%) detailed the adaptation interventions, programs, and activities they are currently involved in. This information highlights the active engagement of various stakeholders in adaptation initiatives.

6. Top Needs and Priorities:

A significant majority (91%) of respondents identified the top three most urgent adaptation needs at the federal level. This critical information can guide resource allocation and strategic planning. Furthermore, the fact that 97% highlighted their top priorities emphasizes the alignment of stakeholder objectives in the adaptation process.

7. Prioritization Criteria and Parameters:

The stakeholders (97%) extensively described the criteria and parameters they employ for prioritizing adaptation interventions within critical sectors. This methodical approach to setting priorities contributes to efficient resource utilization.

8. NAP Involvement and Participation:

More than half of the stakeholders (53%) confirmed their stakeholder status in the national adaptation planning process. Furthermore, 91% outlined their plans for effective participation in shaping national adaptation plans.

9. Policies Implementation and Cross-Sectoral Collaboration:

While a notable proportion (50%) shared core steps for implementing policies, a smaller group (19%) provided suggestions for enhancing cross-sectoral collaboration. Both aspects are essential for the successful execution of adaptation strategies.

10. Monitoring and Evaluation, Public Engagement, and Gender Mainstreaming:

A significant number of respondents (31%, 72%, and 81%, respectively) offered recommendations for monitoring and evaluating adaptation efforts, enhancing public engagement, and mainstreaming gender considerations in adaptation planning and implementation. These insights contribute to robust and inclusive adaptation strategies.

11. Gender Actions:

Additionally, 84% of stakeholders elaborated on gender-specific actions and initiatives. These insights reveal a growing emphasis on gender inclusion in adaptation activities.

12. Capacity and Resource Assessment:

An overwhelming majority (97%) provided valuable information about existing resources and capacities for adaptation at the federal level. This data is critical for understanding the readiness and limitations of stakeholders in implementing adaptation strategies.

13. Capacity Gaps and International Collaboration:

Most stakeholders (81%) identified capacity gaps and challenges in resource access, offering a transparent view of the obstacles they face. Furthermore, 97% of respondents explored opportunities for international collaboration, indicating a willingness to leverage global expertise and resources for adaptation efforts.

1.2.7 Response Parameters:

The figure-2 provides an overview of survey responses showing each parameter, including the total number of responses and the percentage of stakeholders who provided responses for that specific parameter. It helps in understanding the level of engagement and insights provided by the stakeholders in various aspects of the needs assessment survey.

Figure 2: Responses Assessment



1.2.8 Response Distribution:

These observations provide insights into the distribution of responses across different components of the NAP process and highlight the engagement level of stakeholders in each area. In this, an analysis of responses from the needs assessment survey, with a focus on different components of the National Adaptation Plan (NAP) process is given below;

1. Institutional Capacity Assessment:

This component received responses from all stakeholders (100%), indicating a high level of engagement in identifying roles and potential focal points related to climate change adaptation. Stakeholders appear to have provided a comprehensive assessment of the institutional capacities within their respective domains.

2. Risk and Vulnerability Assessment:

Approximately 81% of the stakeholders participated in this assessment. This suggests that a significant majority of respondents contributed to understanding climate-related risks and vulnerabilities, a crucial aspect of effective adaptation planning.

3. Needs Assessment:

The responses for this section were notably high, with 94% of stakeholders providing insights. This demonstrates a strong emphasis on identifying vulnerable sectors and communities, adaptation interests, and current intervention programs. The high response rate reflects a thorough examination of priorities and adaptation requirements.

4. Institutional Roles and Procedures:

Again, around 81% of stakeholders took part in defining roles and procedures within the NAP process. This engagement is crucial for effective coordination and planning at the institutional level.

5. Gender Mainstreaming:

Similarly, 81% of stakeholders were actively involved in gender mainstreaming aspects, indicating a commitment to ensuring the inclusion and participation of women in adaptation planning. This is a positive sign for gender-responsive climate action.

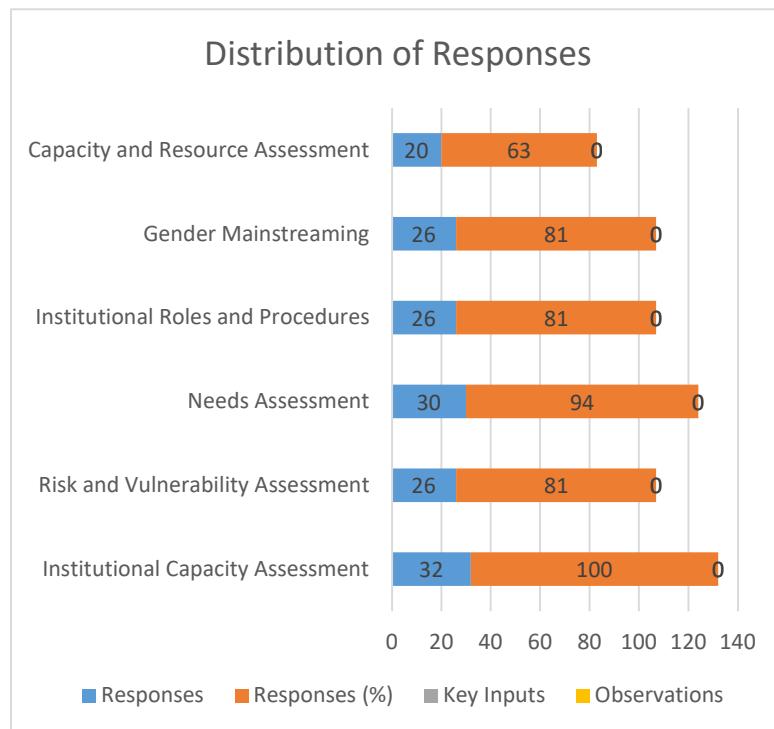
6. Capacity and Resource Assessment:

In this area, 63% of stakeholders provided their inputs. While the response rate is slightly lower, it still signifies a substantial engagement in assessing existing capacities and resources. Understanding the available resources is vital for planning and resource allocation in the adaptation process.

1.2.9 NAP Component Response Rate:

The figure-3 shows distribution of responses across NAP components and highlights maximum observations suggesting that stakeholders actively participated in various components of the NAP process. The relatively high response rates across most components demonstrate a commitment to understanding and addressing climate change-related challenges, vulnerabilities, and adaptation needs, as well as ensuring inclusive and gender-responsive planning. However, there is some room for improvement in enhancing engagement, particularly in capacity and resource assessment.

Figure 3: NAP Component Responses



1.2.10 Key Observations:

- Well Defined Roles and Focus** - The positive aspects are well-defined roles, focus on risk assessment, and a commitment to ongoing adaptation efforts.
- Improvement Needs** - The areas that need improvement are broader stakeholder participation, clarification of roles, enhanced public engagement, and stronger gender mainstreaming.
- Rich Source of Information** - The survey of key stakeholders provides a rich source of information that can guide the development and implementation of climate change adaptation strategies in Pakistan.
- Indicator of Collective Commitment** - The high level of participation and detail in responses indicates a collective commitment to addressing the challenges posed by climate change at the national level.
- Response Level** - The analysis helps in understanding the distribution of responses across different components of the Needs Assessment and provides insights into the level of engagement and focus in each component of the NAP process.
- Input Feedback** - There is a high level of engagement from stakeholders in providing feedback and input for the National Adaptation Plan (NAP) process, with the majority participating in various components.
- Weakness Identification** - Addressing weak areas will contribute to a more comprehensive and effective approach to adaptation and NAP processes.

1.2.11 Findings and Results:

- 1. Needs Assessment:** This component received the highest response rate, indicating a strong interest in identifying priorities and adaptation needs.
- 2. Institutional Capacity Assessment:** This component assesses roles and focal points, and received responses from all stakeholders.
- 3. NAP Stakeholder and NAP Role:** A significant number of stakeholders have well-defined roles in the NAP process. This is a positive sign as it indicates clarity in responsibilities and accountability.
- 4. NAP Participation:** NAP participation is relatively low. This suggests that there might be challenges in engaging a broader range of stakeholders in the planning and implementation of adaptation strategies.
- 5. Perceived Risks and Vulnerabilities:** The majority of stakeholders are involved in understanding climate-related risks and vulnerabilities. This is crucial for building a strong foundation for adaptation planning.
- 6. Vulnerable Sectors and Communities:** Identifying specific sectors and communities vulnerable to climate change is essential for targeted adaptation efforts. The involvement of a significant number of stakeholders in this area is positive.
- 7. Adaptation Interest:** Many stakeholders have expressed an interest in adaptation. This indicates a collective desire to address climate change and its impacts, which is a motivating factor for effective planning.
- 8. Adaptation Planning Role:** While many stakeholders have defined roles in adaptation planning, there is a portion with undefined roles. Clarity in roles is essential to avoid overlaps and ensure efficient planning.
- 9. Responsible Sectors:** A significant number of stakeholders are responsible for specific sectors, which is vital for a coordinated approach to adaptation.
- 10. Capacity and Resource Assessment:** Both components had slightly lower response rates, but they are still crucial aspects of the NAP process
- 11. Capacity Gaps Identification:** Many stakeholders are involved in identifying capacity gaps, which is crucial for addressing resource and skill deficiencies.
- 12. Interventions and Programs:** Many stakeholders are involved in ongoing adaptation interventions and programs. This demonstrates an active commitment to adaptation efforts.
- 13. Top Needs and Top Priorities:** The identification of top needs and priorities is critical for focused planning. The involvement of a large number of stakeholders in these areas indicates alignment with the most pressing issues.
- 14. Public Engagement:** The level of public engagement is relatively low. Expanding public participation in adaptation efforts can enhance community resilience and support.
- 15. Gender Mainstreaming and Gender Actions:** Gender mainstreaming and actions are areas that require more attention. Gender should be integrated into all aspects of adaptation planning for a more inclusive approach.

1.3 Stakeholder Input Integration:

The UNFCCC Studies propose evidence from countries that demonstrates how the stakeholders' consultation information be fed timely into NAP components by highlighting entry points¹. This section gives detail of the needs assessment findings for various NAP process key aspects. Table - 2 shows information synthesis for integration of stakeholder inputs based on the data from the filled questionnaires. The stakeholder inputs were analyzed clarifying stakeholder interest-based roles in risk and vulnerability assessment of each sector, relevant interest, development of interventions and prioritization of actions, participation during engagements, and developing capacities.

Table 2: Stakeholder Input Integration

Steering NAP Process:						
Stakeholder	Role	Risks and Vulnerabilities	Interests	Interventions and Prioritization	NAP Participation	Capacities and Gaps
Ministry of Climate Change (MCC)	Strategic guidance, leadership, coordination, communication, resource mobilization, monitoring, and engagement	Address climate change risks in national policies and strategies.	Provide leadership, coordination, resource mobilization, and international engagement in adaptation efforts.	Providing guidance, oversight, and facilitating communication among stakeholders.	Statutory role in NAP planning - Promote gender inclusive climate adaptation policies.	Collaborate with international partners to align projects with national priorities.
Pakistan Bureau of Statistics (PBS)	Provide statistical data for adaptation planning and monitoring. - Provide Data-Driven Policy Support.	Gather climate-related data, conduct surveys, and provide statistical information for adaptation planning and monitoring.	Gather climate-related data, conduct surveys, and provide accurate statistical information for adaptation planning and monitoring.	Providing climate-related statistical data and information. - Identifying High-Risk Areas. - Collect and provide disaggregate data.	Statutory role in NAP planning by providing data on climate change adaptation indicators - Incorporate gender disaggregated data.	Need for additional resources and support to enhance capabilities for climate data – Need to collaborate with international partners.
Global Change Impact Studies	Conduct research on climate change	Research climate impacts, assess	Mandated role in research on climate impacts on	Conducting research on climate change	Statutory role in NAP planning – Integrate	Need for Indicators to assess gaps –

¹ Adopted from Framework for NAP country level training, designed by UNDP/unitary/giz/UNFCCC

Centre (GCISC)	impacts. – Devise adaptation strategies based on climate data models.	vulnerabilities , and provide scientific input for adaptation strategies.	vulnerable sectors, and climate assessments provide scientific input on adaptation indicators.	impacts - Extensive provincial engagements and consultations and consensus.	MRV component in NAP - Cyclic assessments every 5-6 years – Ensure gender sensitive research .	Assessments on localized classification of vulnerabilities – Exposure visits to provinces – International Collaboration.
Ministry of Planning, Development and Special Initiatives	Alignment with national development goals, inter-ministerial coordination , progress monitoring, development finance integration.	Assess climate risks and integrate adaptation into development plans.	Legal role in appraisal, evaluation, and approval of development projects of line ministries. – Ensure adaptation in development plans.	Piloting implementation of vulnerability and risk assessments in PSDP/ NDRMF projects, monitoring progress. – Rectifying duplication in all development efforts.	Statutory role in NAP planning - PCCA 2017 Implementation - Cross Sectoral and Inter Ministerial Collaborations - Ensure gender-responsive policies.	Compliance issues in PSDP projects ToRs – EAD role to collaborate with international partners for integration of development financing.
National Disaster Risk Management Fund (NDRMF)	Manage funds for disaster risk reduction and climate adaptation.	Fund climate-resilient projects, support risk reduction measures, and evaluate project outcomes	Fund climate-resilient projects, support risk reduction measures, and evaluate project outcomes.	Managing funds for climate adaptation and risk reduction.	Statutory role in NAP planning Support gender responsive disaster risk reduction and assess gender impacts.	Collaborate with international partners for climate adaptation financing and project evaluation.
Ministry of Finance	Budgetary allocations, funds monitoring, resource mobilization	Monitor and allocate funds for climate adaptation projects.	Develop PFM to ensure efficient resource allocation and coordinate funding - Clarity of roles of line ministries - Link resource	Overseeing budget allocations and exploring international climate finance. - Get provincial reporting.	Statutory role in NAP planning to coordinate finance - Incorporate gender considerations to promote	Ownership in activities planned for long term – Financial access for research institutions– Collaborate with

			allocation to gender		inclusive finance.	international partners t.
Ministry of Science and Technology	Climate data and research, technology transfer and innovation, scientific input.	Establish climate data repository, conduct research, provide scientific input, facilitate technology transfer, and promote innovation.	Support climate research, provide scientific input, and collaborate for technology transfer and innovation.	Contributing scientific input, climate data, and technology support. — Policy support for developing climate-resilient technologies	Statutory role in NAP process - Role in monitoring and evaluation of progress - Facilitate women's participation .	Collaborate with international partners for technology support and research collaboration.
Ministry of Federal Education and Professional Training (MoFE&PT)	Oversee educational and professional training programs related to climate change adaptation.	Develop curricula on climate change adaptation, promote climate education, and engage educational institutions in adaptation initiatives.	Develop curricula on climate change adaptation, promote climate education, and engage educational institutions in adaptation initiatives.	Overseeing education and training related to climate adaptation.	Statutory role in NAP process - Promote gender-responsive education on climate adaptation and women's participation .	Collaborate with international partners for climate education and knowledge exchange.

Water Resources:

Stakeholder	Role	Risks and Vulnerabilities	Interests	Interventions and Prioritization	NAP Participation	Capacities and Gaps
Ministry of Water Resource	Water resource and energy management , climate-resilient projects, and integrated planning.	Develop climate-resilient policies, implement water and energy projects, and coordinate with relevant ministries.	Coordinate water and energy projects, and integrate adaptation - Critical role of IRSA and Council of Common Interest in conflict resolution.	Overseeing water and energy projects and promoting adaptation - Prioritization of strategic measures for water conservation (Dams and telemetry system for water accounting).	Statutory role in adaptation planning - NAP indicators and measures - Integrate gender-responsive approaches into water and energy management.	Coordination to be localized - Adaptation planning to be long term - Collaborate with international partners for energy and water resource management.
Pakistan Council of Research in	Conduct water	Support water resource management	Monitor water availability, develop	Conducting research on water	Statutory role in NAP planning -	Collaborate with international

Water Resources (PCRWR)	resource research.	and conservation initiatives.	adaptation strategies, and support sustainable water management.	resources and quality for climate adaptation.	Conduct gender-sensitive research on water resources.	l partners for water resource research and management initiatives.
Indus River System Authority (IRSA)	Regulate water distribution from the Indus River system among the provinces Punjab, Sindh, Khyber Pakhtunkhwa, and Balochistan.	Emphasize risks like water scarcity and vulnerabilities in the Indus River system.	Sustainable water management and prioritizing interventions to ensure adequate water supply.	Maintaining the sustainability of the Indus River System. improving the infrastructure for water storage, irrigation.	Mandated role to collaborate with MoCC to ensure integrated water resource management and assess the impacts on water resources.	Conducts capacity assessments to ensure effective water management. Assess needs and gaps for resources, and institutional capacity.
Federal Commission on Indus Water Treaty	Manage transboundary water flows	Coordinate water flow management with primarily India – Develop plans to monitor flood patterns with PDMA/PMD and provincial irrigation departments	Develop flood risk reduction strategies due to transboundary waters in Sutlej and Ravi – Take control measures to protect settlements and people livelihood	Managing transboundary treaties – Coordinating flood risk reduction especially in Punjab province.	Mandated role as assigned by MoWR in adaptation planning.	Collaborate with cross sectoral agencies and international partners for flood management and mitigation efforts.
Agriculture, Livestock and Food Security:						
Stakeholder	Role	Risks and Vulnerabilities	Interests	Interventions and Prioritization	NAP Participation	Capacities and Gaps
Ministry of National Food Security & Research (MoNFS&R)	Develop policies for climate-resilient agriculture and food security. – Monitor and manage demand and supply of food	Promote climate-smart agricultural practices, facilitate research on climate-resilient crops, and coordinate with stakeholders.	Promote climate-smart agriculture, support research and practices for best yield of staple crops, and coordinate with federal and provincial stakeholders	Addressing agriculture and food security adaptation. - Interventions focus on yield improvement, climate resilient improved	Statutory role in NAP planning - MoCC collaborate with MoNFS&R to take on board provinces - Increase information	Reliability of data by SPARCO – Collaborate with international partners (China, EU and Gulf states models for social

	commodities .		for food security.	crops – Developing dashboard to share real time information.	credibility and authenticity.	mobilization and training for farmers) - Promote gender in agricultural policies.
National Agricultural Research Centre (NARC)	Conduct agricultural research and promote climate-resilient farming practices.	Research climate-resilient crops and farming practices, and collaborate with farmers for sustainable agriculture.	Research climate-resilient crops and farming practices, and collaborate with farmers for sustainable agriculture.	Conducting research on climate-resilient agriculture and farming practices.	Statutory role in NAP planning - Support gender-sensitive agriculture research and promote women in sustainable farming.	Collaborate with international partners for climate-resilient agriculture research and practices.
Pakistan Agriculture Research Council (PARC)	Conduct agricultural research for climate resilient farming practices	Research climate-resilient crops and farming practices, provide technical support to farmers, and promote sustainable agriculture.	Research climate-resilient crops and farming practices, provide technical support to farmers, and promote sustainable agriculture.	Collaborate with national and provincial stakeholders to promote climate-resilient agriculture.	Support gender-sensitive agricultural research and women's involvement in farming.	Collaborate with international partners for national and provincial agricultural research and sustainability.
Centre for Agriculture and Biosciences International (CABI)	Promote sustainable agriculture and agricultural research.	Conduct research on climate-resilient crops and sustainable agriculture, and provide technical expertise.	Conduct research on climate-resilient crops and sustainable agriculture, and provide technical expertise.	Promoting sustainable agriculture and providing technical expertise.	Role in NAP process - Support gender-sensitive agricultural research and women's engagement in sustainable farming.	Collaborate with international partners for sustainable agriculture research and expertise.
Stakeholder	Role	Risks and Vulnerabilities	Interests	Interventions and Prioritization	NAP Participation	Capacities and Gaps
Federal Seed Certification & Registration	Ensure quality seeds for climate-	Certify climate-resilient seeds, promote their	Certify climate-resilient seeds, promote their	Certifying climate-resilient seeds and	Statutory role in NAP planning	Collaborate with international partners

Department (FSC&RD)	resilient agriculture.	use, and ensure quality standards in seed production.	use, and ensure quality standards in seed production.	promoting their use.		for quality seed production and certification - promote women in seed production.
---------------------	------------------------	---	---	----------------------	--	---

Health:						
Stakeholder	Role	Risks and Vulnerabilities	Interests	Interventions and Prioritization	NAP Participation	Capacities and Gaps
Ministry of National Health Services and Regulations (MoNHSR)	Address health impacts of climate change, ensure public health preparedness, and monitor health risks.	Develop health sector adaptation strategies and policies, coordinate with health agencies, and monitor health impacts.	Develop health sector adaptation strategies, coordinate with health agencies, and monitor health impacts.	Addressing health sector adaptation and monitoring health impacts.	Statutory role in NAP planning - Ensure gender-sensitive health sector adaptation policies and support women's health.	Collaborate with international partners for health sector adaptation and knowledge sharing.

Forestry and Biodiversity:						
Stakeholder	Role	Risks and Vulnerabilities	Interests	Interventions and Prioritization	NAP Participation	Capacities and Gaps
Forestry and Biodiversity Wing - Ministry of Climate Change (MCC)	Manage forestry and wildlife conservation for climate resilience and form policies	Promote climate-resilient forestry and wildlife conservation, assess vulnerabilities, and engage provincial forest and wildlife department for implementation.	Promote climate-resilient forestry and wildlife conservation, assess vulnerabilities, and engage provincial forest and wildlife department and local indigenous communities.	Collaborate with national and provincial stakeholders for climate-resilient forestry and wildlife conservation.	- Statutory role in NAP process - Steering NAP process - Stakeholder engagement with forestry, wildlife departments, FBR and TEVTA	Collaborate with international partners for climate-resilient forestry and wildlife conservation. Support gender-inclusive forestry and wildlife conservation

Gender Inclusion:						
Stakeholder	Role	Risks and Vulnerabilities	Interests	Interventions and Prioritization	NAP Participation	Capacities and Gaps

Ministry of Human Rights (MoHR)	Safeguard human rights in climate change adaptation efforts.	Advocate for vulnerable communities' rights, monitor adaptation program's human rights impacts, and ensure inclusive adaptation policies.	Advocate for vulnerable communities' rights, monitor adaptation program's human rights impacts, and ensure inclusive adaptation policies.	- Assign statutory role in planning for safeguarding human rights in adaptation programs – inputs to inform policies.	. Inputs related to violations of human rights in various sectors of the economy	Collaborate with international partners for human rights-based climate adaptation - Advocate for gender-sensitivities in policies.
National Commission on Women Status (NCSW)	Promote gender equality in climate change policies and advocate for gender-responsive climate adaptation policies.	Promote gender-responsive climate adaptation policies - advocate for women's participation in adaptation initiatives, assess gender impacts, and ensure gender equality.	Promote gender-responsive climate adaptation policies, ensure gender-inclusive policies in climate adaptation strategies.	Promoting gender equality in adaptation policies and actions.	Statutory role in NAP planning - Promote gender-sensitive adaptation strategies and engage women in climate adaptation initiatives.	Collaborate with international partners for gender-inclusive climate adaptation.
Urban Resilience:						
Stakeholder	Role	Risks and Vulnerabilities	Interests	Interventions and Prioritization	NAP Participation	Capacities and Gaps
Ministry of Housing and Works (MoHW)	Manage infrastructure development and urban planning for climate-resilient cities.	Integrate climate adaptation considerations into urban development plans, assess infrastructure vulnerability, and promote resilient housing.	Integrate climate adaptation considerations into urban development plans, assess infrastructure vulnerability, and promote resilient housing.	Addressing urban resilience and infrastructure adaptation.	Statutory role in NAP planning Incorporate gender considerations in urban development and promote resilient housing for women.	Collaborate with international partners for resilient urban development and infrastructure.
Ministry of Communication	Infrastructure and transport resilience, disaster risk reduction, early	Identify vulnerable infrastructure, enhance resilience, and coordinate disaster risk	Develop and implement climate-resilient infrastructure projects and coordinate	Addressing infrastructure resilience, disaster risk reduction, and early	- Statutory role in NAP planning - Green initiative with MoCC Afforestation	Collaborate with international partners. Promote gender-inclusive

	warning systems, and disaster response coordination.	reduction and response efforts.	disaster preparedness and response.	warning systems.	as part of PC1-	disaster preparedness and response.
Pakistan Engineering Council (PEC)	Ensure engineering standards for climate-resilient infrastructure.	Set engineering standards for climate-resilient infrastructure, assess projects, and promote climate-resilient engineering practices.	Set engineering standards for climate-resilient infrastructure, assess projects, and promote climate-resilient engineering practices.	Setting engineering standards for climate resilience.	Statutory role in NAP planning- Promote gender-inclusive engineering standards and women's participation in engineering projects.	Collaborate with international partners for climate-resilient engineering practices.
National Energy Efficiency and Conservation Authority (NEECA), Ministry of Energy (MoE)	Develop and implement energy-related policies and strategies for climate change adaptation.	Provide technical expertise, collaborate with stakeholders, and integrate climate adaptation into energy policies.	Provide technical expertise, collaborate with stakeholders, and integrate climate adaptation into energy policies.	Contributing to energy-related adaptation policies and strategies. Promoting the use of energy-efficient technologies, renewable energy sources.	Statutory role in NAP planning; Promote gender-inclusive energy policies and support women's participation in the energy sector.	Collaborate with international partners for clean energy and climate-resilient energy initiatives.
Alternative Energy Development Board (AEDB/PPIB)	Promote renewable energy sources and sustainable energy solutions.	Develop renewable energy projects, promote sustainable energy solutions.	Develop renewable energy projects, promote sustainable energy solutions, and integrate climate adaptation.	Promoting renewable energy and sustainable energy solutions.	Statutory role in NAP process - Promote gender-inclusive renewable energy initiatives.	Collaborate with international partners for renewable energy and sustainability projects.
Public Procurement Regulatory Authority (PPRA)	Regulate public procurement processes for climate adaptation projects.	Ensure transparency, fairness, and efficiency in procurement for adaptation projects, and	Ensure transparency, fairness, and efficiency in procurement for adaptation projects, and	Collaborate with national and provincial stakeholders to ensure transparent	Statutory role in NAP process – Integrate waste management and	Collaborate with international partners for climate-resilient procurement

		integrate climate considerations	integrate climate considerations	and climate-resilient procurement	procurements into NAP.	processes. – Women participation in projects.
Capital Development Authority (CDA)	Urban development, infrastructure planning, and city management	Assess climate-related risks and vulnerabilities in urban areas, including infrastructure vulnerability to extreme weather events.	Ensure sustainable and resilient urban development	Developing adaptation interventions, focusing on urban resilience and prioritizing infrastructure upgrades.	Actively participate in the NAP process, contributing its urban development expertise.	Existing capacities in urban planning and development – Capacity building for climate-specific expertise and funding for climate-resilient infrastructure.
Pakistan Environmental Protection Agency (Pak-EPA)	Ensure environmental protection in climate adaptation projects.	Assess environmental impacts, provide recommendations, and ensure compliance with environmental regulations.	Assess environmental impacts, provide recommendations, and ensure compliance with environmental regulations.	Assessing environmental impacts in adaptation projects.	Statutory role in NAP planning - Incorporate gender considerations in environmental assessments and regulations.	Collaborate with international partners for environmental protection in adaptation projects.

Disaster Management:

Stakeholder	Role	Risks and Vulnerabilities	Interests	Interventions and Prioritization	NAP Participation	Capacities and Gaps
National Disaster Management Authority (NDMA)	Disaster management and reduction, disaster risk integration, early warning systems, and disaster expertise.	Integrate adaptation into disaster plans, enhance early warnings, provide expertise, and coordinate with provincial authorities.	Integrate adaptation into disaster plans, enhance early warnings, provide expertise, and coordinate with provincial authorities.	Integrating adaptation into disaster management and early warning systems. - and coordinate with women welfare organizations in disaster response.	Statutory role in adaptation planning - sharing - Formulate gender-sensitive disaster risk reduction plans.	Collaborate with national entities during disasters and international partners for disaster risk reduction and expertise

Federal Flood Commission (FFC)	Coordinate flood management and mitigation efforts.	Develop flood risk reduction strategies, monitor flood patterns, and implement flood control measures.	Develop flood risk reduction strategies, monitor flood patterns, and implement flood control measures.	Coordinating flood risk reduction and control measures and coordinate with women welfare departments in flood management.	Statutory role in NAP process – Integrate gender sensitive flood control measures into NAP planning.	Collaborate with international partners. Promote gender-sensitive flood risk reduction.
Pakistan Meteorological Department (PMD)	Provide climate data and weather forecasting.	Forecast climate trends and weather events, provide early warnings, and monitor climate patterns.	Forecast climate trends and weather events, provide early warnings, and monitor climate patterns.	Providing climate data, weather forecasts, and gender sensitive climate information in early warning system.	Statutory role in NAP planning – Provide data and analysis on climate scenarios for vulnerable sectors -	Collaborate with international partners for climate data sharing and forecasting. Promote gender-inclusive early warnings.
Ministry of Information and Broadcasting (MoIB)	Communicate climate change adaptation information to the public.	Raise awareness, disseminate climate information, and engage in climate-related public outreach efforts.	Raise awareness, disseminate climate information, and engage in climate-related public outreach efforts.	Communicating climate information and raising public awareness.	Statutory role in NAP process - Promote gender inclusive climate communication and outreach.	Collaborate with international partners for climate communication and public awareness.

2. NAP Promotion Opportunities:

This section gives an account of opportunities for NAP stakeholders to participate in national, provincial and local events. These opportunities provide a framework to engage in planned standing national and local events, and promote and advance national adaptation planning. These opportunities allow for cross-sectoral collaboration, knowledge exchange, and community engagement, ultimately contributing to building a resilient and adaptive nation in the face of climate change challenges. These opportunities can further present a range of avenues to support and enhance national adaptation planning.

2.1 The Planned and Standing Events:

The planned standing events offer stakeholders various entry points for engagement, collaboration, and advocacy of success of adaptation efforts. These events can highlight inclusive and comprehensive indigenous adaptation approaches which can help plan adaptation interventions and strategies across all vulnerable sectors. These events can lead to valuable outcomes, such as increased awareness, knowledge sharing, capacity building, and frequent engagements. These events collectively contribute to uniting stakeholders across different levels and sectors, and ensuring the nation's preparedness to confront the climatic challenges by building a culture of adaptation, as shown in table-3. The integration of these events into NAP roadmap is crucial for fostering a holistic approach to adaptation planning.

Table 3: NAP Promotion Opportunities

Opportunities	Description	Purpose
National Climate Change Adaptation Conference	- Participate in national conferences on adaptation	- Share research, case studies, and initiatives on national adaptation planning - Engage in knowledge exchange with experts, policymakers, and stakeholders
Regional and District Level Workshops	- Participate in local workshops and consultations	- Share insights on local adaptation planning in Pakistan - Contribute to discussions on challenges and best practices
Community Forums, City Hall and Town Meetings	- Engage with communities at local events	- Educate on climate change impacts and adaptation - Gather feedback and ideas for national planning.
Policy Consultation Sessions	- Participate in policy sessions to influence planning	- Provide input and recommendations for adaptation policies and strategies - Advocate for specific measures in national planning.
Media Interviews and Articles	- Collaborate with media for wider awareness	- Use interviews and articles to inform and advocate for adaptation planning - Share experiences and challenges to inspire others.
Training and Capacity	- Attend training programs for knowledge enhancement	- Develop skills to contribute effectively to national adaptation planning

Building Programs		<ul style="list-style-type: none"> - Learn techniques and tools for planning and communication.
Collaboration with NGOs and Civil Society Organizations	<ul style="list-style-type: none"> - Collaborate with local NGOs and civil society groups 	<ul style="list-style-type: none"> - Participate in events to promote adaptation awareness - Volunteer or offer expertise to their adaptation initiatives.
Research and Academic Conferences	<ul style="list-style-type: none"> - Participate in academic conferences on adaptation 	<ul style="list-style-type: none"> - Present research findings related to national adaptation planning - Network and collaborate with researchers and policymakers.

2.2 The Event Type:

The different types of events at the national, provincial, and local levels, along with their descriptions and purposes in promoting national adaptation planning in Pakistan are described in table - 5. The Ministry of Climate Change will update stakeholders on upcoming events and opportunities through official government websites in federal and provinces, related research institutions, NGOs, and professional networks working in the field of climate change and adaptation in Pakistan.

Table 4: Types of Promotion Opportunities

Event Type	Description	Purposes
1- National Events		
Workshops and Conferences	<ul style="list-style-type: none"> - Bring experts, policymakers, NGOs, stakeholders together 	<ul style="list-style-type: none"> - Exchange ideas, best practices, research. - Foster collective understanding of adaptation planning.
Policy Dialogues	<ul style="list-style-type: none"> - Engage stakeholders with decision-makers 	<ul style="list-style-type: none"> - Influence integration of adaptation into policies and frameworks.
Climate Awareness Campaigns	<ul style="list-style-type: none"> - Raise public awareness about climate change impacts 	<ul style="list-style-type: none"> - Promote understanding and action on adaptation.
Climate Weeks and Summits	<ul style="list-style-type: none"> - Showcase successful adaptation stories, innovations, commitments 	<ul style="list-style-type: none"> - Inspire contribution to national adaptation agenda.
2- Provincial Events		
Provincial Workshops and Conferences	<ul style="list-style-type: none"> - Bring together local experts, stakeholders, and policymakers 	<ul style="list-style-type: none"> - Discuss adaptation strategies relevant to the specific province - Promote localized understanding and planning.

Policy Integration Forums	<ul style="list-style-type: none"> - Engage provincial decision-makers and stakeholders 	<ul style="list-style-type: none"> - Advocate for the inclusion of adaptation measures in provincial policies and plans.
Climate Resilience Exhibitions	<ul style="list-style-type: none"> - Showcase adaptation projects, technologies, and solutions implemented at the provincial level 	<ul style="list-style-type: none"> - Inspire replication and innovation.
Community Engagement Campaigns	<ul style="list-style-type: none"> - Target local communities in specific provinces 	<ul style="list-style-type: none"> - Raise awareness about climate impacts and the importance of adaptation - Encourage local participation and ownership.
Provincial Training Workshops	<ul style="list-style-type: none"> - Build capacity among local stakeholders on adaptation planning and implementation 	<ul style="list-style-type: none"> - Empower provinces to develop and execute their adaptation strategies.
Research and Data Sharing Seminars	<ul style="list-style-type: none"> - Share province-specific climate data, research findings, and vulnerability assessments. 	<ul style="list-style-type: none"> - Inform adaptation decisions with locally relevant information.

3- Local Events

Community Workshops	<ul style="list-style-type: none"> - Engage local communities, share contextually relevant adaptation practices 	<ul style="list-style-type: none"> - Foster empowerment and ownership.
School Programs	<ul style="list-style-type: none"> - Instill climate awareness, adaptation concepts among students 	<ul style="list-style-type: none"> - Foster a sustainable mindset in future generations.
Farmers' Meetings	<ul style="list-style-type: none"> - Share adaptive agricultural practices, benefiting rural communities 	<ul style="list-style-type: none"> - Enhance resilience in changing climate conditions.
Urban Planning Forums	<ul style="list-style-type: none"> - Integrate adaptation into urban planning 	<ul style="list-style-type: none"> - Enhance city resilience to climate impacts.

3 Engagement Integration:

The NAP promotion opportunities emphasize inclusive stakeholder engagement, ensuring representation from diverse sectors and communities. This integrated approach involves systematic integration of various processes with activities and outputs. These processes are integral to planning for consultations, risk analysis, institutional arrangement and responsive governance.

3.1 Mapping and Engagement

The engagement strategy involves a comprehensive stakeholder identification and mapping approach followed by assessments and an effective communication.

- 1. Stakeholder Mapping** - The process begins with stakeholder identification and mapping, led by the Ministry of Climate Change (MCC), which identifies individuals and entities engaged in NAP-related initiatives. A series of workshops, including the Inception Workshop and subsequent Consultative Workshops at national level, enable engagement and collaboration among stakeholders. Eight vulnerable sectors are identified as focal points for adaptation actions, and the Pakistan Climate Change Authority (PCCA) takes on the role of coordinating the overall NAP process.
- 2. Engagement Design** - This process is guided by designing a comprehensive stakeholder engagement strategy that emphasizes collaboration, coordination, and alignment of interests among various stakeholders at the national and provincial levels. This strategy aims to ensure effective climate change adaptation by involving key and powerful players from vulnerable sectors. This strategy is a linchpin of the NAP process, involving country-led coordination mechanisms, federal-to-provincial coordination, and engagement with academia, CSOs, CBOs, NGOs, and international organizations.
- 3. Capacity Assessment** - The process also focuses on capacity needs assessment, linking engagement to a communication strategy, and tapping national opportunities to promote the NAP process. The engagement of stakeholders in vulnerable sectors; water resources, agriculture and livestock, forestry and biodiversity, human health, disaster preparedness, urban resilience, and gender inclusion, demonstrates the collaborative approach to adaptation.
- 4. Prioritization** - National and provincial stakeholders within each sector contribute to policy formulation, planning, and implementation of adaptation strategies in medium to long term i.e., prioritization of actions, measures and interventions.
- 5. Effective Communication** - The success of Pakistan's NAP process hinges on effective collaboration, communication, and alignment among stakeholders. Their combined efforts and contributions across sectors and governance levels are crucial for building resilience to climate change impacts, safeguarding vulnerable communities, and securing a sustainable and resilient future for the country.

3.2 NAP Communication:

The NAP communication outlines the structured engagement, tailored communication, and feedback loops to enhance stakeholder engagement. It aims to align stakeholders' efforts toward the common goal of climate adaptation within NAP process.

- 1. Multi-Channel Approach** - involves inclusive messaging, and capacity-building initiatives to address the diverse needs and roles of stakeholders at national and provincial levels. It enhances the overall effectiveness by fostering collaboration, understanding, and knowledge exchange, and promoting successful adaptation and resilience efforts.
- 2. Structured Engagement** - emphasizes the capacity assessment and tailored communication. It ensures that stakeholders with varying backgrounds, expertise, and responsibilities can actively contribute local indigenous experiences to the NAP process.
- 3. Integration of Feedback Mechanisms** - includes inclusive messaging, and capacity-building workshops, allows for continuous improvement and knowledge exchange, and fosters a deeper understanding by localizing climate risks and workable adaptation strategies.
- 4. Platforms for Engagement** - through stakeholder workshops, online platforms, and interactive webinars, the NAP communication creates platforms for discussion, information sharing, and collaborative problem-solving. These initiatives not only enhance stakeholder involvement but also contribute to a more informed decision-making process, leading to more effective climate adaptation measures.
- 5. Role Clarification** - defines roles, clarifies responsibilities, and promotes coordination among stakeholders to maximize the impact of climate adaptation efforts. The continuous updates, feedback surveys, monitoring and review, and transparent communication channels maintain stakeholder engagement throughout the NAP process, ensuring sustained commitment and momentum.
- 6. Linking Engagement and Roadmap** - NAP communication serves as a vital bridge between the NAP roadmap and the active participation of stakeholders. It recognizes that effective climate adaptation requires a united effort and a shared understanding of diverse challenges and opportunities.

3.2.1 Communication Approaches:

Table - 5 outlines a basic communication plan for engaging national and provincial stakeholders for various sectors, highlighting the key stakeholder communication roles and the specific communication approaches to foster collaboration and alignment with adaptation goals.

Table 5: NAP Communication

Sector	Stakeholder	Communication Approaches
Water Resources Sector	Ministry of Water and Power	Organize workshops to integrate water conservation and harvesting into policies. Collaborate on groundwater conservation and rainwater harvesting strategies.
	Pakistan Council of Research in Water Resources	Collaborate on research to support water conservation and management initiatives.
	Ministry of Climate Change	Integrate climate adaptation into water policies.
	GCSIC, PMD	Collaborate on climate information analysis and assessments for water resources.
	Ministry of Planning, Development and Reform	Include water-related adaptation strategies in development projects' feasibility planning and allocate budget accordingly.

	Ministry of Finance	Collaborate with Ministry of Planning to ensure budget allocation for NAP. Focus on cross-sectoral adaptation needs.
	Ministry of Energy	Integrate energy conservation and renewable energy policies for water sector needs.
	Water and Sanitation Agency	Work together to implement quality programs for clean water supply and promote public awareness.
	Provincial Irrigation Departments	Work together to develop irrigation and infrastructure policies for water resource efficiency.
Agriculture and Livestock Sector	Ministry of National Food Security and Research	Organize workshops to integrate climate adaptation into agriculture and livestock policies for better food security.
	Pakistan Agriculture Research Council and National Agriculture Research Council	Conduct research on climate-resilient crops and share findings with relevant policies.
	Pakistan Agricultural Storage and Services Corporation Limited	Collaborate on food security strategies through efficient planning.
	Centre for Agriculture and Biosciences International	Develop climate-resilient crop strategies and collaborate on their implementation.
	Federal Seed Certification & Registration Department	Integrate quality seed standards into adaptation policies.
	GCSIC, PMD	Collaborate on climate information analysis and assessments for agriculture.
	Ministry of Climate Change	Integrate climate adaptation into agriculture policies.
Forestry, Biodiversity, and Ecosystems Sector	Ministry of Climate Change	Organize workshops to collaborate on policies related to environment, biodiversity, and ecology preservation.
	Provincial Forest Departments, Wildlife Departs	Work together to collaborate on better conservation through adaptation measures.
Human Health Sector	Ministry of National Health Services and Regulations	Organize workshops to incorporate adaptation policies into public health strategies.
	Provincial Health Departments	Work together to implement adaptation interventions in general public health.
Disaster Preparedness Sector	National Disaster Management Authority	Organize workshops to collaborate on disaster response strategies based on climate information.
	Pakistan Meteorological Department (PMD)	Share climate change data for disaster management.
	Federal Flood Commission	Share data and collaborate on flood situation in the country.

	National Disaster Risk Management Fund	Integrate financing into disaster risk management by prioritizing needs.
	Ministry of Information and Broadcasting	Integrate and implement climate resilience into national broadcasting.
Urban Resilience Sector	Ministry of Housing and Works	Organize workshops to collaborate on urban planning for climate resilience.
	Ministry of Planning, Development and Reform	Integrate climate resilience interventions in urban development planning.
	Capital Development Authority, Public Works Department	Develop climate-resilient infrastructure.
	Ministry of Communication	Integrate efforts into climate resilient road infrastructure.
	Pak-EPAs	Implement environmental protection policies for urban areas.
Gender Sector	Ministry of Human Rights	Collaborate on policies for gender inclusion in NAP.
	National Commission on Women Status	Empower women and promote gender equality in adaptation planning.
	Ministry of Information and Broadcasting	Integrate and implement climate resilience into national broadcasting.
	Provincial Women Development Departments, Population Welfare Department	Empower women economically and technically for climate resilience.

3.3 Strategy Contribution:

This section explains the contribution of the engagement strategy to the NAP communication at various stages of the stakeholder engagements. The engagement strategy provides a roadmap to capture the underlying activities of the stakeholders in medium and long term. This helps achieve their perspective on readiness and preparedness in various components of the NAP process. The stakeholder needs assessment also help align aspects of readiness and preparedness through their inputs. Main consensus-based activities under the NAP process components are reviewed concisely here based on analysis of actual information provided during consultations.

A structured analysis of contribution of engagement strategy to the NAP communication and NAP project activities is shown in table - 6.

Table 6: Engagement Strategy Interaction

Aspect	Engagement Strategy	NAP Communication	NAP Output Activities
Objective	Involves stakeholders in decision-making, gathers local knowledge, and ensures buy-in.	Ensures transparency, educates stakeholders, and gathers feedback.	Implements adaptation measures based on timeline and milestones.

Approach	Workshops, consultations, collaboration with local communities and experts.	Public awareness campaigns, regular updates, feedback mechanisms.	Vulnerability assessment, adaptation measure formulation, prioritization.
Interdependence	Feeds stakeholder input into NAP activities, aligns with roadmap milestones.	Aligns communication with project activities and roadmap timeline.	Communication keeps stakeholders engaged and informed throughout process.
Entry Points	Stakeholder engagement points, involvement mechanisms, consultation frameworks.	Information dissemination channels, engagement platforms.	Timeline, milestones, actions for vulnerability assessment and planning.
Impact	Enhances relevance and feasibility of NAP, fosters ownership.	Ensures public understanding, fosters trust, and reduces misconceptions.	Progressively achieves NAP objectives while keeping stakeholders engaged.

3.4 Interaction Analysis:

The analysis of the interaction between engagement strategy, NAP communication and opportunities uses a multifaceted approach and communication means. The capacity assessment and NAP communication address stakeholder-specific needs while enhancing engagement. An effective stakeholder engagement utilizes a structured approach for the alignment of stakeholder roles to various NAP components.

3.4.1 Role Clarity:

The role clarity prevents overlaps, and ensures transparency and efficient resource utilization. In this, the robust coordination mechanisms align national, provincial, and local stakeholder interests and adaptation strategies, fostering a cohesive approach. It initiates structured consultations, workshops, and forums to provide a platform for collaborative input. The table - 7 depicts the role of the communication modes in essential elements of engagement and NAP opportunities.

3.4.2 Communication Elements:

It further highlights that tailored NAP communication addresses specific capacity needs and provides accessible materials for a diverse audience. Multiple communication channels, including online platforms and interactive webinars facilitate frequent information dissemination for awareness and knowledge sharing. Iterative feedback mechanisms, including surveys, enable improvements in communication for better stakeholder engagement. This comprehensive approach demonstrates the critical role of communication in enhancing collaboration. Following is the interaction analysis of engagement strategy, and NAP communication and opportunities in table - 7.

Table 7: Interaction Analysis

NAP Communication Elements	Interaction with Engagement Strategy	Opportunities on NAP Project
-----------------------------------	---	-------------------------------------

Stakeholder Engagement	<ul style="list-style-type: none"> - Initiates structured engagement plan involving consultations, workshops, and forums. 	<ul style="list-style-type: none"> - Provides a platform for stakeholders to share insights and concerns, fostering collaboration.
Capacity Assessment	<ul style="list-style-type: none"> - Identifies strengths and gaps in stakeholders' capacity for tailored communication. 	<ul style="list-style-type: none"> - Tailored communication enhances engagement by addressing stakeholders' specific needs.
Information Dissemination	<ul style="list-style-type: none"> - Uses diverse channels for sharing NAP progress, strategies, and findings. 	<ul style="list-style-type: none"> - Increases stakeholders' awareness of project milestones and achievements.
Stakeholder Roles Clarification	<ul style="list-style-type: none"> - Outlines roles to align stakeholders' contributions towards common goals. 	<ul style="list-style-type: none"> - Clear roles prevent overlaps, ensuring efficient use of resources.
Coordination Mechanisms	<ul style="list-style-type: none"> - Establish collaboration framework for vertical integration of efforts. 	<ul style="list-style-type: none"> - Ensure alignment of national, provincial, and local adaptation strategies.
Feedback Mechanisms	<ul style="list-style-type: none"> - Collect insights to adapt communication strategies based on stakeholders' input. 	<ul style="list-style-type: none"> - Allow iterative improvement of communication for better stakeholder engagement.
Inclusive Messaging	<ul style="list-style-type: none"> - Develops accessible communication materials tailored to diverse audiences. 	<ul style="list-style-type: none"> - Enhances engagement by resonating with different stakeholders' understanding levels.
Stakeholder Workshops	<ul style="list-style-type: none"> - Facilitate collaborative discussions and problem-solving. 	<ul style="list-style-type: none"> - Enable stakeholders to jointly contribute to the development of adaptation strategies.
Online Platform	<ul style="list-style-type: none"> - Provides a central hub for information access and interactive discussions. 	<ul style="list-style-type: none"> - Enhances transparency and accessibility of NAP-related information.
Regular Updates	<ul style="list-style-type: none"> - Keep stakeholders informed about progress and upcoming events. 	<ul style="list-style-type: none"> - Maintain stakeholders' interest and involvement throughout the project timeline.
Interactive Webinars	<ul style="list-style-type: none"> - Encourage active participation and knowledge sharing. 	<ul style="list-style-type: none"> - Deepen stakeholders' understanding through interactive learning experiences.
Capacity Building	<ul style="list-style-type: none"> - Equips stakeholders with knowledge for effective contribution. 	<ul style="list-style-type: none"> - Empowers stakeholders to actively engage in decision-making processes.
Feedback Surveys	<ul style="list-style-type: none"> - Collect feedback for continuous improvement of communication strategies. 	<ul style="list-style-type: none"> - Provide insights into stakeholder satisfaction and suggests areas for enhancement.
Conclusion	<ul style="list-style-type: none"> - Demonstrates how effective communication fosters collaboration. 	<ul style="list-style-type: none"> - Highlights the potential benefits of successful stakeholder engagement for climate resilience.

4. Risk Analysis:

The risks of disenfranchisement give rise to weakened progress and impact. The risk analysis of disenfranchisement is based on two critical factors which could cause such lack of ownership of stakeholders in the NAP process.

1. Lack of Interest-Based Roles - The needs assessment highlights major gaps in mandated and interest-based roles of stakeholders, hence their individual efforts for adaptation in Pakistan lead to no fruition. These gaps increase the risk of disenfranchisement in medium to long term projects. The major risks have been identified by stakeholders are lack of cyclic engagement of key stakeholders with power in line ministries.

2. Lack of Commitment - Due to this fact, the implementing entities at national, provincial and local government level show lack of commitment to adaptation efforts. Other factors for the lack of interest were highlighted as capacity gaps in technical expertise, financial resources and inadequate human resource, and lacking integration of adaptation into main policies and regulations, hence lacking action planning.

3. Ineffective Coordination – The consultation highlights that institution arrangement such as working group structures work in silos and face disconnecting issues. Also, after devolution, the coordination mechanism is not existing or ineffective among line ministries and their extension department in provinces, hence posits challenges of ineffective engagement and communication.

4.1 Major Risks:

The needs assessment has led to identify potential risks highlighted during consultations with government stakeholders. It also gives an account of the remedies to minimize such risks. A holistic approach can help minimize the risks associated with disenfranchisement and lack of ownership by these stakeholders, thereby enhancing the effectiveness of stakeholder engagement in NAP process.

4.2 Risk Management:

The core mitigation strategies focus on both fostering increased interest and commitment among government stakeholders and addressing their concerns and potential barriers to active involvement in the NAP process.

Table - 8 explains the risks associated with disenfranchisement that could cause a lack of ownership of the NAP process. It highlights potential risks, causes, and consequences. It further gives risk mitigation strategies to cope with disengagement from the NAP process.

Table 8: Risks and Mitigation

Risk Category	Description	Potential Consequences	Mitigation Strategies
Loss of Stakeholder Interest	Government stakeholders with low interest may disengage from the NAP process, reducing their contribution and diminishing the NAP's comprehensiveness.	Reduced diversity of perspectives and expertise in adaptation planning, potentially overlooking critical climate vulnerabilities.	Regularly communicate the significance of their roles and contributions, showcasing the benefits of their active involvement in NAP implementation. Provide training and capacity-building to enhance their understanding and motivation.

Lack of Commitment to Implementation	Apathetic government stakeholders may not prioritize NAP implementation, leading to delayed or inadequate adaptation actions.	Slower progress in building climate resilience, leaving vulnerable communities at risk of climate impacts and hampering sustainable development.	Engage stakeholders in developing realistic and achievable goals, emphasizing the importance of NAP in achieving broader development objectives. Establish clear accountability mechanisms and timelines for implementation.
Limited Resource Allocation	Government entities with low interest may allocate insufficient resources to NAP activities, hindering effective planning and execution.	Inadequate funding and human resources may result in suboptimal adaptation measures, reducing the NAP's impact and effectiveness.	Advocate for increased budget allocation for NAP-related initiatives. Highlight the economic benefits of proactive adaptation, emphasizing cost-effectiveness. Foster partnerships with international donors and organizations for additional resources.
Policy and Regulatory Bottlenecks	Government stakeholders lacking interest may not advocate for necessary policy changes or adaptations, impeding progress in critical areas.	Outdated or inappropriate policies may hinder adaptation efforts and limit the ability to respond effectively to evolving climate risks.	Raise awareness among stakeholders about the need for policy reform to align with climate adaptation goals. Collaborate with relevant departments to streamline policy changes that facilitate NAP implementation.
Ineffective Communication	Poor engagement and interest may result from inadequate communication efforts, exacerbating disengagement.	Misunderstandings, misalignment of objectives, and distrust among stakeholders may compromise the NAP process and its outcomes.	Develop a targeted communication strategy to consistently inform and engage government stakeholders. Tailor messages to resonate with their interests and priorities. Foster open dialogue and information-sharing forums to address concerns and build consensus.

5. Comprehensive Engagement:

A wide range of stakeholders can contribute to a holistic and inclusive NAP process in Pakistan. The need assessment helps recommend a course of action for the institutional arrangements to

minimize risks and maximize the impact of the NAP process. This can reflect on the design of NAP road map to capture all national, provincial and local opportunities to make it effective to minimize risks. A comprehensive institutional engagement framework can ensure that all possible opportunities are identified and capitalized upon for climate adaptation. Here are salient features;

1. Multi-Stakeholder Coordination:

Establish a National Climate Change Council with representation from line ministries and provincial governments responsible for vulnerable sectors. This body can provide overall guidance and coordination for the NAP process.

2. National Designated Authority (NDA):

Designate a lead agency as the NDA responsible for overseeing the NAP process and resources allocation for adaptation activities.

3. Ministry of Climate Change:

Strengthen the cross sectoral role Ministry of Climate Change as the focal point for climate-related matters for coordination and monitoring of adaptation efforts across different sectors.

4. Sectoral Ministries:

Involve relevant line ministries responsible for key vulnerable sectors in the NAP process to integrate climate adaptation considerations into their policies and programs.

5. Provincial Departments:

Empower provincial extension and line departments to oversee adaptation planning and implementation at the provincial level. They should work closely with their respective sectoral departments to ensure alignment.

6. Provincial Coordination Bodies:

Establish Provincial Climate Change Committees to facilitate coordination among relevant provincial departments and to ensure that adaptation priorities reflect local contexts and needs.

7. Research and Academic Institutions:

Engage research and academic institutions to provide scientific expertise, data, and research support for evidence-based decision-making in adaptation efforts.

8. Local Governments:

Involve local governments to play a critical role in implementing adaptation strategies at the community level. Devolve adaptation planning and funding mechanisms to local levels.

9. Private Sector Engagement:

Engage the private sector through business associations and chambers of commerce to identify opportunities for private sector investments in climate-resilient infrastructure, technologies, products and services.

10. Civil Society and NGOs:

Include civil society organizations and non-governmental organizations in the NAP process to ensure that the needs and perspectives of vulnerable communities are considered and grassroot adaptation initiatives are supported.

11. Data and Information Sharing:

Promote the sharing of climate-related data, research findings, and best practices among relevant institutions. This can enhance the quality of adaptation planning and implementation.

12. Capacity Building:

Invest in capacity-building initiatives for relevant institutions to enhance their understanding of climate change impacts, vulnerability assessments, and adaptation strategies.

13. Monitoring and Evaluation:

Incorporate mechanisms for monitoring and evaluating the progress of adaptation initiatives. Regular reviews and assessments will help in identifying successes, challenges, and areas needing improvement.

14. International Collaboration:

Collaborate with international organizations, development partners, and other countries to share experiences, best practices, and funding opportunities for adaptation.

5.1 Engagement Framework:

Effective institutional engagement involves a wide range of stakeholders with core functions to ensure that all possible opportunities for climate adaptation are identified and capitalized upon in order to contribute to a holistic and inclusive NAP process as shown in table - 9.

Table 9: Engagement Framework

Key Stakeholder	NAP based function
1. National Climate Change Council (NCCC)	- Establish a National Climate Change Council to steer NAP process.
2. National Designated Authority (NDA)	- Designate a lead agency as the NDA with the authority to coordinate, facilitate, and allocate resources for adaptation activities.
3. Ministry of Climate Change	- Strengthen the core role of Ministry of Climate Change as the focal point for Climate Change Adaptation and NAP process.
4. Sectoral Ministries	- Involve line ministries in agriculture, water resources, health, urban planning, disaster management for climate considerations in planning and policies.
5. Provincial Departments	- Empower provincial climate change departments or agencies to oversee adaptation planning and implementation at the provincial level, working closely with sectoral departments for alignment.

6. Provincial Climate Change Committees	- Establish Provincial Climate Change Committees to facilitate coordination among relevant provincial departments, agencies, and stakeholders, ensuring adaptation priorities reflect local contexts and needs.
7. Research and Academic Institutions	- Engage research and academic institutions to provide scientific expertise, data, and research support for evidence-based decision-making in the NAP process.
8. Local Governments	- Involve local governments as key stakeholders in implementing adaptation strategies at the community level and devolve adaptation planning and funding mechanisms to local levels where possible.
9. Private Sector	- Engage the private sector through business associations and chambers of commerce to identify opportunities for private sector investments in climate-resilient infrastructure, technologies, and services.
10. Civil Society and NGOs	- Include civil society organizations and non-governmental organizations in the NAP process to consider the needs and perspectives of vulnerable communities and support grassroots adaptation initiatives.

5.2 Institutional Arrangement:

5.2.1 Situation Analysis:

The existing situation of the institutional presence, capacities, gaps and deficiencies have been assessed from the stakeholder inputs during consultations and the needs assessment. The key highlights are delineated below;

1. Existing Efforts:

The Government of Pakistan has undertaken various initiatives and institutional arrangements to address climate vulnerabilities, recognizing the significance of adaptation due to fragile ecosystems and climate change impacts.

2. International Commitments:

Pakistan acknowledges its commitments and obligations under the UNFCCC and the Paris Agreement, emphasizing the importance of national adaptation planning.

3. NAP Project Management Unit:

The GoP has established a National NAP project management unit to oversee the coordination and progress of the NAP process.

4. Ministry of Climate Change (MCC):

The MCC, with support from UNEP and GCF, plays a central role in capacity development, training, and coordination for enhancing adaptive capacity.

5. Policy Framework:

Key documents guiding climate adaptation efforts include the National Climate Change Policy, Framework for Implementation of Climate Change Policy, Pakistan's NDCs, and the Pakistan Climate Change Act.

6. Institutional Responsibilities:

Relevant sectoral institutions at the federal level, such as the Ministry of Climate Change and line ministries like food security, water resources, and health, are responsible for adaptation planning and implementation.

7. Key Institutions and Their Roles:

Various institutions, including Pakistan Meteorological Department, Pakistan Environmental Protection Agency, Global Climate Change Impact Studies Centre, Planning Commission, National Disaster Management Authority, and Pakistan Bureau of Statistics, have distinct roles in data collection, research, disaster management, and planning.

8. Enhancing Coordination:

Strengthening coordination between these institutions can improve risk assessments, early warning systems, and preparedness for disaster management, ultimately contributing to a more effective NAP process.

9. Gaps and Challenges:

There are significant gaps in climate risk assessments, NAP project design, training, capacity-building, adaptation monitoring, resource mobilization, and mainstreaming adaptation, posing risks and disenfranchisement.

10. Need for Coordination:

To minimize risks and maximize NAP impact, a comprehensive institutional arrangement is essential, ensuring collaboration between national, federal, and provincial/local implementing entities.

11. Capacity Building:

While the GoP has no existing institutional arrangements at the national level, there is a shortage of climate professionals and capacity at the local level to address the complexity and frequency of climate events.

12. Impact of Devolution:

The 18th Amendment and devolution to provincial governments have increased their responsibilities, requiring enhanced governance capacity and coordination among provinces and local governments.

13. Provincial Role:

Provincial governments have a crucial role in implementing adaptation policies, aligning with local priorities, but they face challenges in terms of capacity and financial resources.

14. Involvement of Various Sectors:

Public sector institutions, private sector, civil society organizations, academic institutions, and citizens all have roles in climate change adaptation, each contributing to different aspects of research, awareness, advocacy, and action.

5.3 NAP Governance Proposal:

The proposed NAP Governance structure in Pakistan is designed to effectively address and mainstream climate adaptation into national, provincial, and local levels of governance. Here's an explanation of this governance structure:

1. Parliament Enabling Legislation:

The Pakistan Climate Change Act 2017 (PCCA-2017) serves as the foundational legislation for climate change governance in Pakistan, providing the legal framework for climate-related actions and strategies.

2. Pakistan Climate Change Council (PCCC):

Chair:

The Prime Minister presides over the PCCC, offering high-level leadership and direction.

3. Federal Secretary Ministry of Climate Change:

This position serves as the Secretary to the PCCC, responsible for facilitating its functions and coordinating climate-related matters.

4. Pakistan Climate Change Authority (PCCA):

The PCCA is tasked with the implementation of the PCCA 2017 and decisions made by the PCCC. It serves as the executing body responsible for translating policies and strategies into action.

5. Pakistan Climate Change Fund:

This fund is essential for financing climate change adaptation efforts and plays a critical role in resource allocation for climate projects and initiatives.

6. Mainstreaming of Climate Change:

The governance structure also focuses on mainstreaming climate change across various sectors:

7. Federal Ministries and Divisions:

These entities are responsible for integrating climate change adaptation into national-level policies, programs, and projects. This integration is facilitated through PCCC's sector-specific sub-committees, ensuring that climate adaptation is embedded in various government sectors.

8. Provincial Governments:

Provincial governments are designated to mainstream the National Adaptation Plan (NAP) process at the provincial level. Each province has a designated provincial member to the Pakistan Climate Change Authority (PCCA) to ensure that provincial-level initiatives align with national climate adaptation goals.

9. Provincial Government Sectoral Agencies:

These agencies play a vital role in mainstreaming NAP at both provincial and local levels. They are responsible for implementing climate adaptation strategies within their respective sectors.

10. District and Tehsil Governments:

At the local level, district and tehsil governments are crucial for translating climate adaptation strategies into actions that directly benefit local communities.

The table - 10 below provides a visual representation of the proposed NAP Governance structure:

Table 10: Proposed NAP Governance Structure

Level of Governance	Key Actors and Functions
National	- Parliament Enabling Legislation (PCCA-2017)
	- Pakistan Climate Change Council (PCCC)
	- Chair: Prime Minister
	- Federal Secretary Ministry of Climate Change (Secretary to PCCC)
	- Pakistan Climate Change Authority (PCCA)

	<ul style="list-style-type: none"> - Pakistan Climate Change Fund
Mainstreaming of Climate Change	<ul style="list-style-type: none"> - Federal Ministries / Divisions (Through PCCC's sector-specific sub-committees)
	<ul style="list-style-type: none"> - Provincial Governments (Through designated provincial member to PCCA)
	<ul style="list-style-type: none"> - Provincial Government Sectoral Agencies (Mainstreaming at provincial and local levels)
	<ul style="list-style-type: none"> - District and Tehsil Governments (Local-level implementation)

This governance structure aims to establish clear roles and responsibilities at each level of governance to ensure effective climate change adaptation and mainstreaming throughout Pakistan. It emphasizes coordination and collaboration between national, provincial, and local entities giving rise the need to comprehensively integrate all key stakeholders in order under NAP governance.

5.4 Vertical Integration:

The vertical integration at different levels is crucial for effective implementation of the NAP governance for vulnerable sectors. This table - 11 outlines the responsible institutions for the adaptation planning and implementation in each vulnerable sector.

Table 11: Sector-wise Vertical Integration

Vulnerable Sector	Responsible Institutions
Water	<ul style="list-style-type: none"> - Ministry of Water Resources
	<ul style="list-style-type: none"> - Federal Flood Commission
	<ul style="list-style-type: none"> - Indus River System Authority (IRSA)
	<ul style="list-style-type: none"> - Provincial Irrigation Departments
Agriculture and Livestock	<ul style="list-style-type: none"> - Ministry of National Food Security and Research
	<ul style="list-style-type: none"> - Provincial Irrigation Departments
	<ul style="list-style-type: none"> - Provincial Agriculture Extension Departments
	<ul style="list-style-type: none"> - Pakistan Agriculture Research Council (PARC)
	<ul style="list-style-type: none"> - Provincial Livestock and Dairy Development Departments
Forestry	<ul style="list-style-type: none"> - Ministry of Climate Change
	<ul style="list-style-type: none"> - Provincial Forest Departments

Gender	- Ministry of Human Rights
	- National Commission on the Status of Women (NCSW)
	- Women Development Department
Human Health	- Ministry of National Food Security & Research
	- Public Health and Engineering Departments
Disaster Preparedness	- National Disaster Management Authority (NDMA)
	- Provincial Disaster Management Authorities (PDMA)
Urban Resilience	- Pakistan Environmental Protection Agency (Pak-EPA)
	- Provincial Environmental Protection Agencies (EPAs)
	- Public Works Department
	- Provincial Public Works Departments
	- Capital Development Authority (CDA)
	- Provincial Local Government Departments
Biodiversity and Ecosystems	- Ministry of Climate Change
	- Provincial Forest Departments
	- Provincial Fisheries Departments

The above table outlines the primary responsible institutions for each sector; however, collaboration and coordination with other relevant agencies and departments may also be necessary for comprehensive adaptation planning and implementation.

5.4.1 Implementation:

Vertical integration is critical to ensure that adaptation actions are implemented effectively and consistently from the national level down to the provincial and local levels. Each vulnerable sector is assigned to responsible institutions at various governance levels:

1. Water:

The Ministry of Water Resources, Federal Flood Commission, and Indus River System Authority oversee water-related adaptation efforts, coordinating with provincial irrigation departments.

2. Agriculture and Livestock:

The Ministry of National Food Security and Research leads in this sector, with support from provincial irrigation and agriculture extension departments, as well as research institutions like PARC.

3. Forestry:

The Ministry of Climate Change is responsible for forestry-related adaptation, working closely with provincial forest departments.

4. Gender:

The Ministry of Human Rights, National Commission on the Status of Women (NCSW), and Women Development Department collaborate to address gender-specific adaptation needs.

5. Human Health:

The Ministry of National Health & Research and public health authorities jointly address health-related adaptation.

6. Disaster Preparedness:

The National Disaster Management Authority (NDMA) and provincial disaster management authorities are responsible for disaster preparedness and management.

7. Biodiversity and Ecosystems:

The Ministry of Climate Change works with provincial forest and fisheries departments to protect biodiversity and ecosystems.

8. Urban Resilience:

The Pakistan Environmental Protection Agency (Pak-EPA), provincial EPAs, public works departments, capital development authorities, and local government departments cooperate to enhance urban resilience.

This integrated approach ensures that adaptation actions are aligned with the unique needs of each sector, and responsibilities are clearly defined across various levels of governance, from federal to provincial and local. Coordination among these institutions is essential to successfully implement NAP in Pakistan.

5.5 Proposed Institutional Arrangement:

5.5.1 Need for Institutional Arrangement:

The proposed framework aims to deepen coordination among government entities at federal and local levels, enhancing ownership of the NAP process. It seeks to address the capacity gap and involve key specialized agencies in research, disaster management, and financing.

This institutional arrangement outlines the key entities involved in the NAP process in Pakistan, along with their respective roles and functions, ensuring a comprehensive and coordinated approach to climate adaptation as explained in table - 12.

Table 12: Proposed Institutional Arrangement

Institutional Arrangement	Interest-Based Roles and Critical Functions
Climate Change Authority (MoCC)	- Overall Oversight and Coordination: Provide high-level guidance and coordination for the NAP process in Pakistan.
Sectoral Climate Change Adaptation Cells (SCACs)	- Agriculture, Livestock, Fisheries, and Water Resources: Focus on sector-specific adaptation strategies, policies, and programs for these critical sectors.

	<ul style="list-style-type: none"> - Forestry, Biodiversity, and Other Ecosystems: Develop and implement adaptation plans that safeguard biodiversity and ecosystems.
	<ul style="list-style-type: none"> - Human Health and Gender: Address health-related climate vulnerabilities, particularly those impacting gender dynamics.
	<ul style="list-style-type: none"> - Disaster Preparedness: Develop strategies to enhance resilience to extreme weather events and natural disasters.
	<ul style="list-style-type: none"> - Human Settlements and Infrastructure: Plan for climate-resilient infrastructure and sustainable urban development.
National Working Group (NWG)	<ul style="list-style-type: none"> - Policy Legislations and Governance: Formulate policies and enact governance measures that support climate adaptation efforts.
	<ul style="list-style-type: none"> - Institutional Development: Strengthen institutions and capacities for effective NAP implementation.
	<ul style="list-style-type: none"> - International Cooperation and Partnerships: Foster collaboration with international bodies, organizations, and governments to access knowledge and resources.
	<ul style="list-style-type: none"> - Resource Mobilization: Identify funding sources and strategies to finance adaptation initiatives.
	<ul style="list-style-type: none"> - Research and Development: Promote research to inform adaptive actions and develop innovative solutions.
	<ul style="list-style-type: none"> - Technology Transfer: Facilitate the transfer of climate-resilient technologies to support adaptation.
	<ul style="list-style-type: none"> - Education, Training, and Awareness: Raise public awareness, provide training, and offer educational programs on climate adaptation.
	<ul style="list-style-type: none"> - Extreme Events Management: Develop strategies and mechanisms to manage and respond to extreme climate events.
	<ul style="list-style-type: none"> - Climate Information Management: Collect, manage, and disseminate climate information for informed decision-making.
	<ul style="list-style-type: none"> - Building Adaptive Capacity: Enhance the adaptive capacity of communities, institutions, and vulnerable groups.
Civil Society Organizations (CSOs)	<ul style="list-style-type: none"> - Building Synergies with SCACs: Collaborate with SCACs to bring grassroots perspectives into sectoral adaptation planning.
	<ul style="list-style-type: none"> - Different UN Agencies Working on Climate Change: Support UN agencies' initiatives and foster cooperation in climate adaptation programs.

	- INGOs: Partner with international NGOs to access resources, knowledge, and best practices in climate adaptation.
	- National NGOs: Engage national NGOs to facilitate community involvement and advocate for climate-resilient policies.
Chambers of Commerce and Industries	- Federal, Provincial, and Regional Chambers of Commerce: Identify opportunities for private sector investments in climate-resilient infrastructure, technologies, and services.

6. Inclusive Engagement:

An inclusive stakeholder engagement ensures that engagement of stakeholder is sensitive to gender issues and representation, social inclusiveness and considers vulnerable groups and/or communities

6.1 Gender Inclusion:

The Government of Pakistan, through its National Climate Change Gender Action Plan (2021)², aims to make national efforts in priority sectors gender-responsive. It highlighted aligning national commitments in gender and climate action and empowering women to be key agents in climate resilience through innovative projects.

6.2 Integrating Gender Role:

The needs assessment integrates women's roles in the NAP process. The needs assessment also involved a multi-stakeholder, cross-sectoral approach to identify and assess institutional and stakeholder capacity regarding gender, environment, and climate change links. Key stakeholder views were gathered and analyzed on the following:

- 1- Identifying and consulting with stakeholders at national, provincial, and community levels on gender issues.
- 2- Exploring meaningful participation of women and exploring gender integration into existing adaptation measures.
- 3- Conducting gender analysis throughout vulnerability assessments for strengthening women's capacities in the NAP process.
- 4- Drawing from indigenous knowledge and experiences for gender-based participatory roles.

6.3 Gender Sensitive Engagement:

The needs assessment helps address gender inclusion across vulnerable sectors and for the components of the Nap process, through a comprehensive and context-specific approach. The following approach outlines the key steps and strategies to achieve gender sensitivity and inclusiveness within each component:

² Progress Report of NCCP Implementation Framework Page, 2021 (www.pk.undp.org/content/pakistan/en/home/projects/sustainable-forest-management.html)

1. Vulnerability Assessment:

- **Gender-Disaggregated Data:** Collect and analyze gender-disaggregated data during vulnerability assessments to understand how climate change affects women and men differently.
- **Gender Impact Analysis:** Conduct a gender impact analysis to identify gender-specific vulnerabilities, roles, and contributions in vulnerable sectors.
- **Participatory Workshops:** Organize participatory workshops and consultations involving women's groups and organizations to ensure their voices are heard in vulnerability assessments.

2. Adaptation Planning:

- **Gender-Responsive Policies:** Develop gender-responsive adaptation policies and strategies that address the unique needs and vulnerabilities of women.
- **Inclusive Planning:** Ensure that women are actively involved in the development and planning of adaptation measures and projects.
- **Capacity Building:** Provide training and capacity-building programs to empower women to actively participate in adaptation planning and decision-making.

3. Implementation:

- **Gender-Mainstreamed Projects:** Implement adaptation projects that integrate gender considerations and benefit women, considering their specific roles and needs.
- **Women's Empowerment:** Promote women's empowerment through income-generating activities related to climate resilience.
- **Stakeholder Engagement:** Encourage women's participation in local governance structures and community-based adaptation initiatives.

4. Monitoring and Evaluation:

- **Gender-Responsive Indicators:** Develop gender-responsive monitoring and evaluation (M&E) indicators to track the impact of adaptation efforts on women and men.
- **Gender-Sensitive Feedback Mechanisms:** Establish feedback mechanisms that allow women to provide input on the effectiveness of adaptation projects.
- **Regular Gender Audits:** Conduct regular gender audits of adaptation programs to assess their gender responsiveness and make necessary adjustments.

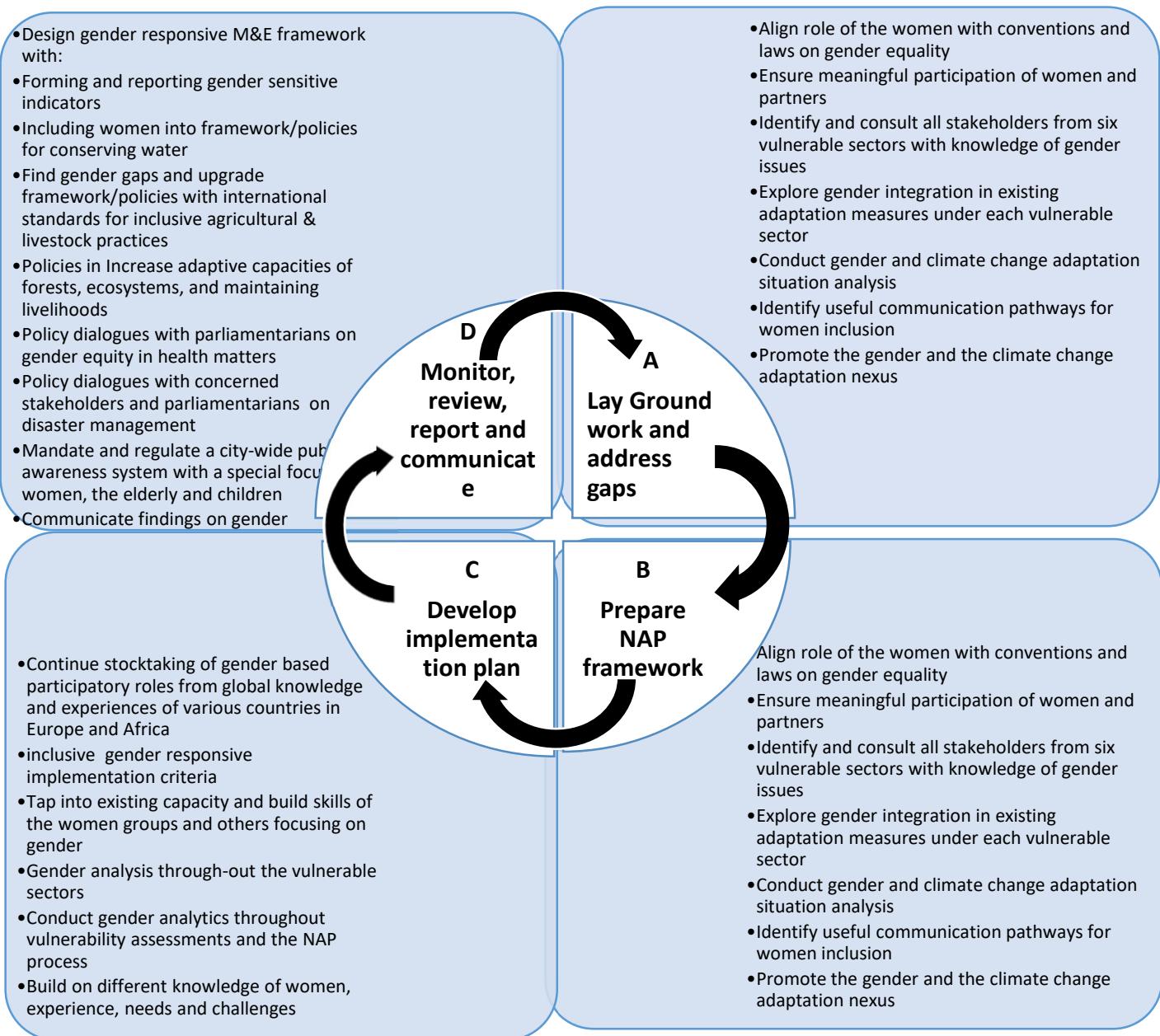
5. Crosscutting Actions:

- **Capacity Building:** Strengthen the capacity of government institutions, NGOs, and civil society organizations to implement gender-sensitive NAP components.
- **Awareness and Education:** Raise awareness about gender and climate change issues among policymakers, practitioners, and the general public.
- **Resource Allocation:** Allocate resources specifically for gender-responsive adaptation initiatives.
- **Engage Stakeholders:** Engage a wide range of stakeholders, including women's organizations, in the NAP process to ensure their perspectives are considered.

By integrating these strategies into each component of the NAP process, Pakistan can work

towards a more gender-inclusive and sensitive national adaptation planning process that empowers women as agents of change in building climate resilience and preparedness. The figure - 4 illustrates gender entry points in NAP components by ensuring a more gender inclusive national adaptation planning process.

Figure 4: Addressing Gender in NAP Components³



³ UNFCCC Resources Repository

6.4 Addressing Social Inclusiveness:

The needs assessment has highlighted the need to ensure gender-responsive and socially inclusive stakeholder engagement. A structured approach is essential to emphasize the pivotal role of gender inclusion and social inclusiveness for vulnerable communities affected by climate change. This involves identifying gaps and assessing the needs of vulnerable groups, particularly women, in the face of climate threats. Stakeholders at national, provincial, and local levels must prioritize real solutions, including policy formulation and long-term adaptation strategies, to support these communities.

The findings from the need assessment survey have further refined this approach as described in table - 13.

Table 13: Addressing Gender and Social Inclusiveness

Strategy/Action	Implementation
1. Gender-Responsive Approach	<ul style="list-style-type: none">– Integrate gender considerations throughout the NAP process.– Ensure that gender-specific vulnerabilities are addressed.
2. Diverse Stakeholder Representation	<ul style="list-style-type: none">– Promote diverse representation, including women, youth, and minorities.– Actively involve marginalized groups in decision-making.
3. Accessible Information and Communication	<ul style="list-style-type: none">– Provide information in accessible formats for all individuals.– Use local languages and various communication channels.
4. Capacity Building	<ul style="list-style-type: none">– Empower vulnerable groups through training in climate resilience.– Strengthen the capacities of local organizations and leaders.
5. Inclusive Consultations	<ul style="list-style-type: none">– Organize inclusive and participatory consultations.– Create safe spaces for marginalized groups to voice concerns.
6. Intersectional Approach	<ul style="list-style-type: none">– Recognize intersecting vulnerabilities and tailor strategies.– Address multiple challenges faced by communities.
7. Community-Based Adaptation (CBA)	<ul style="list-style-type: none">– Promote community-led adaptation approaches.– Facilitate local decision-making and project implementation.
8. Monitoring and Evaluation	<ul style="list-style-type: none">– Develop gender-responsive and inclusive M&E frameworks.– Regularly review strategies based on feedback from marginalized groups.
9. Legal and Policy Framework	<ul style="list-style-type: none">– Advocate for gender-responsive policies and laws.– Ensure inclusion of vulnerable groups' perspectives.
10. Engagement Champions	<ul style="list-style-type: none">– Identify and support advocates for gender equality and inclusion.

	<ul style="list-style-type: none"> – Empower champions within government and civil society.
11. Data Collection and Analysis	<ul style="list-style-type: none"> – Collect and analyze data by gender and social characteristics. – Use data to track progress and inform decision-making.
12. Funding Allocation	<ul style="list-style-type: none"> – Allocate resources for projects targeting vulnerable groups. – Prioritize funding for initiatives addressing unique needs.
13. Awareness and Education	<ul style="list-style-type: none"> – Raise awareness about climate change impacts and adaptation. – Provide education to build climate resilience knowledge and skills.

This approach can help create a more socially inclusive and equitable engagement, while addressing the needs and concerns of vulnerable groups and communities.

7. NAP Roadmap

7.1 National Adaptation Planning:

The objective of the NAP Roadmap is to ensure a cohesive national adaptation planning at national level. It identifies and highlights key activities and outputs for responsible state actors (stakeholders with power) at different levels of government such as the Ministry of Climate Change and line ministries. It integrates climate change adaptation into various levels of planning and engage powerful stakeholders to influence the NAP process by performing a role under each component.

7.2 Engagement Assessment Integration:

As evident in stakeholder analysis and engagement strategy, the successful implementation of the NAP requires a cohesive stakeholder analysis and engagement strategy that identifies all responsible institutions for sectoral adaptation planning at national, provincial and local levels. The stakeholder needs assessment and engagement give synthesis of institutional roles and responsibilities, and engagement strategy integration. It further explicates their essential NAP roles, engagement level and their strategic linking with components of NAP process as discussed in NAP governance and coordination mechanism.

7.3 Adaptation Framework:

The NAP process hinges on a robust needs assessment process. The needs assessment helps identify climate-related risks and vulnerabilities across vulnerable sectors, giving rise the need for a targeted and effective adaptation framework.

This framework prioritizes critical components of the NAP process and formulates roles and activities based on the urgency of adaptation needs. It also integrates cross-sectoral collaboration, ensuring a cohesive approach among all components. Through this needs-driven approach, it highlights the responsible institutions and data sources for each component.

Table - 15 demonstrates an exemplary adaptation framework highlighting key aspects of the NAP process with the identification of priority activities and actions, key stakeholders and data sources. This presentation is a comprehensive representation of capacity related need assessment to indicate preparedness and readiness of all power group stakeholders in order to realistically capture current ongoing progress on adaptation efforts.

Table 15: Strategic Framework for Adaptation

NAP Process	Description	Responsibility	Data Sources
1. Assessment and Prioritization	Identify climate vulnerabilities, risks, and sectoral adaptation needs. Prioritize adaptation actions based on local context.	Ministry of Climate Change (Federal) Provincial Environment Departments	Climate vulnerability assessments, historical climate data, sector-specific impact assessments
2. Stakeholder Engagement	Engage national and provincial stakeholders to gather insights and local knowledge on adaptation needs and opportunities.	Federal and Provincial Stakeholder Departments, Local	Stakeholder consultations, focus group discussions

		Governments, Civil Society Organizations	
3. Action Planning	Develop sector-specific adaptation action plans detailing strategies, targets, and implementation timelines.	Federal and Provincial Ministries and Departments	Sector-specific planning documents, policy frameworks
4. Resource Allocation	Allocate budget and resources for adaptation projects based on action plans.	Ministry of Finance (Federal), Provincial Finance Departments	Budget allocations, financial reports
5. Implementation	Implement identified adaptation actions, projects, and strategies at both federal and provincial levels.	Federal and Provincial Ministries, Development Authorities	Project implementation plans, progress reports
6. Data Collection and Localization	Collect local climate data, monitor adaptation projects, and assess progress. Localize data to reflect regional and provincial variations.	Meteorological Departments, Environmental Agencies, Research Institutions	Climate monitoring data, project reports, research findings
7. Capacity Building	Enhance capacity at both federal and provincial levels to implement and monitor adaptation actions effectively.	Training Institutes, Capacity Building Organizations	Training materials, workshops reports
8. Evaluation and Review	Evaluate the effectiveness of adaptation actions and review progress against set targets. Make necessary adjustments.	Federal and Provincial Ministries, Independent Review Panels	Evaluation reports, progress assessments
9. Reporting and Communication	Communicate adaptation progress, successes, and challenges to stakeholders and the public.	Ministry of Climate Change (Federal), Provincial Communication Departments	Progress reports, communication materials
10. Continuous Learning and Improvement	Continuously learn from adaptation experiences, gather lessons learned, and improve strategies based on feedback.	Federal and Provincial Ministries, Research Institutions	Case studies, research reports

7.4 Roadmap Function:

The NAP roadmap captures all such linkages in NAP core components with outcomes from associated indicative activities and the resulting outputs with milestone and timelines. In this, the objective of NAP is to identify and highlight all key activities that Ministry of Climate Change intends to plan, timelines, key milestones to be achieved by key responsible actors i.e., ministries, provincial governments and local government departments with interest-based roles in NAP planning and implementation.

7.5 Roadmap Key Stages:

A comprehensive approach establishes key milestones for successful completion of NAP roadmap that encompasses various stages, associated output activities and actions and resultant outcomes with timelines to address national adaptation planning for the country.

- 1. Baseline Assessment** - The approach has various stages, starting with an assessment of climate change impacts and vulnerabilities, is followed by engagement with stakeholders.
- 2. Consultations** - In this, the consultation process informs the identification and prioritization of adaptation actions based on urgency, feasibility, and potential impact.
- 3. Capacity Building** - Similarly, capacity building and knowledge enhancement are integral to the plan, with training programs and awareness campaigns designed to empower stakeholders and communities to understand and implement adaptation measures at local levels.
- 4. Institutional Framework** - The development of a strong policy and institutional framework integrates climate change adaptation across sectors and establishes or reinforces institutions responsible for planning and execution.
- 5. Implementation** - Implementation and monitoring form a core part of the roadmap, with detailed action plans, regular progress tracking, and periodic evaluations to ensure the effectiveness of measures.
- 6. Financing Mechanism** - In addition to implementation, financing strategies emphasize to mobilize resources from various sources, including domestic funds and international partnerships.
- 7. Sectoral Collaborations** - The roadmap also emphasizes collaboration and knowledge sharing, promoting coordination between governmental departments and encouraging the exchange of best practices with other nations facing similar climate challenges.
- 8. Review** - The plan's adaptability is a key aspect, with provisions for continuous updates based on new scientific insights, changing climate scenarios, and evolving socio-economic conditions.

The table – 14 provides a concise overview of the key stages, output activities and actions outlined in the NAP Roadmap for adaptation planning in Pakistan⁴.

Table 14: Overview of the NAP Roadmap for Adaptation Planning

NAP Process	Output Activities	Actions
1. Assessment and Baseline Data Collection	- Conduct comprehensive climate change impact and vulnerability assessment in different regions	- Analyze baseline climate data (temperature, rainfall, water availability, agriculture productivity, etc.).
2. Stakeholder Engagement and Consultation	- Engage stakeholders: government, NGOs, research institutions, community leaders, civil society	- Conduct workshops and consultations for input and community involvement.

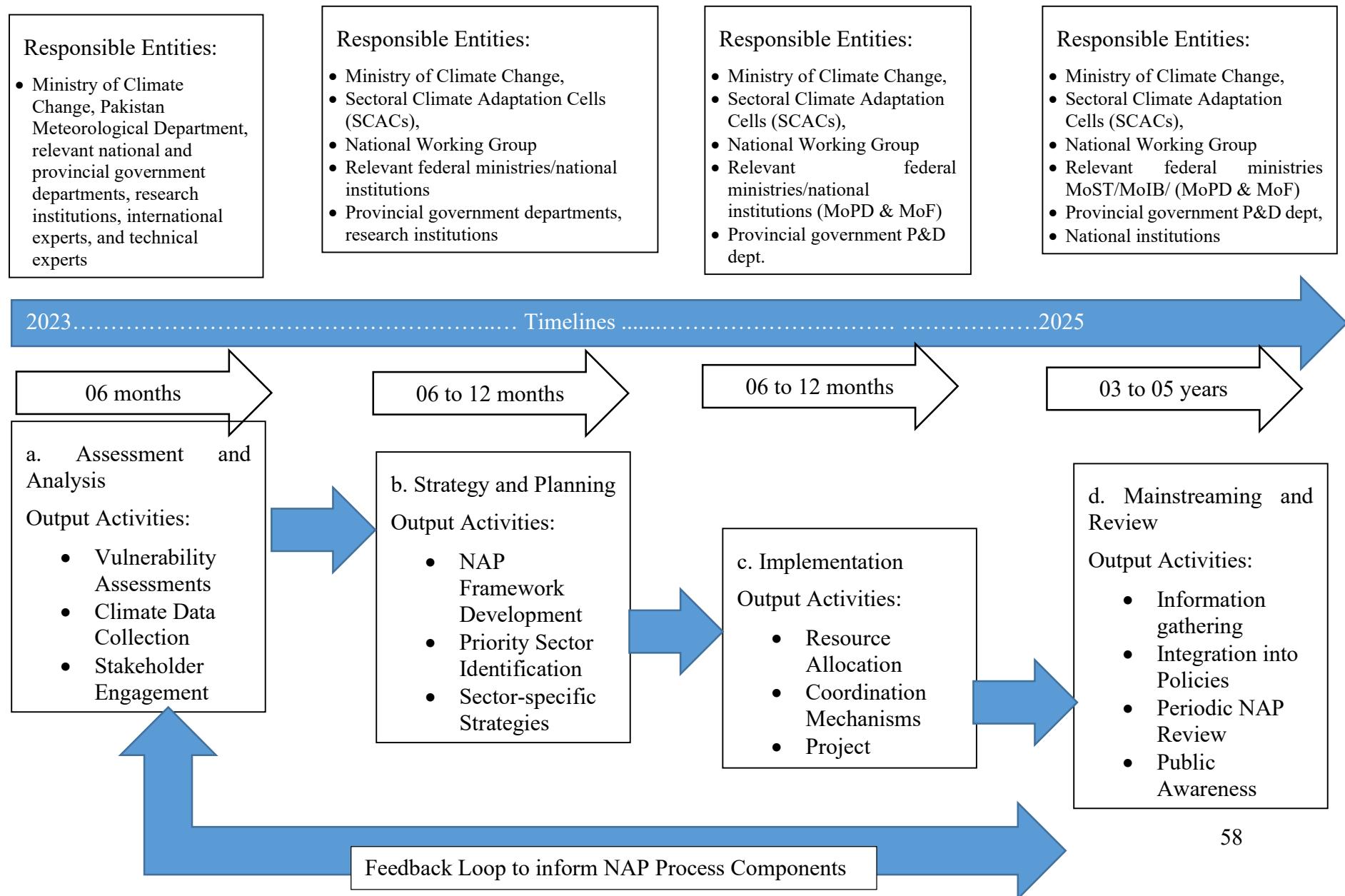
⁴ Based on analysis of UNFCCC guide on NAP Roadmap for LDCs and developing countries

3. Prioritization of Adaptation Actions	<ul style="list-style-type: none"> - Identify key adaptation priorities using assessment and stakeholder inputs 	<ul style="list-style-type: none"> - Prioritize actions based on urgency, impact, and feasibility.
4. Capacity Building and Knowledge Enhancement	<ul style="list-style-type: none"> - Develop training programs for stakeholders on adaptation planning and implementation 	<ul style="list-style-type: none"> - Conduct awareness campaigns for communities on climate change impacts and adaptation needs.
5. Policy and Institutional Framework Development	<ul style="list-style-type: none"> - Strengthen or establish institutions for adaptation planning 	<ul style="list-style-type: none"> - Create policies integrating adaptation across sectors (agriculture, water, urban planning, etc.).
6. Implementation and Monitoring	<ul style="list-style-type: none"> - Create detailed action plan for prioritized adaptation measures. 	<ul style="list-style-type: none"> - Monitor implementation progress and effectiveness regularly - Conduct periodic evaluations and adjustments.
7. Financing and Resource Mobilization	<ul style="list-style-type: none"> - Identify available funding for adaptation 	<ul style="list-style-type: none"> - Explore international partnerships and funding opportunities - Develop mechanisms for domestic resource mobilization.
8. Knowledge Sharing and Collaboration	<ul style="list-style-type: none"> - Facilitate coordination between government levels and departments. 	<ul style="list-style-type: none"> - Share knowledge and best practices with other climate-affected nations.
9. Evaluation and Review	<ul style="list-style-type: none"> - Periodically evaluate adaptation measure effectiveness 	<ul style="list-style-type: none"> - Incorporate new insights into future planning.
10. Continuous Update and Improvement	<ul style="list-style-type: none"> - Regularly update plan based on new scientific findings and changing conditions. 	<ul style="list-style-type: none"> - Enhance plan's adaptability to emerging challenges.

7.6 Stakeholder Entry Points:

The NAP Road map focuses on medium to long term adaptation planning. The goal is to identify and prioritize activities that the Ministry of Climate Change will undertake in collaboration with relevant line ministries, provincial governments, and local departments to effectively influence the NAP process for its successful implementation at national level. The figure - 5 gives overall snapshot of the NAP road map in Pakistan with key state actors, their responsibilities, and key entry points into the NAP process components. The time frame indicates tentative timeline spans from 2023 to 2025, and the activities are divided into quarterly intervals for each year.

Figure 5: Stakeholder Entry Points in NAP Process



7.7 The NAP Roadmap:

The NAP roadmap for adaptation planning provides a holistic approach to tackle climate change impacts in Pakistan. By engaging stakeholders, prioritizing actions, building capacity, fostering institutional support, and maintaining adaptability, the roadmap aims to enhance the country's resilience to the challenges posed by climate change⁵.

Table - 16 outlines these activities under different components and elements of the NAP roadmap, the essential functions, key outcomes, outputs, steps, output activities, and responsible sectoral stakeholders at national and provincial, local levels with key responsibilities for formulating a National Adaptation Plan (NAP) in Pakistan.

Table 16: Comprehensive NAP Roadmap

Element A. Lay the groundwork and address gaps					
Essential Functions	Indicative Activities				Responsibility
Outcomes	Steps	Activities	Outputs	Time Line	Lead Ministries/ Institutions
1 - Stakeholder Engagement Key national and provincial government institutions are capable of coordinating and integrating Climate Change Adaptation into development policy and plans	- Initiating and launching of the NAP process	<ul style="list-style-type: none"> - Briefing on NAP process Outputs - Process of NAP formulation and subsequent implementation of the NAP established, training and awareness raising procedures and/or manuals developed; and events for public and private sectors, CSOs, and local communities on the NAP organized - Coordinating mechanism 	<ul style="list-style-type: none"> - Mandate for the NAP process - Framework and strategy for the climate change adaptation - Funded project to support operations of the NAP process - Road map for the NAP process - Engage stakeholders from government, civil society, private sector, and communities to gather input and local knowledge. 	(every 06 months)	<ul style="list-style-type: none"> - Ministry of Climate Change/ National Focal Point, - Sectoral Climate Adaptation Cells (SCACs) - National Working Group for Cross-cutting National Adaptation Needs - Relevant federal ministries/national institutions - Provincial government departments,

⁵ Analyzed and concluded from GCF Country Readiness Report for Pakistan, 2022

		<ul style="list-style-type: none"> – National vision and mandate for NAPs – Access to technical and financial support – NAP framework/strategy road map 			<ul style="list-style-type: none"> – research institutions – Civil Society Organizations Forum
2 – Stocktaking The collection, compilation, processing and dissemination of data, information and knowledge on climate change and relevant development aspects in support of adaptation planning and implementation.	Identifying available information on climate change impacts, vulnerability and adaptation.	<ul style="list-style-type: none"> – Stocktaking of adaptation activities – Synthesis of available knowledge on impacts, vulnerability and adaptation – Capacity gap analysis – Barrier's analysis – Other activities: – Assessment Phase: – Conduct climate vulnerability assessment at National level 	<ul style="list-style-type: none"> – Report on synthesis of available information – Geospatial database in support of the NAP process – Knowledge-base of observed climate impacts, vulnerabilities and potential interventions 	(every 06 months)	<ul style="list-style-type: none"> – Pakistan Meteorological Department, research institutions – Ministry of Climate Change, relevant national and provincial government departments, research institutions
3 – Gaps Identification Identifying and addressing gaps and needs related to capacity for the successful design and implementation of adaptation.	– Assessing gaps and needs of the enabling environment for the NAP process		<ul style="list-style-type: none"> – Gap and needs analysis report – Barrier analysis report 	(every 06 months)	<ul style="list-style-type: none"> – Ministry of Climate Change, PCCA/ PCCC, and technical experts – Ministry of Climate Change, international experts, and technical experts
4 – Needs Assessment Assessing climate development linkages and	– Addressing capacity gaps and weaknesses in undertaking	<ul style="list-style-type: none"> – Building institutional and technical capacity – Opportunities for integrating 	– Strategy document(s) for capacity-building, awareness-raising, communication and education	(every 06 months)	– Ministry of Climate Change, and technical experts (CCAE)

<p>needs and supporting the integration of climate change adaptation into national and subnational development and sectoral planning (through policies, projects and programmes).</p>	<p>the NAP process</p>	<p>adaptation into development</p> <ul style="list-style-type: none"> – Programmes on climate change communication, public awareness-raising and education – Other activities: – 			
<p>4.a – Vulnerability and Risks Assessment</p>	<ul style="list-style-type: none"> – Comprehensively and iteratively assessing development needs and climate vulnerabilities 	<ul style="list-style-type: none"> – Compile development objectives, policies, plans and programmes – Synergy between development and adaptation objectives, policies, plans and programmes – Other activities: – Identify priority sectors and regions at Provincial and local levels – Strategy Development: – Develop adaptation strategies and policies at National level – Establish coordination mechanisms at National and provincial levels 	<ul style="list-style-type: none"> – Report on stocktaking of development/adaptation activities – Report on approaches for ensuring synergy between development and adaptation 	<p>(every 06 months)</p>	<ul style="list-style-type: none"> – Ministry of Climate Change, and technical experts (CCAE) – Ministry of Climate Change, and technical experts (CCAE) – Ministry of Climate Change, and technical experts (CCAE) – Ministry of Climate Change, and technical experts (CCAE) – Ministry of Climate Change, International experts (CCRM, Reading Uni.) and technical experts (CCAE)
<p>Element B. Preparatory elements</p>					

5 – Climate Scenarios Development Analysing climate data and assessing vulnerabilities to climate change and identifying adaptation options at the sector, subnational, national and other appropriate levels.	<ul style="list-style-type: none"> – Analyzing current climate and future climate change scenarios 	<ul style="list-style-type: none"> – Analysis of current climate – Future climate risks and uncertainty/Scenario analysis – Communicating projected climate change information 	<ul style="list-style-type: none"> – Report on climate analysis – Report on climate risks/Projected climate changes – Strategy for climate information services 	(every 03 months)	<ul style="list-style-type: none"> – Ministry of Climate Change, international climate experts (CCRM, Reading Uni.)
6 – Adaptation Appraisal Appraising adaptation options to support decision-making on adaptation investment plans and development planning	<ul style="list-style-type: none"> – Assessing climate vulnerabilities and identifying adaptation options at sector, subnational, national and other appropriate levels 	<ul style="list-style-type: none"> – Climate vulnerability assessment at multiple levels – Ranking climate change risks and vulnerabilities – Scoping adaptation options – Other activities: 	<ul style="list-style-type: none"> – Vulnerability and adaptation assessment report 	(every 03 months)	<ul style="list-style-type: none"> – Ministry of Climate Change, international climate experts (CCRM, Reading Uni.)
6.a – Prioritization	<ul style="list-style-type: none"> – Reviewing and appraising adaptation options 	<ul style="list-style-type: none"> – Appraisal of adaptation options – Other activities: – 	<ul style="list-style-type: none"> – Report on appraisal of adaptation options – Sectoral and subnational plans or strategies 	(every 09 months)	<ul style="list-style-type: none"> – Ministry of Climate Change, Sector-specific ministries, technical experts (GCISC)
6.b – Communication	<ul style="list-style-type: none"> – Compiling and communicating national adaptation plans 	<ul style="list-style-type: none"> – Draft national adaptation plans – Finalization of NAPs and process endorsement – Communicate NAPs at national level 	<ul style="list-style-type: none"> – Draft NAPs for review – Endorsed NAPs 	(every 09 months)	<ul style="list-style-type: none"> – Ministry of Climate Change, Sector-specific ministries, technical experts (GCISC)

6.c – NAP Integration	<ul style="list-style-type: none"> – Integrating climate change adaptation into national and subnational development and sectoral planning – Opportunities and constraints for integrating climate change into planning – Building capacity for integration – Integration of adaptation into existing planning processes 	<ul style="list-style-type: none"> – Report Integration of adaptation development on of into (every 09 months) 	<ul style="list-style-type: none"> – Ministry of Climate Change, Sector-specific ministries, technical experts (GCISC). And technical experts (CCAE) 		
Element C. Implementation strategies					
7 – Streamlining Adaptation Promoting and facilitating the prioritization of climate change adaptation in national planning	<ul style="list-style-type: none"> – Prioritizing climate change adaptation in national planning 	<ul style="list-style-type: none"> – National criteria for prioritizing implementation – Identification of opportunities for building on existing adaptation activities 	<ul style="list-style-type: none"> – Revised Policies – 	<ul style="list-style-type: none"> – (every 09 months) 	<ul style="list-style-type: none"> – Ministry of Climate Change, MoPD&SI, MoF, technical experts, Provincial P&Ds
8 – Adaptation Strategy Implementation Facilitating the implementation of adaptation at all levels through appropriate policies, projects and programmes, taking into account opportunities for synergy.	<ul style="list-style-type: none"> – Developing a (long-term) national adaptation implementation strategy 	<ul style="list-style-type: none"> – Strategy for adaptation implementation – Implementation of NAPs through policies, projects and programmes – Other activities: – Implementation and Monitoring: – Implement adaptation actions and projects at Provincial and local levels – Monitor and evaluate progress at National, 	<ul style="list-style-type: none"> – Implementation strategy for the NAP 	<ul style="list-style-type: none"> – (every 09 months) 	<ul style="list-style-type: none"> – Ministry of Climate Change, MoPD&SI, MoF, technical experts, Provincial P&Ds

		provincial, and local levels			
8.a Capacity Building	-	<ul style="list-style-type: none"> - Enhancing capacity for planning and implementing adaptation - Strengthening long-term institutional and regulatory frameworks - Training at sectoral and subnational levels - Outreach on outputs at the national level and promotion of international cooperation - Other activities: - Capacity Building and Outreach: - Enhance local capacity for adaptation - Provincial and local levels - Raise awareness and educate stakeholders at national, provincial and local levels 	<ul style="list-style-type: none"> - National training and outreach programme (s) 	(every Year)	<ul style="list-style-type: none"> - Ministry of Climate Change, Ministry of Science and Tech. and Ministry of Broadcasting - Line Ministries - Coordination bodies, technical experts, - Relevant Provincial depts. - International organizations, CSOs, CBOs, and local technical experts
8.b – NAP Promotion	-	<ul style="list-style-type: none"> - Promoting coordination and synergy at the regional level and with other multilateral environmental agreements - Coordination of adaptation planning across sectors - Synergy at the regional level - Synergy with multilateral environmental agreements (MEAs) - Other activities: - 	<ul style="list-style-type: none"> - Report on regional synergy - Report on synergy with MEAs 	(every Year)	<ul style="list-style-type: none"> - Ministry of Foreign Affairs, Ministry of Climate Change, international organizations
Element D. Reporting, monitoring and review					
9 Monitoring	-	<ul style="list-style-type: none"> - Monitoring the NAP process - Identify (few) areas of the NAP process to 	<ul style="list-style-type: none"> - Metrics report/Monitoring Plan 	(every Year)	<ul style="list-style-type: none"> - Ministry of Climate Change,

<p>Facilitating the monitoring, review and updating of adaptation plans over time, to ensure progress and the effectiveness of adaptation efforts and to demonstrate how gaps are being addressed.</p>		<ul style="list-style-type: none"> monitor progress, effectiveness and gaps (PEG) – Define metrics for documenting PEG – Collect information throughout the NAP process to apply the metrics developed 	<ul style="list-style-type: none"> – Database of metrics 		<ul style="list-style-type: none"> – Sectoral Climate Adaptation Cells (SCACs) – PMDs – GCISC – National Technical experts – International organizations, CSOs, CBOs, and local technical experts
<p>10 - Review Coordinating reporting and outreach on the NAP process to stakeholders nationally and internationally on progress to the Convention.</p>		<ul style="list-style-type: none"> – Reviewing the NAP process to assess progress, effectiveness and gaps 	<ul style="list-style-type: none"> – Synthesis of new assessments & emerging science and the results and outcomes from implemented adaptation activities – Evaluate metrics collected to assess progress, effectiveness and gaps of the NAP process 	<ul style="list-style-type: none"> – Evaluation report (every 03 to 05 year) 	<ul style="list-style-type: none"> – Ministry of Climate Change, and technical experts – International organizations, CSOs, CBOs, and local technical experts
<p>10.a - Updation</p>		<ul style="list-style-type: none"> – Iteratively updating the national adaptation plans 	<ul style="list-style-type: none"> – Repeat some steps and update NAPs and related documentation – Production of updates to the NAP outputs aligned with relevant national development plans 	<ul style="list-style-type: none"> – Updated NAPs (every 03 to 05 year) 	<ul style="list-style-type: none"> – Ministry of Climate Change, sectoral stakeholders with power at national and provincial levels and technical experts
<p>10.b – NAP Outreach</p>		<ul style="list-style-type: none"> – Outreach on the NAP process and reporting on progress and effectiveness 	<ul style="list-style-type: none"> – Disseminate the NAPs and related outputs to the UNFCCC secretariat and others – Provision of information in 	<ul style="list-style-type: none"> – Progress report and information in national communication (every year) 	<ul style="list-style-type: none"> – Ministry of Climate Change, and International and local technical experts

		national communications on progress in and effectiveness of the NAP process			– International organizations, CSOs, CBOs, and local technical experts
--	--	---	--	--	--

Conclusion:

The development of a robust stakeholder engagement strategy and National Adaptation Plan (NAP) roadmap at the federal, provincial, and local levels in Pakistan represents a significant stride towards climate resilience and sustainable development. The following conclusion draws on key findings of the study;

- **Enhanced Collaboration:** The development of a stakeholder engagement strategy and NAP roadmap strengthens collaboration among various stakeholders, fostering a unified approach to climate change adaptation.
- **Structured Approach:** The strategy provides a structured framework for stakeholder involvement, making the process more systematic and efficient.
- **Structured Engagement Mechanisms:** These strategies ensure that the voices and expertise of government agencies, civil society organizations, academia, the private sector, and vulnerable communities are integrated into the adaptation planning process. This not only enhances the effectiveness and relevance of the NAP but also fosters ownership and commitment among stakeholders.
- **Inclusivity:** The strategy ensures the inclusion of government agencies, civil society organizations, academia, private sector entities, and vulnerable communities in the adaptation planning process, promoting diverse perspectives.
- **Transparency:** By emphasizing transparency, the strategy promotes open communication and decision-making, building trust among stakeholders.
- **Alignment with Local Context:** Engagement at federal, provincial, and local levels aligns adaptation efforts with the unique needs and challenges of different regions and communities.
- **The NAP Roadmap:** With its clear steps, prioritization criteria, and resource mobilization strategies, provides a well-defined path toward climate adaptation. It aligns adaptation priorities across sectors and levels of governance, enabling a coordinated response to climate change impacts.
- **Prioritization and Resource Mobilization:** The NAP roadmap enables the identification of adaptation priorities, resource needs, and mobilization strategies, ensuring efficient allocation of resources.
- **Long-term Resilience:** The NAP roadmap sets the foundation for long-term climate resilience, integrating adaptation measures across sectors and governance levels.
- **International Collaboration:** The roadmap positions Pakistan to collaborate with international partners and leverage best practices for effective adaptation.
- **Monitoring and Evaluation:** Both the strategy and roadmap emphasize the importance of monitoring and evaluating adaptation actions, ensuring their effectiveness over time.
- **Sustainable Development:** The integrated approach of stakeholder engagement and NAP development contributes to sustainable development by addressing climate change impacts and vulnerabilities.

Recommendations:

Based on the development of a stakeholder engagement strategy and NAP roadmap at federal, provincial, and local levels, some key recommendations are delineated below;

- **Cross-Sectoral Collaboration:** Encourage collaboration and information sharing among different government agencies and sectors. Create mechanisms for inter-ministerial and inter-departmental cooperation to implement adaptation measures that cut across various domains, such as water resources, agriculture, and urban development.
- **Continuous Stakeholder Involvement:** Sustain and strengthen stakeholder engagement throughout the implementation of the NAP. Regular consultations, workshops, and feedback mechanisms should be established to ensure that stakeholders at levels remain active contributors to the adaptation process.
- **Capacity Building:** Invest in capacity-building programs for stakeholders, especially at the provincial and local levels. Enhancing their understanding of climate change impacts and adaptation measures will empower them to play more effective roles in implementation.
- **Community Empowerment:** Prioritize the engagement of vulnerable communities in adaptation planning and decision-making processes. Ensure their concerns and needs are not only heard but also integrated into the NAP, recognizing their local knowledge and resilience practices.
- **Gender Mainstreaming:** Integrate gender considerations throughout the NAP process to ensure that the unique vulnerabilities and capacities of women and men are addressed. Implement gender-responsive strategies for adaptation planning and implementation.
- **Indigenous Knowledge Management:** It is crucial for effective local-level adaptation in Pakistan to harness traditional wisdom to address climate challenges, enhance community resilience, and sustainably manage natural resources.
- **Public Awareness and Education:** Conduct comprehensive awareness campaigns to educate the public about climate change impacts and adaptation measures. Enhance climate literacy to garner broader support and engagement in climate resilience efforts.
- **Local Adaptation Plans:** Encourage provincial and local governments to develop their adaptation plans that align with the national NAP. Support them in tailoring adaptation strategies to address regional and community-specific vulnerabilities.
- **Resource Mobilization:** Develop innovative financing mechanisms and explore opportunities for international cooperation to secure the necessary resources for NAP implementation. Establish clear financial plans and seek public-private partnerships to leverage additional funds.
- **Monitoring and Evaluation:** Implement robust monitoring and evaluation frameworks to assess the effectiveness of adaptation actions. Define key indicators, track progress, and regularly review and update the NAP based on performance and changing climate realities.
- **Alignment with Sustainable Development Goals (SDGs):** Ensure that NAP actions are in alignment with the SDGs, particularly those related to climate action, poverty reduction, and sustainable development. Seek synergies between climate adaptation and broader development objectives.

- **Transparency and Accountability:** Maintain a transparent and accountable approach to NAP implementation. Regularly report on progress to stakeholders and the public, fostering trust and confidence in the adaptation process.
- **Learning from International Experience:** Continuously learn from international best practices and experiences in climate adaptation. Exchange knowledge with other countries facing similar challenges to improve the effectiveness of Pakistan's NAP.
- **Bottom-Up Approaches:** Implement NAP upwards from local government to provincial and national level adaptation planning. Create team based mock exercises for local adaptation planning. Accommodate any difficulties at local level first, promote local languages by integrating role of women. Gradually enhance identification of stakeholders, as the list extends the outreach increases.
- **National Adaptation Plan:** The implementation of these recommendations helps develop a comprehensive national adaptation plan aiming to help build a resilient and adaptive framework that not only responds to the current climate challenges but also ensures long-term sustainability and the well-being of the people and ecosystems in Pakistan.

Annex 1: Consultations Schedule for Needs Assessment

Federal and Provincial/Local KII	Sep Third Week	Sep Fourth Week	Oct First Week
<p>1- Water Resources: Personal KII</p> <p>Ministry of Water and Power/Federal Flood Commission. WCAP, G-5</p> <p>Ministry of Planning, Development and Reform, Pak Secretariat (planning/feasibilities for implementation of adaptation for all sectors)</p> <p>Ministry of Finance, Pak Secretariat (financial planning/budgeting for adaptation all sectors)</p> <p>Ministry of Energy (Petroleum and Natural Resources), A-Block, Pak-Secretariat</p> <p>Alternative Energy Development Board, G-5/2 (renewable energy for Urban Resilience, Agriculture)</p> <p>National Energy Efficiency and Conservation Authority (NEECA), G-5/2 (renewable energy for Urban Resilience, Agriculture)</p> <p>Pakistan Council of Research in Water Resources (PCRWR) H-8</p> <p>Indus River System Authority, G-10</p> <p>Federal Commission on Indus Water Treaty, G-7</p>	Federal	Federal	Federal
<p>2 - Agriculture and Livestock (For food security and sustainable food systems): Personal KII</p> <p>Ministry of National Food Security & Research, Pak Secretariat (water resource use)</p> <p>Pakistan Agriculture Research Council (PARC), G-5</p> <p>National Agriculture Research Center (NARC), Chak Shahzad</p> <p>GCSIC, G-8</p> <p>Federal Seed Certification & Registration Department, G-9/1</p> <p>Centre for Agriculture and Biosciences International (CABI), adjacent to Agriculture University Rawalpindi</p>	Federal	Federal	Federal
<p>3 - Forestry, Biodiversity and other Ecosystems sectors (land & marine ecosystems): Personal KII</p> <p>Ministry of Climate Change, G5</p> <p>The Forestry Wing of Ministry of Climate Change, G5</p>	Federal	Federal	Federal
<p>4 - Human Health: Personal KII</p> <p>Ministry of National Health Services and Regulations, Kohsar Block, Pak Secretariat,</p>	Federal	Federal	Federal

<p>5 - Disaster Preparedness (Crosscutting): Personal KII</p> <p>National Disaster Management Authority, G-5/1</p> <p>Pakistan Meteorological Department (PMD), H-8/2</p> <p>Federal Flood Commission, G-5</p> <p>NDRMF, G-10</p> <p>M/o Information and Broadcasting</p>	Federal	Federal	Federal
<p>6 - Urban Resilience: Personal KII</p> <p>M/o of Housing and Works, Pak Secretariat</p> <p>Pak-EPA, H-8/2</p> <p>Capital Development Authority, Islamabad</p> <p>M/o Communication</p> <p>Pakistan Engineering Council, G-5</p> <p>M/o Fed.Education, Pak Secretariat,</p> <p>M/o Science and Technology, G-5</p>	Federal	Federal	Federal
<p>7 - Gender (Crosscutting): Personal KII</p> <p>Ministry of Human Rights, New Secretariat, Kohsar Block</p> <p>National Commission on Women Status, State Life Building F-6</p>	Federal	Federal	Federal

Annex-2: Questionnaire for Needs Assessment

A. Stakeholder Information: Role and Expertise

1. What is the role of the Ministry/Institution in climate change adaptation?
2. Is there a focal point on national adaptation in the Ministry/Institution? If so, please specify with name, designation, role and relevant department.

B. Understanding Climate Change Risks:

3. What climate-related risks and vulnerabilities do you perceive in your area of expertise or geographic focus?
4. Are there any specific sectors or communities that are particularly vulnerable to climate change in your opinion?

C. Prioritizing Adaptation Needs:

5. What are the interests of the Ministry/Institution in national adaptation?
6. What is the understanding of the Ministry/Institution on its core role(s) for the vulnerable sector(s) in national adaptation planning and implementation?
7. What vulnerable sector(s) the Ministry/Institution is responsible for i.e., water resources, agriculture and livestock, forestry/biodiversity/land & marine ecosystems, human health, disaster preparedness, urban resilience and gender inclusion?
8. Are there any adaptation interventions/programs/activities/action plans, the Ministry/Institution is currently working on for the concerned vulnerable sector(s) as identified in national adaptation planning?

9. What are the top three most urgent adaptation needs at the federal level in Pakistan? Which sectors (e.g., agriculture, water resources, infrastructure) do you believe require the most attention in terms of adaptation planning?
10. What are the criteria of prioritization for developing interventions under your concerned critical sector(s), please explain the parameters?

D. NAP Process:

11. Is the Ministry/Institution a stakeholder in national adaptation planning? What key role(s) the Ministry/Institution understands are statutory as per law, rules and regulations in national adaptation planning process in Pakistan?
12. How you see adaptation planning and formulation of policies considering interest-based role in adaptation, and plan to participate effectively in national adaptation plan process?
13. What will be core steps of implementation of policies, strategies, programs and interventions?
14. How can different sectors and government agencies collaborate more effectively (Cross-Sectoral Collaboration) to address climate change adaptation at the federal level?
15. What indicators or metrics do you believe should be used for monitoring and evaluation (assessing effectiveness) of adaptation actions at the federal level?
16. How can public awareness and community participation be enhanced to support climate adaptation efforts?

E. Gender Inclusion:

17. How the Ministry/Institution intends to ensure the role of women for their effective participation in national adaptation planning and implementation? Any measures taken so far?

F. Capacity and Resource Assessment:

18. What existing resources and capacities (e.g., technical expertise, financial resources) are available at the federal level for adaptation efforts?
19. Any gaps or challenges in accessing resources or building capacity for adaptation? If so, please elaborate
20. Are there any best practices or lessons learned from other countries that you think could be applied in the Pakistani context?
21. What opportunities do you see for Pakistan to collaborate with international partners and organizations to support its adaptation efforts?



Ministry of Climate Change