



# THEMATIC WORKING GROUP REPORT: CLIMATE CHANGE EDUCATION TRAINING AND PUBLIC AWARENESS



Prepared under the project 'Islamic Republic of Pakistan: Preparation of Third National Communication (TNC) under the UNFCCC'

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# ABOUT WWF-PAKISTAN

The World Wide Fund for Nature - Pakistan (WWF-Pakistan) is one of the largest nature conservation organization, working in Pakistan since 1970 with the vision to work towards the protection of the natural resources and sustainable resource use regime across the entire ecosystem. WWF-Pakistan is part of the global WWF Network, which has a presence in over 100 countries and thus has access to an enormous pool of environmental expertise and knowledge. With its Head Office in Lahore, 6 Regional Offices, and more than 30 project site offices across Pakistan, WWF-Pakistan is working on environmental conservation with more than 1000 employees spread throughout the country.

Since its inception in 1970, WWF-Pakistan has been involved in creating awareness about environmental issues in six major areas – which include freshwater, wildlife, oceans, forests, climate and energy, and foods and markets – amongst individuals and groups from all social tiers associated with each practice. The organization continuously strives to establish an effective communication pathway in the social hierarchy by gauging each stakeholder's existing grasp on the subject, devising appropriate content for the interested parties, and expressing it in the most comprehensible manner.

## MISSION STATEMENT

WWF's mission is to stop the degradation of the planet's natural environment and to build a future in which humans live in harmony with nature, by:

- Conserving the world's biological diversity;
- Ensuring that the use of renewable natural resources is sustainable; and,
- Promoting the reduction of pollution and wasteful consumption





# EXECUTIVE SUMMARY

The Ministry of Climate Change (MoCC), alongside its four implementing partners (WWF-Pakistan, Global Change Impact Studies Centre (GCISC), Pakistan Council for Renewable Energy Technologies (PCRET) & National Energy Efficiency & Conservation Authority (NEECA)), is currently preparing Pakistan's **Third National Communication (TNC) on Climate Change under the UN Framework Convention on Climate Change (UNFCCC)**.

The TNC will succeed the Second National Communication, submitted by Pakistan in 2019. The Communication will enable Pakistan to fulfill its requirement under Articles 4.1 and 12 of the UNFCCC (to prepare and submit its national communication). WWF-Pakistan has been declared as 'Team Lead' for Thematic Working Groups (TWG) on 'Education Training and Public Awareness', 'Capacity Building', 'Knowledge and Information Sharing and Networking', 'Information on Steps Taken to Integrate Climate Change', 'Information on Gender Equality and Women's Empowerment on Climate Change Issues', and 'Technical Assistance and Support to Project Management Units to Execute the TNC Project'.

The current report on the Thematic Working Group on Education, Training & Public Awareness provides a detailed account of the climate change-related policies, programs, and interventions, the status of their implementation, alongside the level of public awareness levels surrounding the subject matter in Pakistan.

It summarises the efforts undertaken throughout the preparation of the Third National Communication, in the shape of national-level surveys and workshops within four major provinces of Khyber Pakhtunkhwa, Balochistan, Sindh, and Punjab to assess the on-ground efforts, highlights the constraints and gaps, and provides action-points for future planning and interventions.

The main challenges identified comprise of insufficient infrastructure, governance, and funding, human resources along with a lack of coordinated efforts and data. Recommendations include integrating climate in policies/programs across sectors, hands-on programs aligned with audience needs, educator training, securing funds via government allocations, grants, and private partnerships, and establishing robust monitoring systems for evidence-based decisions.

As part of capacity-building and awareness efforts, the current report provides an outline of the material developed under the TNC, including the climate change bulletin and educational booklet on climate change.



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# LIST OF ACRONYMS

AFOLU	Agriculture Forestry and Other Land Use
AJK	Azad Jammu & Kashmir
COP	Conference of Parties
CSOs	Civil Society Organisations
DRR	Disaster Risk Reduction
EPA	Environmental Protection Agency
ETPA	Education, Training & Public Awareness
GB	Gilgit Baltistan
GCISC	Global Change Impact Studies Center
HEC	Higher Education Commission
IEC	Information, Education and Communication
MoCC	Ministry of Climate Change
NDCs	Nationally Determined Contributions
NEECA	National Energy Efficiency & Conservation Authority
NGOs	Non-Government Organisations
PCRET	Pakistan Council of Renewable Energy Technologies
PEMRA	Pakistan Electronic Media Regulatory Authority
SDG	Sustainable Development Goals
TNC	Third National Communication
TVET	Technical and Vocational Education & Training
TWG	Thematic Working Group
WASH	Water Sanitation & Hygiene
WWF-Pakistan	World Wide Fund for Nature Pakistan











# Background

The Ministry of Climate Change (MoCC), alongside its four implementing partners (WWF-Pakistan, Global Change Impact Studies Centre (GCISC), Pakistan Council for Renewable Energy Technologies (PCRET) & National Energy Efficiency & Conservation Authority (NEECA)), is currently preparing Pakistan's Third National Communication (TNC) on Climate Change under the UN Framework Convention on Climate Change (UNFCCC).

The TNC will succeed the Second National Communication, submitted by Pakistan in 2019. The Communication will enable Pakistan to fulfill its requirement under Articles 4.1 and 12 of the UNFCCC (to prepare and submit its national communication). Furthermore, it will entail how the country has been implementing the Convention, highlighting critical issues, constraints, and capacity requirements for climate mitigation and adaptation.

WWF-Pakistan has been declared as 'Team Lead' for Thematic Working Groups (TWG) on 'Education Training and Public Awareness', 'Capacity Building', 'Knowledge and Information Sharing and Networking', 'Information on Steps Taken to Integrate Climate Change', 'Information on Gender Equality and Women's Empowerment on Climate Change Issues', and 'Technical Assistance and Support to Project Management Units to Execute the TNC Project'.

The report on climate change education, training, and public awareness explores the existing policies, programs, and interventions at the governmental and non-governmental levels. Providing key recommendations for overcoming identified gaps and barriers to implementing effective interventions; sourced through survey respondents and working group participants at provincial workshops. This is proceeded with the section collating results from the national-level survey undertaken to gauge the level of public awareness of climate change in the country. The last subsection provides recommendations extracted from surveys and stakeholder workshops to address the identified gaps and challenges, alongside a brief overview of the published material disseminated under the TWG.

## Methodology and data collection

The data and information under the Thematic Working Group on Education, Training & Public Awareness have been collected through a two-pronged approach:

### Secondary Data:

Literature Review: a comprehensive desk review was undertaken, encompassing existing climate and education-related policies, plans, and interventions at the national level; both public and private. The purpose of the review was to identify areas that align with the requirements of ETPA at the country level, in addition to the gaps and challenges in the implementation of the same.

### Primary Data:

Key Objectives of the Surveys:

1. To better understand the implementation of initiatives relevant to climate change education, training, and public awareness.
2. Identify gap areas and conclude targeted recommendations for future strategies (policies, programs, and plans).
3. Assess the public awareness levels of climate change across Pakistan.
4. Help develop educational material that fulfills the on-ground requirements.

### National-level Surveys:

- (a) Survey A: Assessing the Implementation of Education, Training, and Public Awareness Activities on Climate Change gap exists in Pakistan (see, Annexure 1)
- (b) Survey B: Assessment of Public Awareness Levels of Climate Change in Pakistan (see, Annexure 2)

# Snapshot of survey respondents

## Survey A: Assessing the Implementation of Education, Training, and Public Awareness Activities on Climate Change in Pakistan

Responses from 175+ key stakeholder organizations were received, from across Pakistan. Figures 1 & 2 provide a breakdown of the stakeholders targeted under the survey, and the sector-wise responses received. The highest number of responses were received from governmental organizations (44%), followed by academia, and civil society organizations (19%); corporates/private sector and other sectors made up approximately 18% of the survey responses.

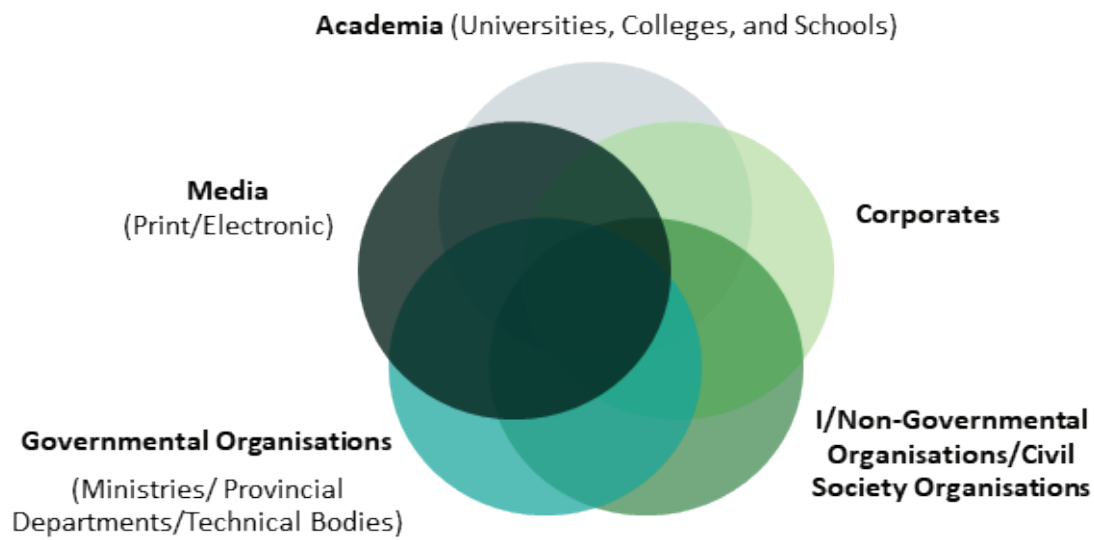


Figure 1: Targeted Participants for Survey A

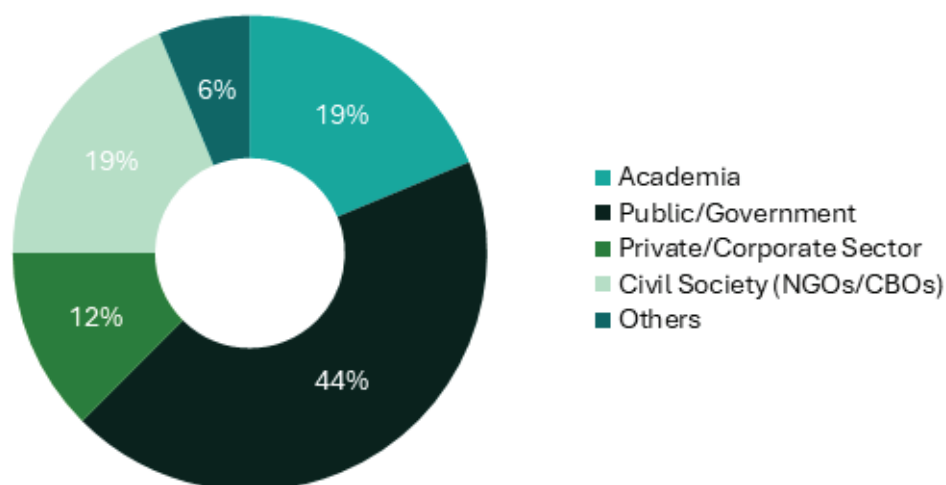
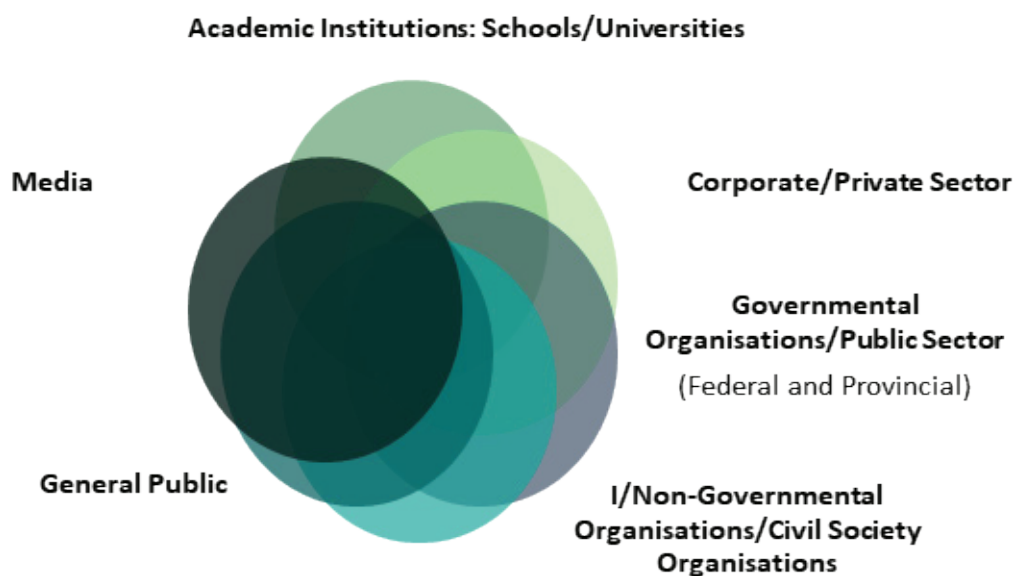


Figure 2: Sector-wise Demographics of Survey A Respondents



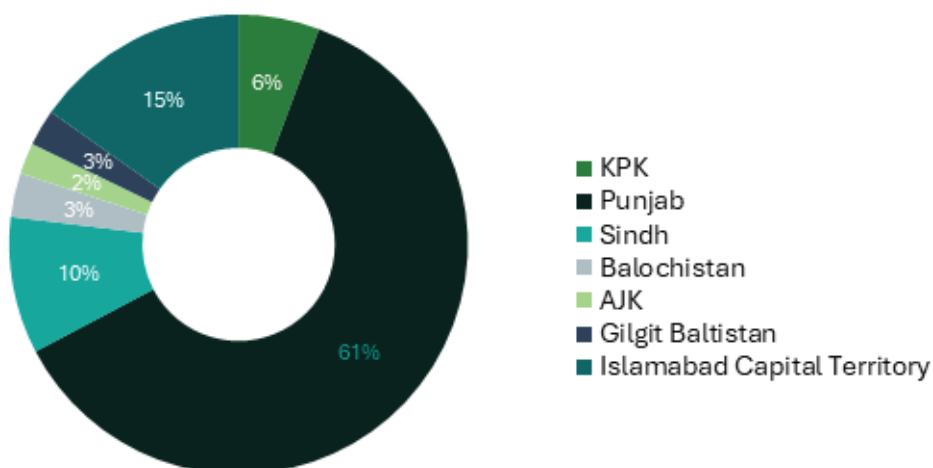
## Survey B: Assessment of Public Awareness Levels of Climate Change in Pakistan

The national-level survey conducted to assess the public awareness level regarding climate change collated more than 2000 responses; the target participants (see, Figure 3) and the demographic description of the survey participation are illustrated in the figures below.



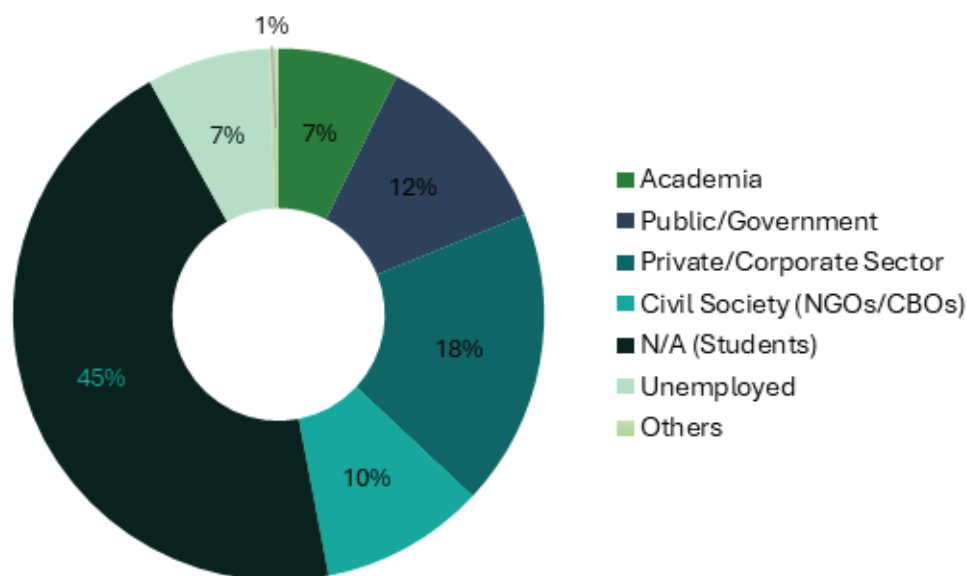
**Figure 3: Targeted Participants for Survey B**

To ensure the inclusion of a diverse number, geographical coverage, and characteristics of survey respondents, the survey was disseminated/undertaken through a hybrid method of face-to-face and online (via email and social media) platforms (Figure 4). In addition, the survey was also made available in the Urdu language for ease of comprehension.



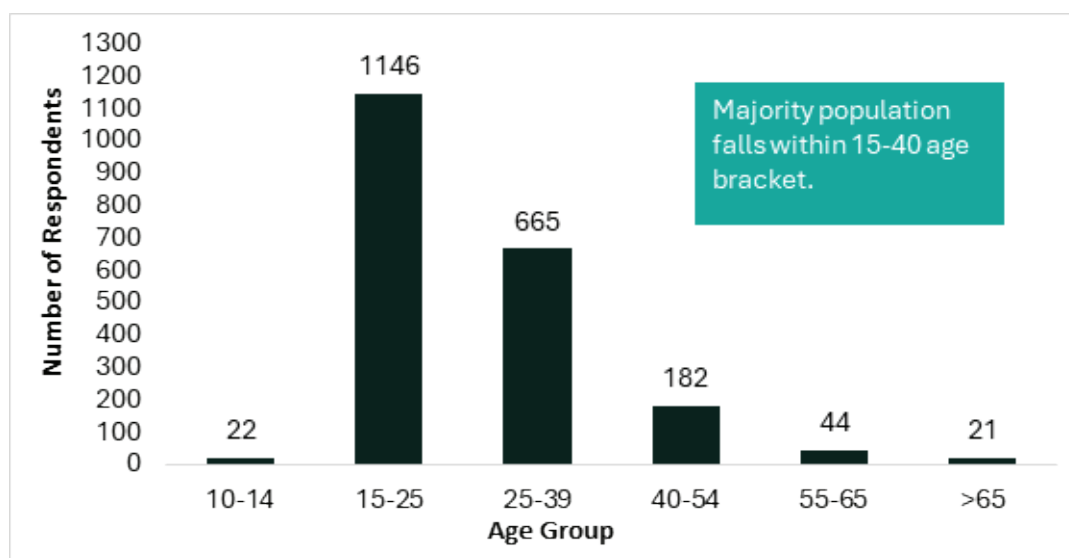
**Figure 4: Geographical Location of Survey B Respondents**

The geographical locations of the survey respondents are illustrated in Figure 4. The highest number of responses were received from the province of Punjab (44%), followed by Islamabad Capital Territory (15.2%), Sindh (9.6%), KPK (5.7%) and Balochistan (3.1%). Azad Jammu and Kashmir (AJK) and Gilgit Baltistan made up approximately (4.8%) of the total responses received. Annexure 3, enlists the name of cities from which survey responses were received.



**Figure 5: Work Sector/Status of Survey B Respondents**

Figure 5 presents the information on the work sectors/status of the survey B respondents. 45% of the responses received were from young people (enrolled in schools, colleges, or universities). This was followed by the private sector (18%), public/government (12%), civil society (10%), and academia (7%). The remaining 8%, include those in the 'unemployed' or 'others' category.



**Figure 6: Age Demographic of the Survey B Respondents**

Although there was a mix of age groups responding to the survey; the main responses were received from the age groups between 15 to 25-year-olds (55%), followed by 25 to 35-year-olds (32%), 40-54 (9%). The remaining 3% of the survey respondents come from the 10 to 14, 55 to 25, and over 65 age brackets (Figure 6). Thus, the response is aptly representative of the youth population bulge in the country. In terms of gender disaggregation, there was a balance between females (51.3%) and males (48.3%), 0.4% of respondents 'preferred not to say' (Figure 7).

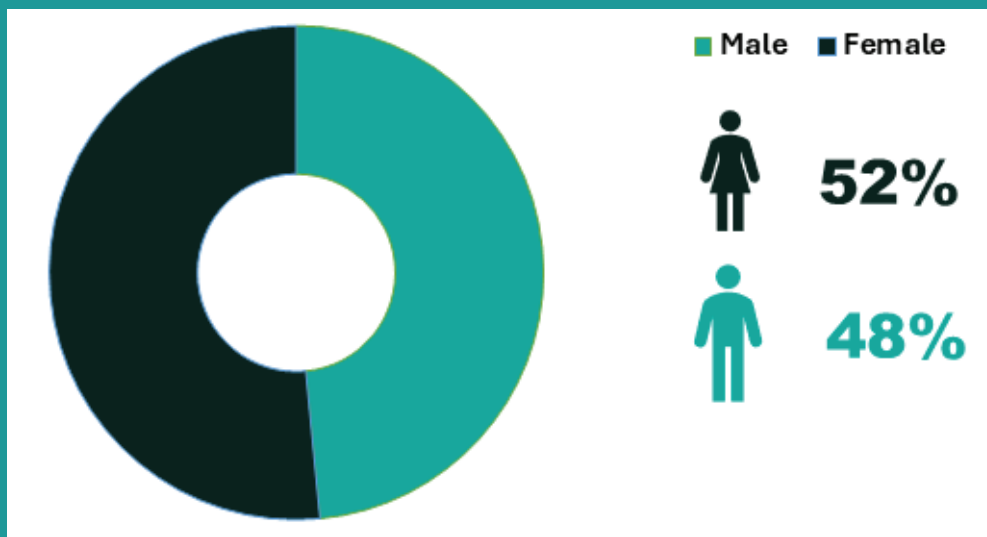
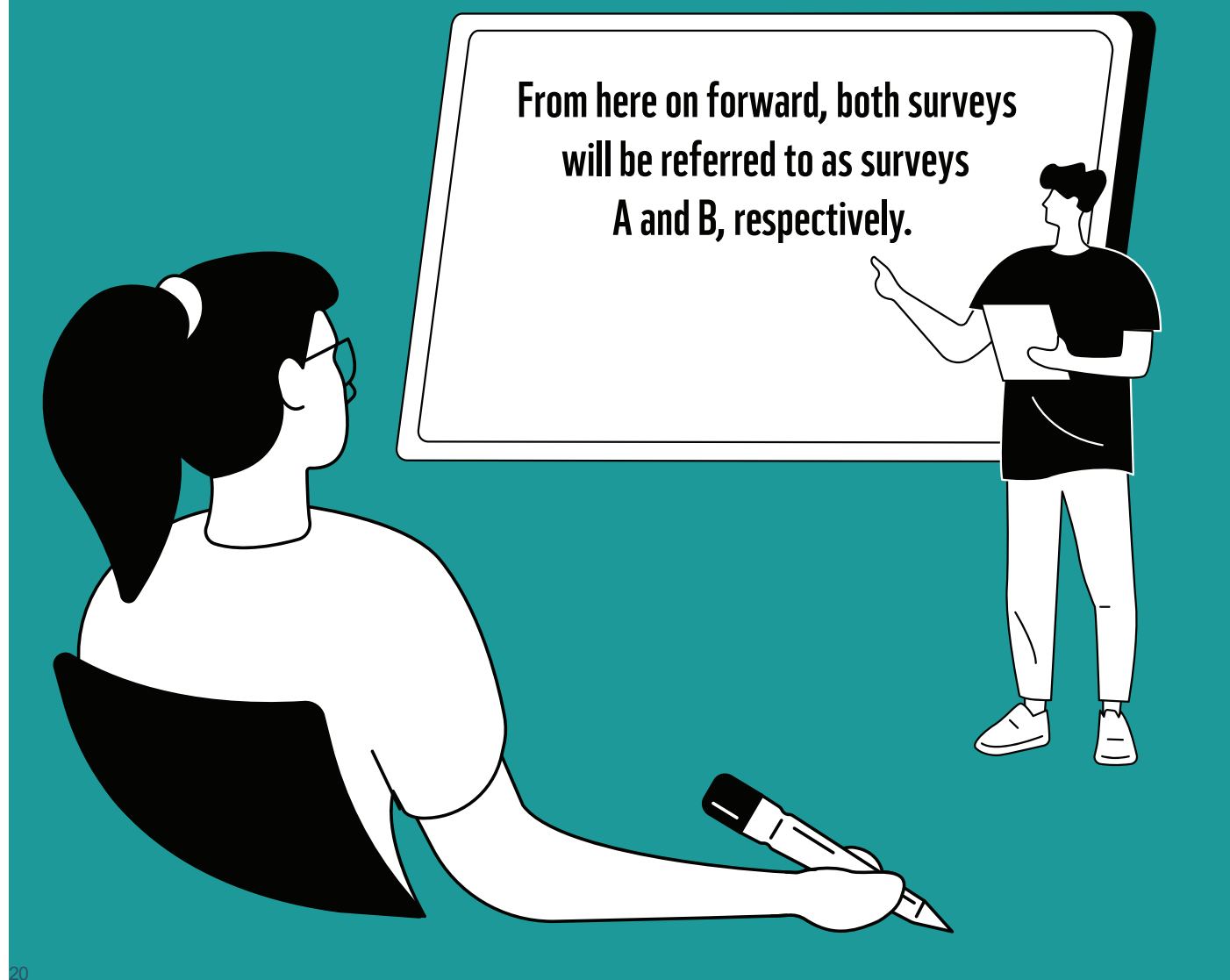


Figure 7: Gender-disaggregation of Survey Respondents



# Policies and Programs on Climate Change Education, Training, and Public Awareness

## Scoping Review of the National and Provincial Level Policies and Programs

The current section overviews the existing policies and programs in Pakistan, relating to climate change and subsequently climate-related education, training, and awareness.

**National Policies:** The National Environment Policy (2005) proposes the integration of environmental education at all levels. On a similar note, the National Climate Change Policy (2021) emphasizes the importance of incorporating climate change mitigation and adaptation in the forestry sector. It highlights Sustainable Development Goal '13', which includes improving education, awareness, and institutional capacity on climate change mitigation, adaptation, impact reduction, and early warning. Priority areas include water, energy conservation, forest ecosystems, and biodiversity. It also includes climate change and environmental planning, disaster risk reduction, knowledge-based management, and networking with regional and international climate change research establishments.

Broadly, the 2021 climate change policy identifies the need for the provision of training and support at 'national and international levels' to personnel of relevant departments and ministries; to enhance their capacity for preparing projects and programs in the climate change area.

**Nationally Determined Contributions (2021):** The NDC 2021 proposes that climate change will be included in the curriculum of all secondary schools and specialized courses will be offered in colleges and universities. Disaster Risk and Reduction (DRR) will introduce social safety nets with a focus on climate change adaptation for socioeconomic development. Youth and Volunteer Engagement will involve the Ministry of Climate Change, Higher Education Commission, universities, and CSOs to propagate climate education curricula. However, the Undergraduate Education Policy (2020) and TVET Policy (2018) do not mention climate change.

Agriculture Forestry and Other Land Use (AFOLU) and DRR are two initiatives that aim to increase women's participation in decision-making and implementation. DRR introduces social safety nets with a focus on climate change adaptation for socioeconomic development. The Waste Sector increases women's awareness regarding waste management and recycling, Health ensures targeted health initiatives regarding women's health, hygiene, and WASH services, and the Energy Sector disseminates information on environment-friendly and green technology.

**The Single National Curriculum (2023):** The primary class levels (including Early Childhood Education and Care) have a negligible reference to climate change. It has been referenced only in grade 4-5 curricula, except in English which includes it as a theme for teaching material in class levels 1-5. Within the general science and social studies curricula, the topic of climate change is limited to the theoretical information of how it occurs. Within levels 6-8, the climate change cluster has been very poorly addressed. The climate change keyword has been referenced only as part of Grade 8 vocabulary and as a small section in the English curriculum.

**Revised Higher Education Commission Curricula (2022):** Subject curricula that make reference climate change and related themes, include: environmental science, geography, Pakistan studies, public administration, forestry, range, watershed and wildlife management, water resources and environmental management, soil sciences, freshwater biology, zoology, agriculture extension education, city and regional planning, peace and conflict studies, remote sensing, marine sciences, public health and disaster management.

Beyond the formal education system, the updated policy vision of the country (NCCP 2021) emphasizes developing capacity in terms of human and infrastructural resources through strengthening climate change science-related institutes and providing opportunities for aspiring climate change professionals to gain international education and skill development. To achieve this, the policy lays out a plan of action for undertaking these capacity building capacity measures in collaboration with the relevant entities, such as nationwide surveys, a national climate change awareness program, advocacy, and mass awareness regarding the importance of water, energy conservation, aerosol pollution, climate change sensitization workshops for policymakers, understanding of natural resources (e.g. forests) and their sustainable management, and educating the corporate sector on sustainable development and carbon markets.

**Climate Change Policy of Khyber Pakhtunkhwa (2022):** Climate change-related health issues, especially for women and children. Building up the capacity of young people to develop diverse knowledge about climate change mitigation and adaptation; including upskilling them for green jobs. Non-technical/technical training of government officials and stakeholders through workshops on climate change mitigation/adaptation and related development issues.

**Climate Change Policy of Sindh (2022):** The climate policy of Sindh focuses on capacity-building programs for stakeholders in climate, agriculture, irrigation, forestry, industries, health, energy, water, WASH, transport, gender, and community-based disaster preparedness. It also emphasizes the importance of designing communication strategies in collaboration with print, electronic, and social media to create mass awareness.

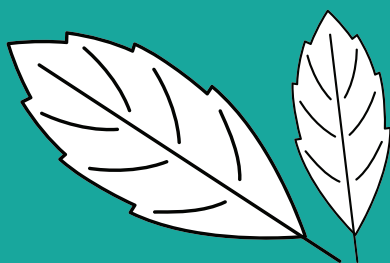
**Climate Change Policy of Punjab (2017):** The climate policy of Punjab outlines gender-responsive actionable measures such as capacity-building programs and incorporating climate change into existing training programs. These measures include access to weather and climate data, harmonizing provincial Vocational Education and Training plans, policy-supporting research and awareness campaigns, disseminating important and timely information to the public, designing and implementing a public awareness program, conducting policy sensitization workshops, dialogue and peer-to-peer exchange, provision of climate change-related information, and specified training on low carbon, climate resilient, and water-energy-food nexus related issues.

**Climate Change Policy of Azad Jammu & Kashmir:** The AJK climate change policy very comprehensively outlines the need for institutional strengthening and capacity building as a priority area for the government. Including things like the establishment of a center of excellence at AJ & K level to promote climate change education and training, and inclusion of climate change. Building knowledge-based management and networking, and awareness raising for public and relevant stakeholders.

**Gilgit Baltistan Climate Change Strategy and Action Plan (2017):** The action plan by Gilgit Baltistan for climate change recognizes the adverse impacts of climate change, particularly in disaster-prone areas. In terms of education, training, and awareness the plan suggests several strategies including media campaigns, targeted stakeholder awareness, and participation ranging from the community level (e.g., vulnerable remote mountain communities) to decision-makers and relevant public & private sector actors.

**Balochistan Climate Change Implementation Framework (2017):** The Civil Society Coalition for Climate Change (CSCCC) collaborated with the Ministry of Climate Change (MoCC) and Environmental Protection Agency, Balochistan (EPA) to create a Stakeholder Recommendation for the Implementation Framework. This framework includes public awareness, media contribution, special awareness campaigns, emergency handling situation training programs, communication strategies, capacity building, and the use of media and civil society organizations to educate and sensitize the public and health personnel to climate change-related health issues.

**Provincial Education Policies:** Punjab, Khyber Pakhtunkhwa (KPK), Balochistan, and Sindh's education sector plans and roadmaps include environmental awareness and disaster risk management as priority programs. Punjab proposes to integrate climate change science into the curriculum, Khyber Pakhtunkhwa (KPK) introduces concepts of climate change mitigation, adaptation, and natural resource management, Sindh recommends values and consequences of biodiversity loss, and Balochistan does not have a climate change policy.



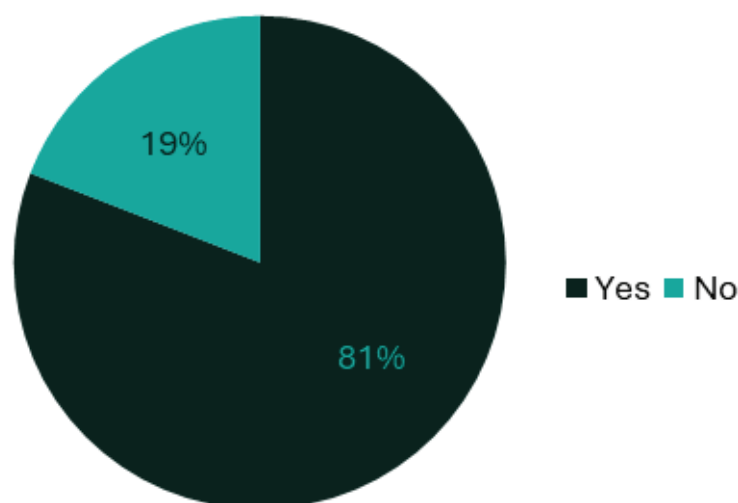
## Previous and ongoing interventions on Climate Change Education, Training, and Public Awareness

Through an extensive desk review, information was gathered regarding the interventions on climate change related to education, training, and public awareness in the country. Table 1 provides a list of few of the notable programs and activities being undertaken by government and non-governmental.

**Table 1: On-going Programs and Activities on Climate Change Education, Training, and Public Awareness in Pakistan**

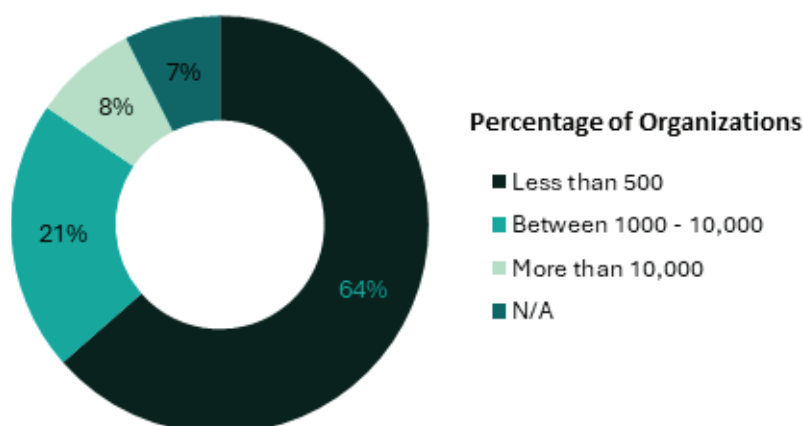
Name of Organisation	Name of Program or Activity
<b>Sustainable Development Policy Institute – Private</b>	1. Sustainable Development Conferences 2. Network for Clean Energy Transition: Research and Advocacy
<b>WWF-Pakistan</b>	1. ECO Internship Program 2. Outdoor Education Program 3. Student Ambassador Program 4. Citizen Journalism for Environmental Advocacy 5. Green Schools 6. Climate March 7. Environmental Education Modules
<b>Ministry of Climate Change and Environment Coordination Pakistan</b>	1. YOUTH4 CLIMATE PAKISTAN 2. Clean and Green Pakistan
<b>UNICEF Pakistan</b>	World's Largest Lesson 2021 (Making Climate Education Accessible for Every Child)
<b>Fridays For Future - Private</b>	Digital and on-ground Climate Strikes
<b>Oxfam Pakistan</b>	Climate Project
<b>Pakistan Meteorological Department – Public</b>	Climate Change Impact and Integration Cell
<b>NDMA – Public</b>	1. Climate Action Leadership Activity Book 2. Climate Action Children Activity Book
<b>UNDP Pakistan</b>	Mover's Program (Citi Foundation)
<b>Idara Taleem O Aagahi -Public</b>	Mahol Saheliyan – A Trilogy of Books on Climate Justice
<b>South Punjab Education Department – Public</b>	The Children's Green Book
<b>GIZ Pakistan</b>	Pakistan German Climate and Energy Initiative Youth For Climate Action
<b>National Highway Authority – Public</b>	Plastic Bags Se Azadi Awareness Campaign
<b>Food &amp; Agriculture Organisation – Public</b>	<i>FAO FFS Training of Facilitators</i>
<b>Code For Pakistan – Private</b>	Hackathon
<b>Civil Society Coalition for Climate Change Pakistan – Private</b>	Pakistan Climate Change Portal
<b>EPA – Public</b>	Awareness Strikes
<b>Pakistan Council of Research in Water Resources (PCRWR) – Public</b>	Pakistan Water Week 2021 And 2022
<b>Pakistan Red Crescent Society Pakistan</b>	1. CLIMATHON– Y Accelerator Challenge 2. Climate Change Adaptation for Resilient Action; Two Days Training
<b>PepsiCo</b>	Reverse Vending Machine
<b>Nestle Pak</b>	1. Core Alliance 2. Eco Tourism Initiatives
<b>NEECA – Public</b>	Energy Efficiency and Conservation Seminar Series
<b>Hashoo Foundation - Private</b>	Climate Action Program (CAP) – SDG 13
<b>British Council Pakistan</b>	Active Citizens Programme Response on Climate Change (2020 – 2021)
<b>Unilever Pakistan - Private</b>	Unilever To Become 'Carbon Positive' By 2030
<b>Engro Pak – Private</b>	IUCN-Engro Foundation Awareness Campaign Along Karachi Coast Wetlands Increasingly Recognized as Buffers Against Climate Change Impacts
<b>JS BANK</b>	Green Innovation Challenge

In addition to the desk review, information regarding the implementation of education, training, and public awareness programs and activities on climate change in Pakistan was collected through Survey A. Figure 8 depicts the percentage of organizations that develop and/or offer learning activities or courses related to climate change. It shows that 81% of the survey respondents answered “Yes” to this question, while only 19% answered “No”, indicating that a greater number of organizations that responded to the survey develop and/or offer learning activities or courses related to climate change.



**Figure 8: Percentage of Organisations that Develop and/or Offer Learning Activities or Courses Related to Climate Change**

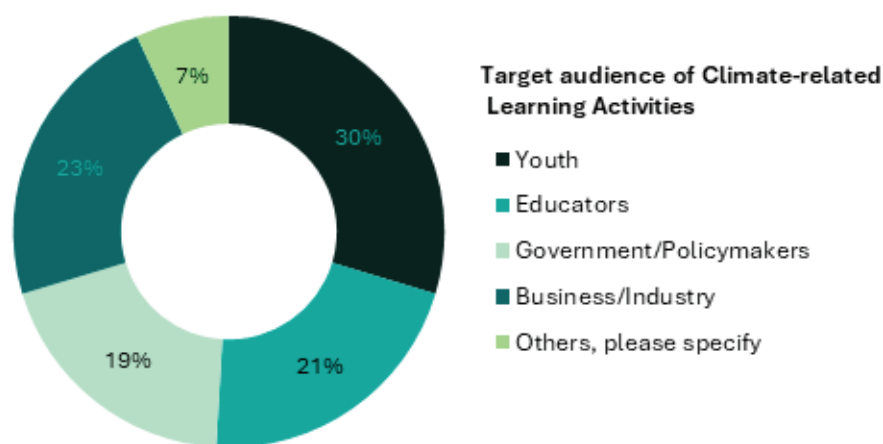
Overviewing the statistics regarding the number of beneficiaries from the climate-related learning activities each year by the respective organization. Figure 9 illustrates that the majority of organizations (64%) cater to less than 500 participants each year. 21% of the organizations cater to 1000-10,000 participants, whereas only 8% of the organizations cater to more than 10,000 participants.



**Figure 9: Number of Participants in the Climate-related Learning Activities, Each Year**

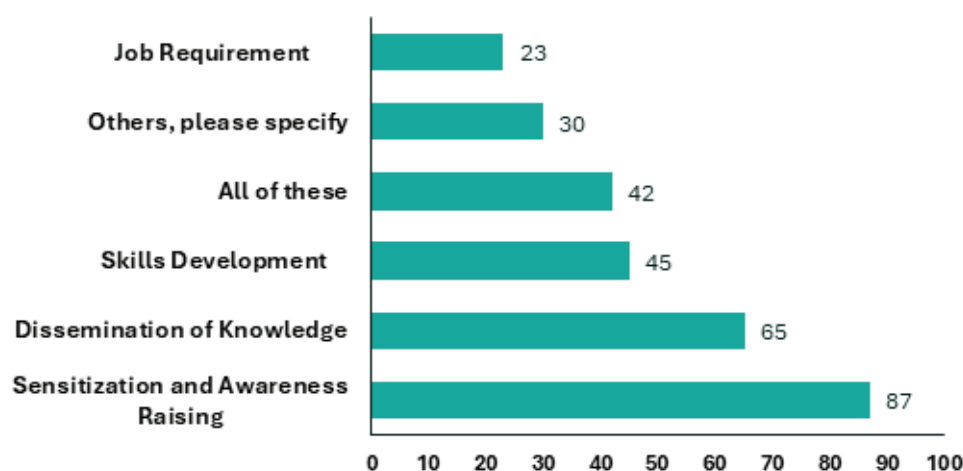
Survey results (see, Figure 10) indicate that the target audience for the climate-related education material being developed by organisations is primarily Youth, with 30% of respondents selecting this category. This is followed by Business/Industry (23%). The other categories received the following percentages of responses: Educators (21%), Government/Policy makers (19%), and Others (7%) including Local Communities, Project Management Units/Implementers, Researchers, Media Personnel & General Public.





**Figure 10: Target Audience of Climate-related Learning Activities**

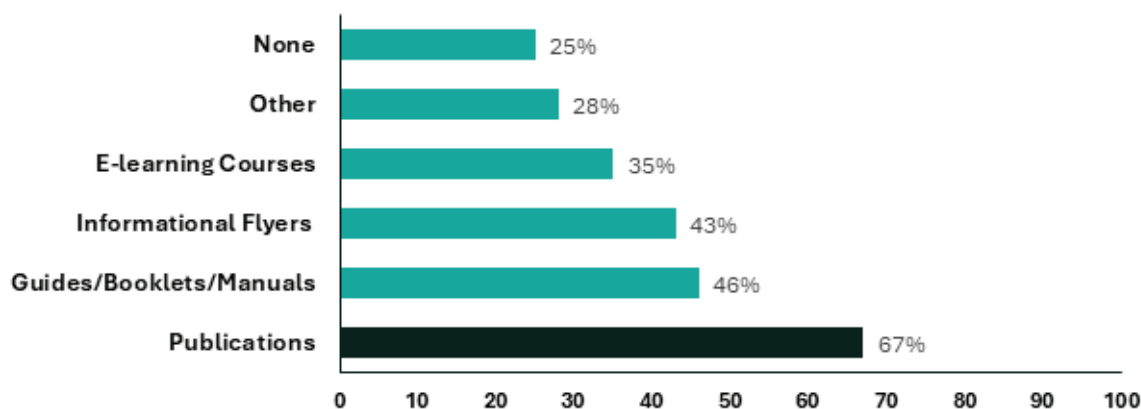
The learning outcomes of the activities or courses being offered on climate change by the surveyed organizations indicate that the most common outcome defined is “sensitization and awareness raising” with 87 survey responses, followed by “dissemination of knowledge”, with 65 survey responses, “skills development” with 45 responses, and “job requirement” with 23 responses (Figure 11). Whereas, 42 of the respondents chose “all of the mentioned options”. This indicates that the majority of the organizations focus on general knowledge & awareness raising. Additionally, 30 of the surveyed organizations responded with “others” including activity outcomes such as certification, research, project design, increased ownership and action and disaster risk reduction.



**Figure 11: Learning Outcome of the Activities or Courses Being Offered on Climate Change**

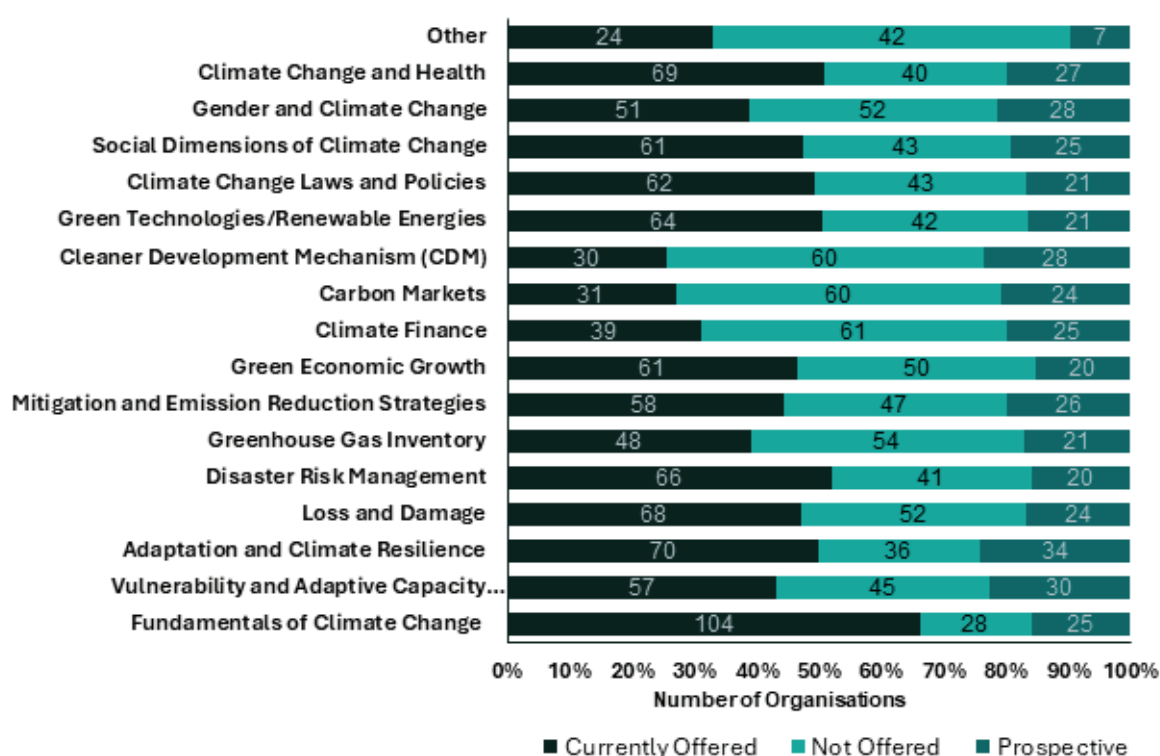
The courses/learning activities, and various types of learning materials relevant to climate change, developed by the responding organizations are illustrated in Figure 12. The results show that the most common category is “Publications” (e.g., journals, chapters, books), with 67% of organizations having developed learning materials in this category. The other categories received the following percentages of responses: “Informational Flyers” (43%), “Guides/Booklets/Manuals” (46%), “E-learning Courses” (35%), and “Others” (28%), including Newspaper Articles, Online Videos, Reports, Training Content, Research Bulletins & Newsletter, Policy Briefs, Ads/Public Service Messages, and University Courses. Whereas, 25% of the organizations specified that they did not develop such material.





**Figure 12: Learning Materials Relevant to Climate Change Developed by Surveyed Organisations**

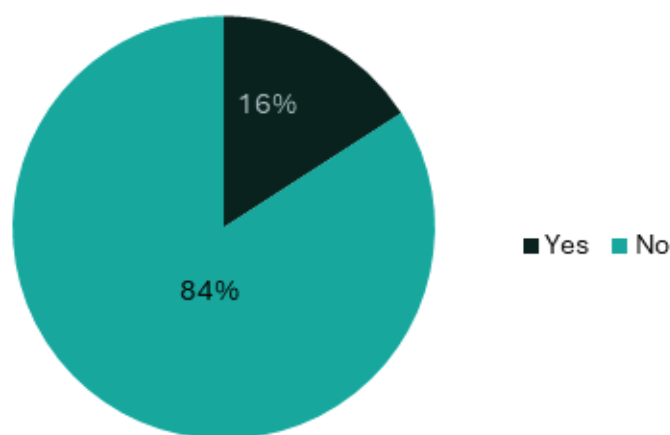
The number of themes being covered under the climate-related courses offered in the organizations have been divided into three categories: courses that are “currently being offered”, the courses that are “currently not being offered”, and the courses that are planned under “future prospects”. For example, under the theme of “Fundamentals of Climate Change”, 104 organizations who took part in the survey said that they offer this course 28 said that do not offer such a theme course and 25 organizations said that they might offer this theme course in the future. Similarly, under the theme of “Carbon Markets”, only 31 organizations said that they are currently offering this themed course, while 60 said that they are not offering it and 28 said that they might offer it in the future. Figure 13 provides a detailed overview of the other thematic areas under study. It is important to note that almost all of the themes provided are being addressed to some extent, with many organizations indicating a good intent to incorporate missing themes in the Overall, the review of Pakistan’s policies and programs on climate change education, training, and public awareness reveals a mixed picture of efforts and progress in integrating climate change concerns into the country’s educational and climate policy landscape. On the positive side, there are clear national policies and strategies, such as the National Climate Change Policy and NDC 2021, emphasizing the importance of climate change education and awareness at various levels. These policies stress the need for capacity-building, training, and institutional support. Additionally, at the provincial level, the education sector plans to some extent incorporate climate change awareness and disaster risk management.



**Figure 13: Themes Covered Under the Climate Change-related Courses Being Offered**

However, despite the increasing emphasis on the integration of climate change, there remains a dearth of meaningful incorporation of the subject matter; much of it remains at the surface level. On a similar note, interventions such as the Single National Curriculum show limited emphasis on climate change, especially in the earlier grades. While the revised HEC curricula propose capacity-building measures and awareness programs, how effectively these plans are being implemented remains a concern. Furthermore, the review highlights that some provinces, like Balochistan, still lack a dedicated climate change policy. Thus, although the importance of climate change education, training, and public awareness, at the national and provincial levels has been recognized. There remains room for improvement in terms of the depth and consistency of climate change integration into the education system, as well as the effective execution of capacity-building initiatives.

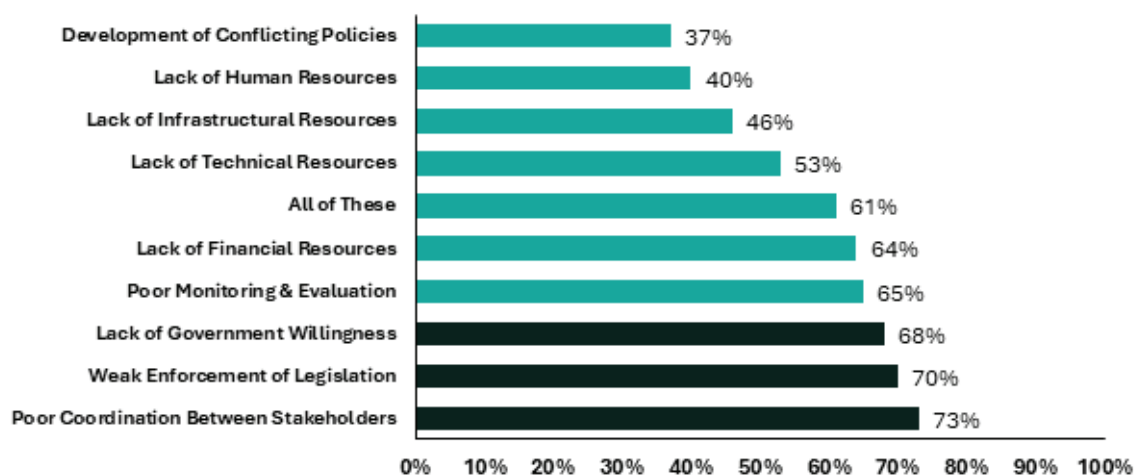
Analyzing the survey results in the same light, 84% of the respondents from key stakeholder organizations believe that the existing policies relevant to climate change and education, training, and public awareness are not sufficient to fulfill the country's current needs (Figure 14).



**Figure 14: Sufficiency of Existing Policies**

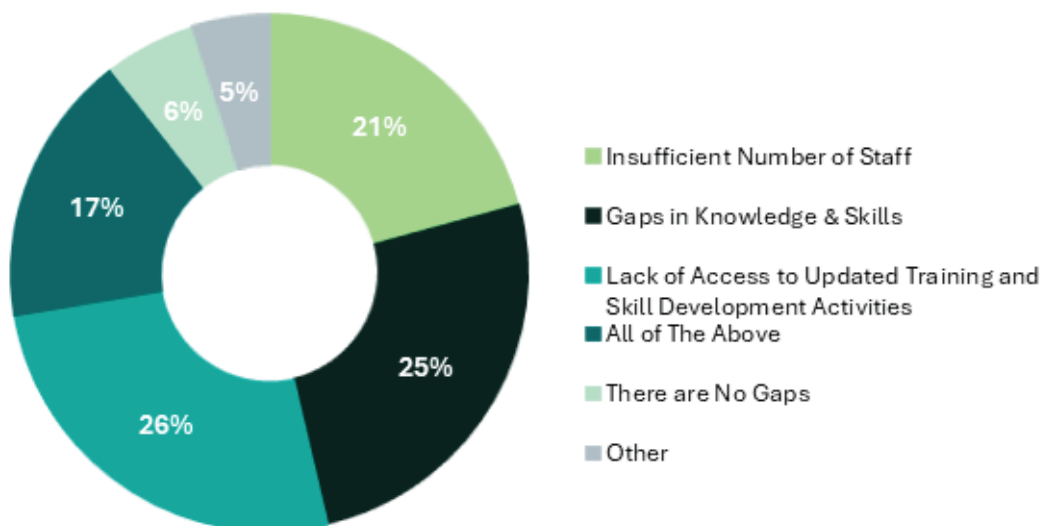
In continuation of the survey responses on the effectiveness of the implementation of existing policies and plans (Figure 15). Poor coordination among stakeholders is ranked as the biggest constraint, cited by 42% of respondents, closely followed by, the lack of financial resources at 40% and a lack of government willingness at 39%, highlighting the importance of collaborative efforts, targeted budget allocation, and political commitment.

Lack of effective monitoring and evaluation, as well as a shortage of human resources (37%), have also been identified as major causes of concern, underscoring the need for effective oversight and capacity building. In comparison, 35% of respondents responded with the “all mentioned constraints”, option emphasizing the all-encompassing issues. In addition, a lack of infrastructural resources (30%) and weak enforcement of legislation (23%) were also labeled as critical impediments to the sustainability of policies and programs. The lowest-ranking factors, including the development of conflicting policies (26%) and a lack of technical resources (21%), emphasize the need for harmonization and technological support in policy implementation efforts (see, Figure 15).



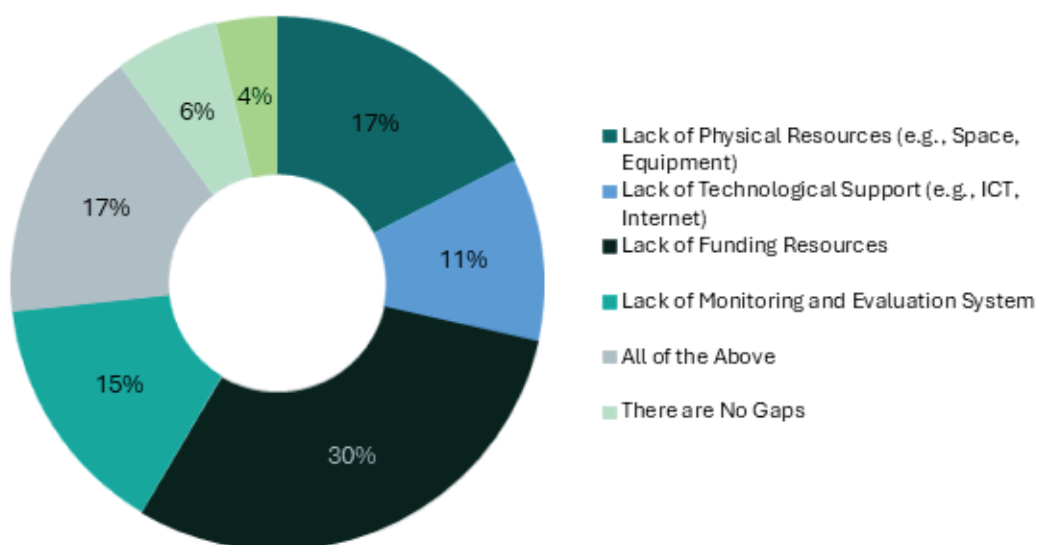
**Figure 15: Biggest Constraints in the Implementation of Policies and Plans**

Besides the identified constraints in effective policy and planning, the subsequent figures indicate the gaps in capacity within organizations, in terms of human, technical, and infrastructural resources. Figure 16 shows the human resource capacity gaps that organizations face in developing and offering learning activities or courses related to climate change. The results show that the most common gap is the lack of access to updated training and skill development activities (26%). The second most common gap is the insufficient number of staff, with 21% of organizations facing this gap. The other gaps received the following percentages of responses: gaps in knowledge and skills, with 25% of organizations facing this gap, all of the mentioned gaps (17%), whereas 6% chose the option of there are no gaps, and 5% chose the option of other.



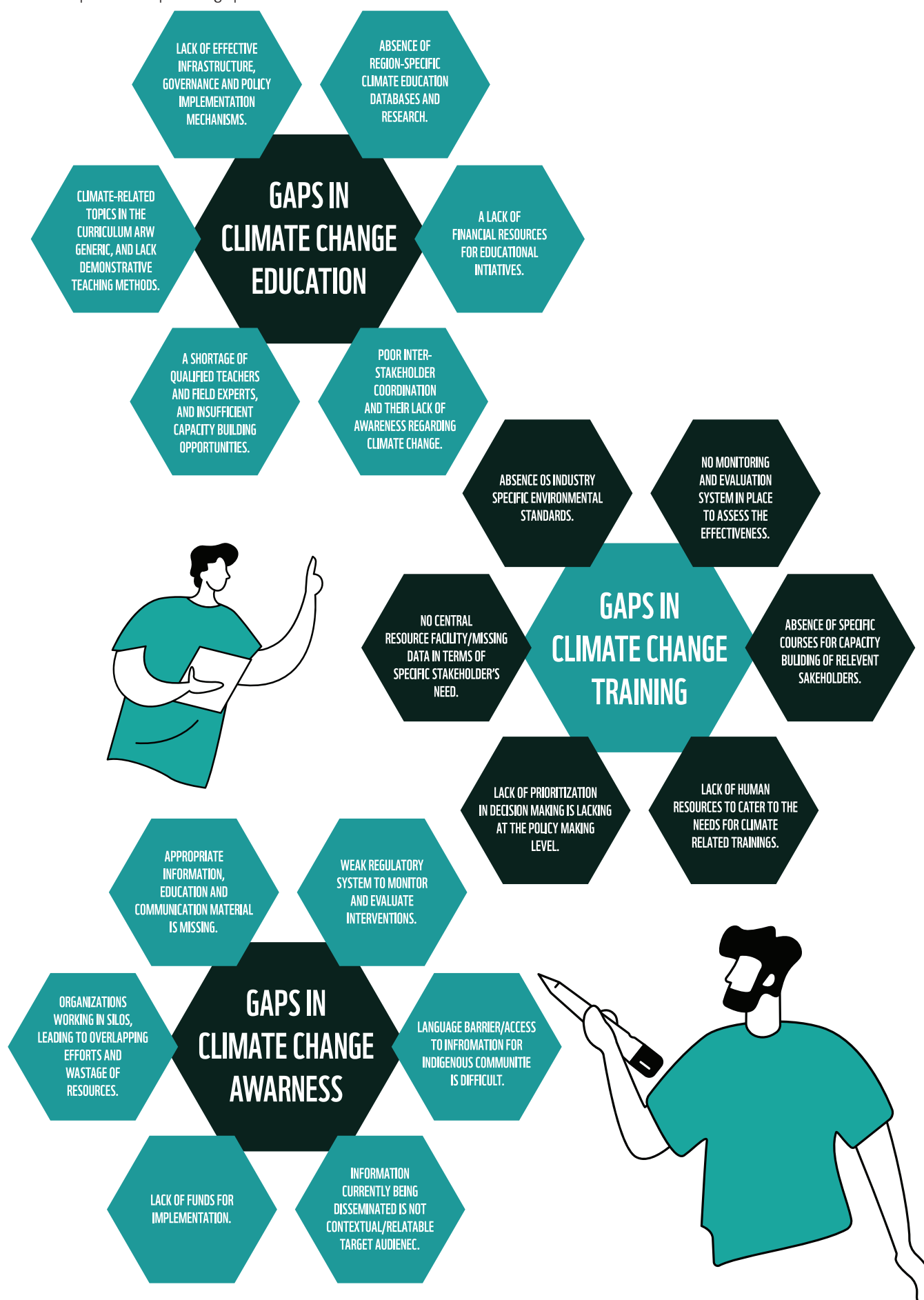
**Figure 16: Human Resource Capacity Gaps for Climate Change-related Education, Training & Public Awareness**

In terms of the technical and infrastructural capacity requirements, Figure 17 shows that the most common gap is the lack of funding resources, with 30% of organizations facing this gap. The second most common gap is a lack of physical resources (e.g., space, equipment), with 17% of organizations facing this gap. The other gaps received the following percentages of responses: lack of monitoring and evaluation system (15%), lack of technological support (e.g., ICT, Internet) (11%), lack of funding resources (17%), and all of the mentioned gaps (17%), 6% of the survey respondents cited that there are no gaps, and 4% chose the option of other.



**Figure 17: Technical and/or Infrastructural Capacity for Climate Change-related Education, Training & Public Awareness**

findings from provincial workshops provide a critical review of gaps that exist at the local level. (Figure 18). A detailed account of the province-specific gaps has been tabulated in Annexure 4.



**Figure 18: Gaps in Climate Change Education (LHS), Training (Center) and Public Awareness (RHS) identified in Provincial Workshops under the Preparation of the Third National Communication on Climate Change.**

Overviewing the insights collected, it is evident that while there is a notable recognition of the importance of integrating climate change concerns into the education system and policy framework, substantial challenges persist, especially in terms of effective implementation.

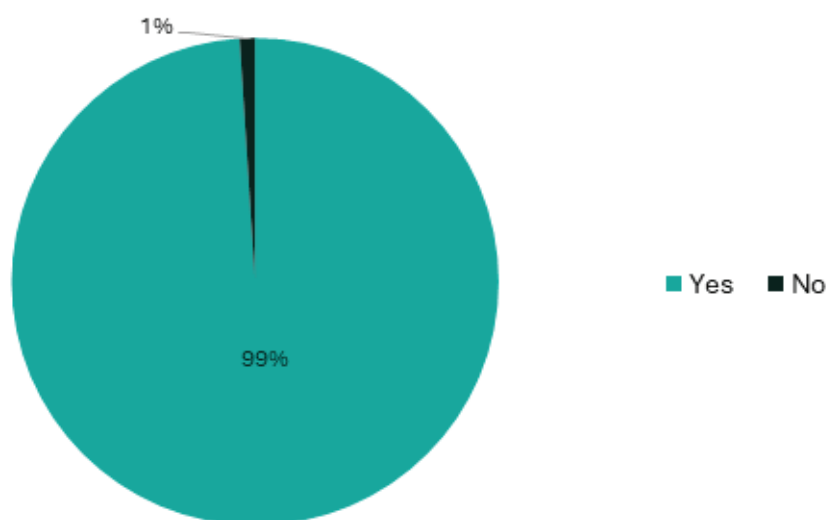
Poor coordination among stakeholders, limited financial resources, and a lack of government willingness emerge as major constraints identified by stakeholders. Coupled with this, at an organizational level; gaps in human, technical, and infrastructural resources hinder capacity-building efforts. The findings from workshops across different provinces highlight region-specific challenges, such as the absence of climate-related topics in curricula, lack of contextual/accessible information material, and qualified teachers for implementation. In addition, the enhanced need for improved data collection and monitoring to assess the effectiveness of education and training activities is also required.

In conclusion, while there has been progress in recognizing the importance of climate change education, training, and public awareness, the review underscores the need for deeper integration, enhanced coordination, and increased resource allocation to address the urgent and complex issues identified. Section 6 outlines some key recommendations extracted from consultations (surveys and workshops).

## Levels of Public Awareness on Climate Change and Recommendations for Its Enhancement in Pakistan

In order to gauge the level of public awareness of climate change within the country a national-level survey was undertaken. The public awareness survey was divided into three main sections assessing knowledge of climate change basics, climate change mitigation and adaptation, and climate action and advocacy. The demographics of survey respondents have been outlined in the Section 2. The succeeding narrative delves into the survey results.

The preliminary question posed to the survey participants was “Does Climate Change Exist?” According to the data, 99% of the survey respondents answered: “Yes”, while only 1% answered “No” (Figure 19). Thus, an overwhelming majority of survey respondents in Pakistan believe that climate change exists.



**Figure 19: Public Perception on Existence of Climate Change**

Assessing the “most concerning” issues in the country (with ‘5’ being the highest level), as per survey respondents there was apprehension regarding multiple existing threats (see, Figure 20), from which “declining economic situation” and “climate change/global warming” were rated the highest. This indicates the extent of concern the population has surrounding climate change, given the current socioeconomic condition of the country.

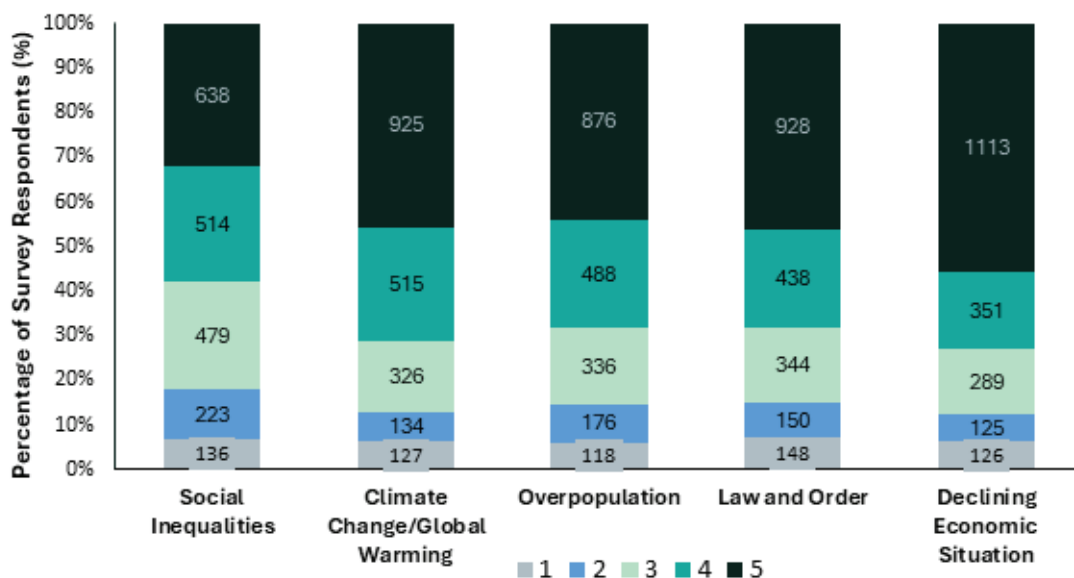


Figure 20: Level of Public Concern for Key Issues Impacting Pakistan



This was followed by gauging the understanding of respondents, in terms of the “main cause of climate change” (Figure 21). As per collected data, the majority of survey respondents in Pakistan believe that deforestation and the burning of fossil fuels activities are the primary cause of climate change with 22.3% and 21.3% of the responses, respectively. Unsustainable consumption patterns were another significant factor in climate change, with 15.5% of respondents attributing the phenomenon to it. Agricultural practices such as methane emissions from livestock were noted as contributing to the phenomenon by 8% of the respondents. The chart also provides an option for respondents to choose “all of these” in case they were uncertain or believed that all causes mentioned contribute to climate change.

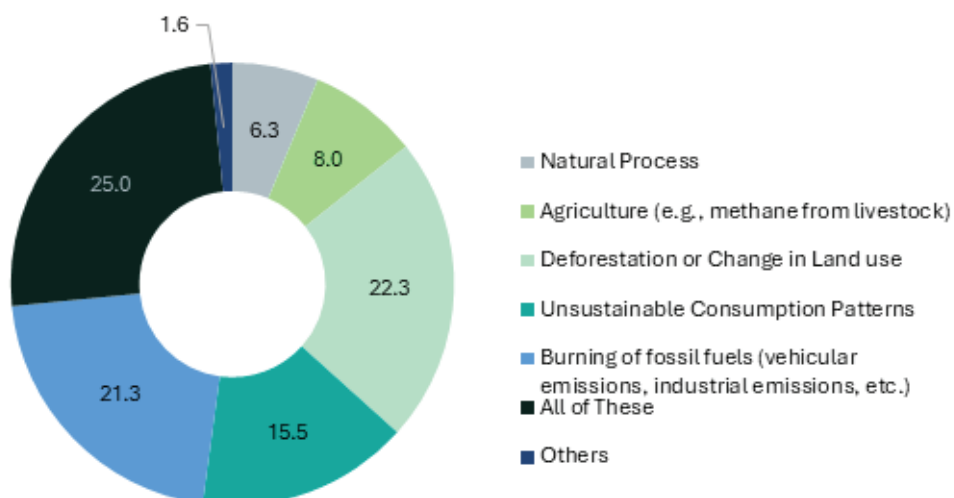
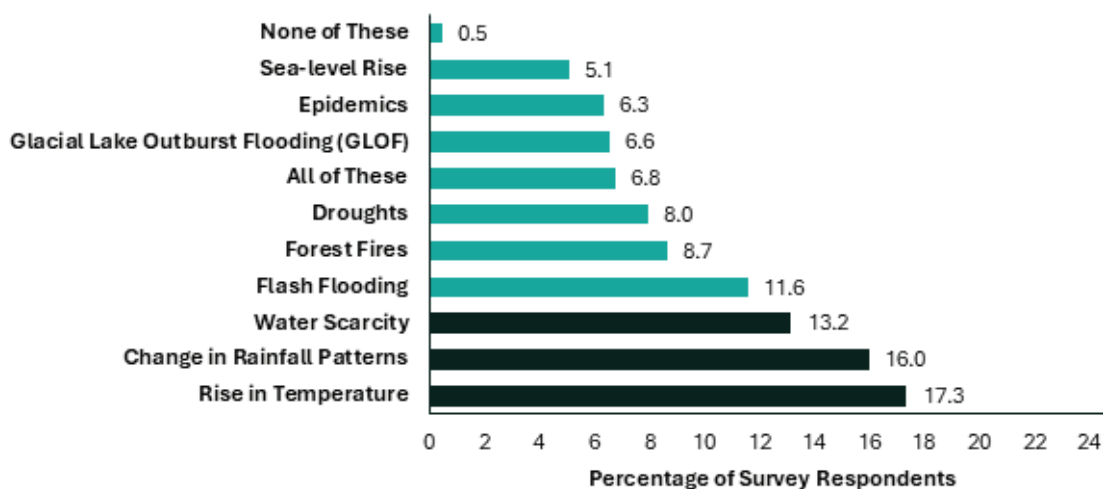


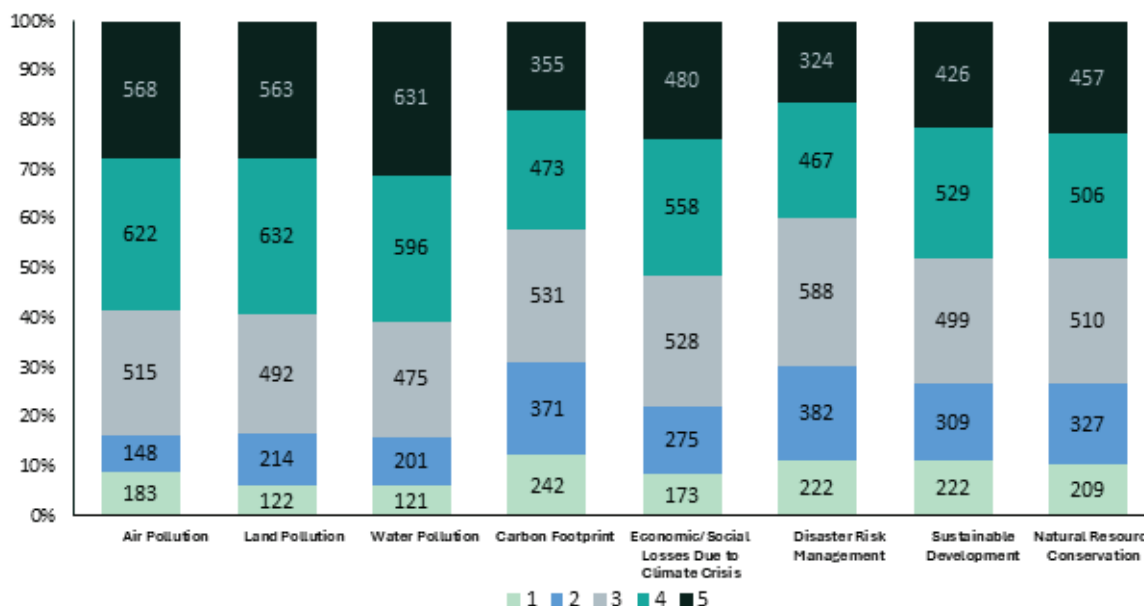
Figure 21: Main Causes of Climate Change as per Survey Respondents

In a question on “observed climate-related changes in last five years in your surroundings”, the survey respondents were asked to choose all the climate-related changes they had observed in their surroundings from the given options. The survey indicates that 17.3% of the respondents had observed a rise in temperature. Other observed changes include changes in rainfall patterns of 16%, water scarcity of 13.2%, and flooding of 11.6%. The least observed climate-related changes were sea-level rise at 5.1 %, epidemics at 6.3%, and glacial lake outbursts at 6.6%; most likely owing to the restricted geographical location of these phenomena (Figure 22).



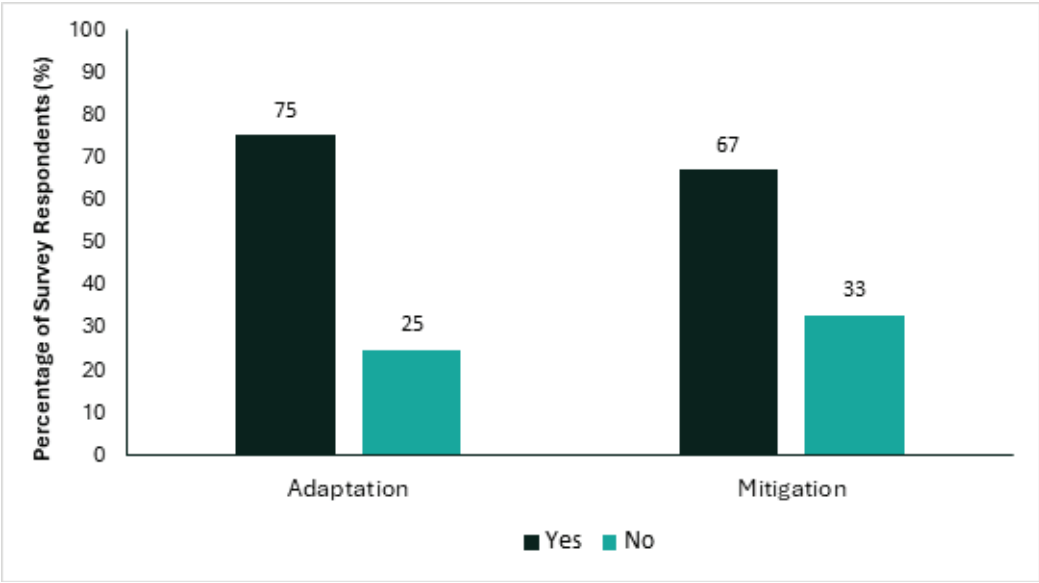
**Figure 22: Observed Climate-related Changes in Last Five Years as per Survey Respondents**

With regards to the knowledge on various themes of environment and climate change, survey responses illustrate mixed results. The highest level of knowledge was shown to be on pollution (water, air and land, respectively). Whereas, themes such as carbon footprint, disaster risk management and sustainable development were relatively lower. Figure 23, details the responses received; with “5” showing highest level of knowledge.



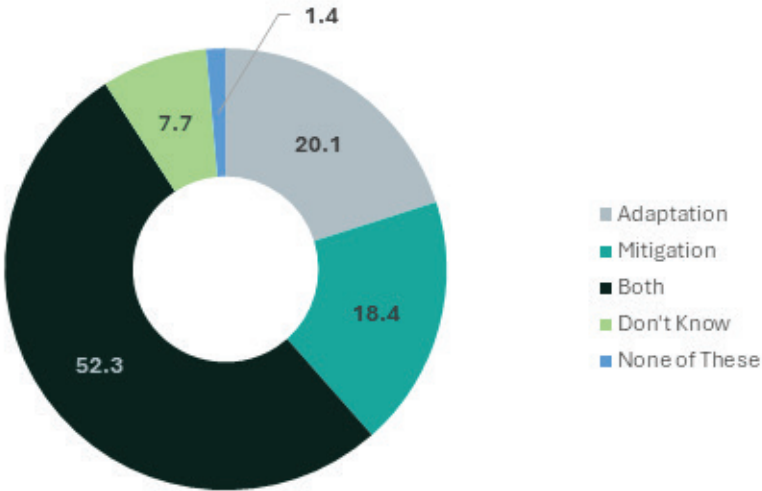
**Figure 23: Level of Public Knowledge of Themes of Environment & Climate Change**

The second section of the survey delved into assessing the knowledge/awareness level surrounding climate change mitigation and adaptation. 75% of the respondents reported having knowledge about climate change adaptation, while 67% about climate change mitigation. The remaining 25% (adaptation), & 33% (mitigation) of respondents were unfamiliar with such interventions (see, Figure 24).



**Figure 24: Public Knowledge Regarding Climate Change Adaptation & Mitigation**

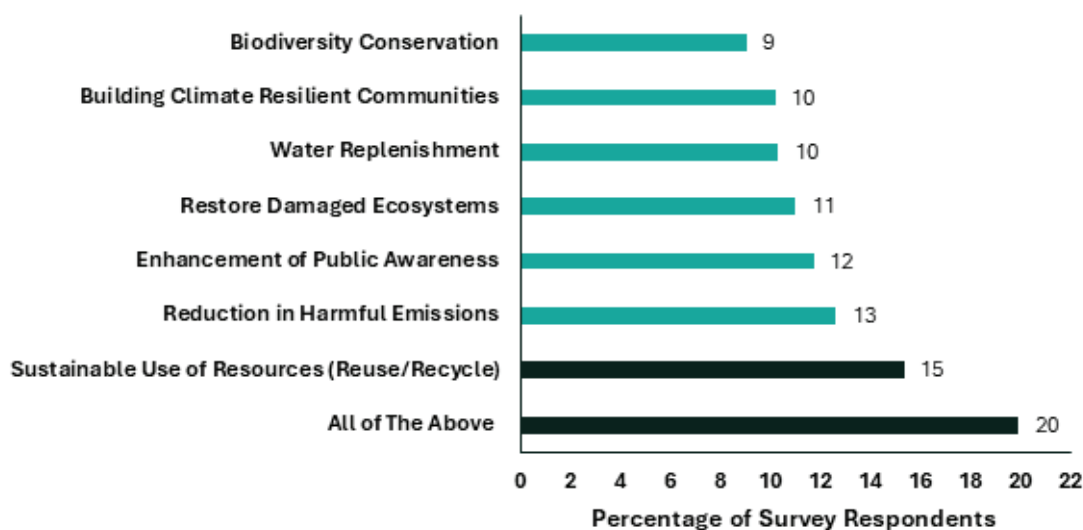
Carrying forward, 52.3% of respondents believed that Pakistan should prioritize both adaptation and mitigation of climate change. 20.1% of respondents were in favor of prioritizing climate change adaptation, while only 18.4% of the respondents wanted to prioritize mitigation over adaptation. 7.7% of respondents responded by saying they did not know, and 1.1% of respondents chose none of the given options (Figure 25). Thus, overall, responses highlight the need for a balanced approach that prioritizes both adaptation and mitigation of climate change.



**Figure 25: Prioritization of Climate Change Mitigation & Adaptation by Survey Respondents**

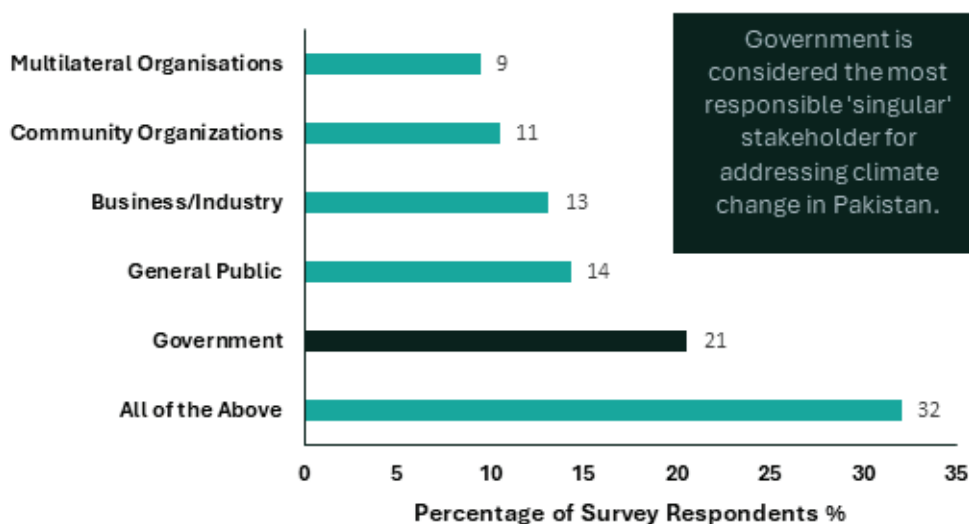


Under climate change mitigation and adaptation, the following key actions were suggested by survey responders: “sustainable use of resources” was the most prevalent action among survey respondents, with 15% of respondents selecting it as their top priority, besides an all-encompassing option of “all of the above”; with 20% of the survey respondents choosing this. Followed by a “reduction in harmful emissions” (13%), “enhancement of public awareness” (12%), “restoration of damaged ecosystems” (11%), and “building climate-resilient communities” (10%), “water replenishment” and “biodiversity conservation” were deemed essential actions for only 10% and 9% of respondents, respectively. Figure 26 provides a graphical overview of the actions.



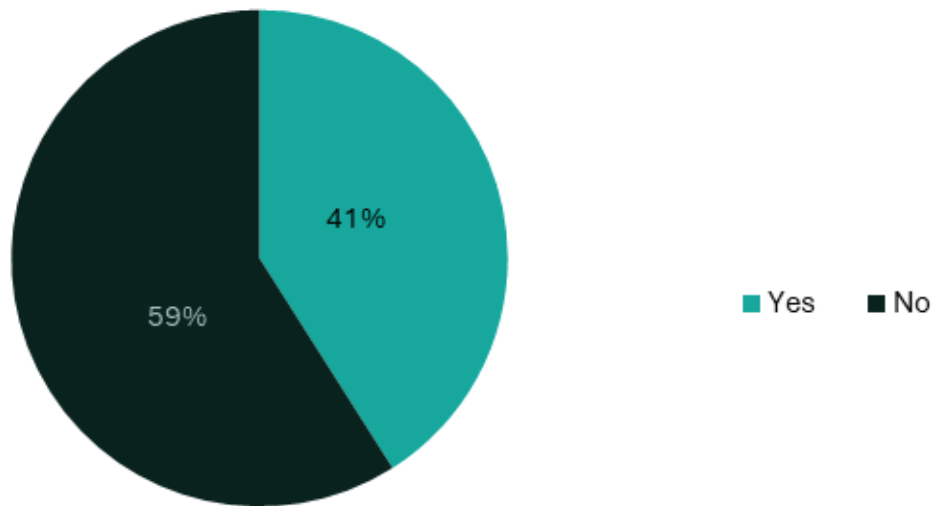
**Figure 26: Public Perceptions on Climate Change Solutions in Pakistan**

The final section of the survey explored the opinions of survey respondents regarding climate action and advocacy. According to the data depicted in Figure 27, the “Government” (21%) is considered the most responsible ‘singular’ stakeholder for addressing climate change in Pakistan, followed by “General Public” (14%) and “Business/Industry” (13%). “Community Organizations” and “Multilateral Organizations” were considered less responsible than the other options and were selected by 11% and 9% of respondents, respectively. This emphasizes the significant role and expectations the population has from the governmental bodies, yet, it is critical to note that 20% of the total survey population believes that all stakeholders are equally responsible for addressing the issue of climate change; and so indicates that people have an understanding of the need for inter-stakeholder collaboration for climate action.

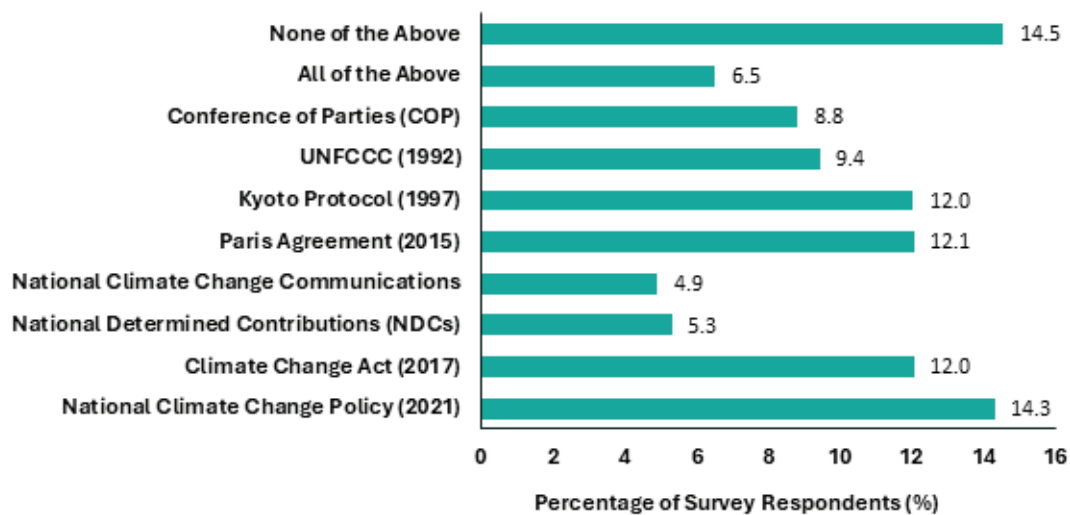


**Figure 27: Public Insights on Key Stakeholders in Resolution of Climate Change Issues**

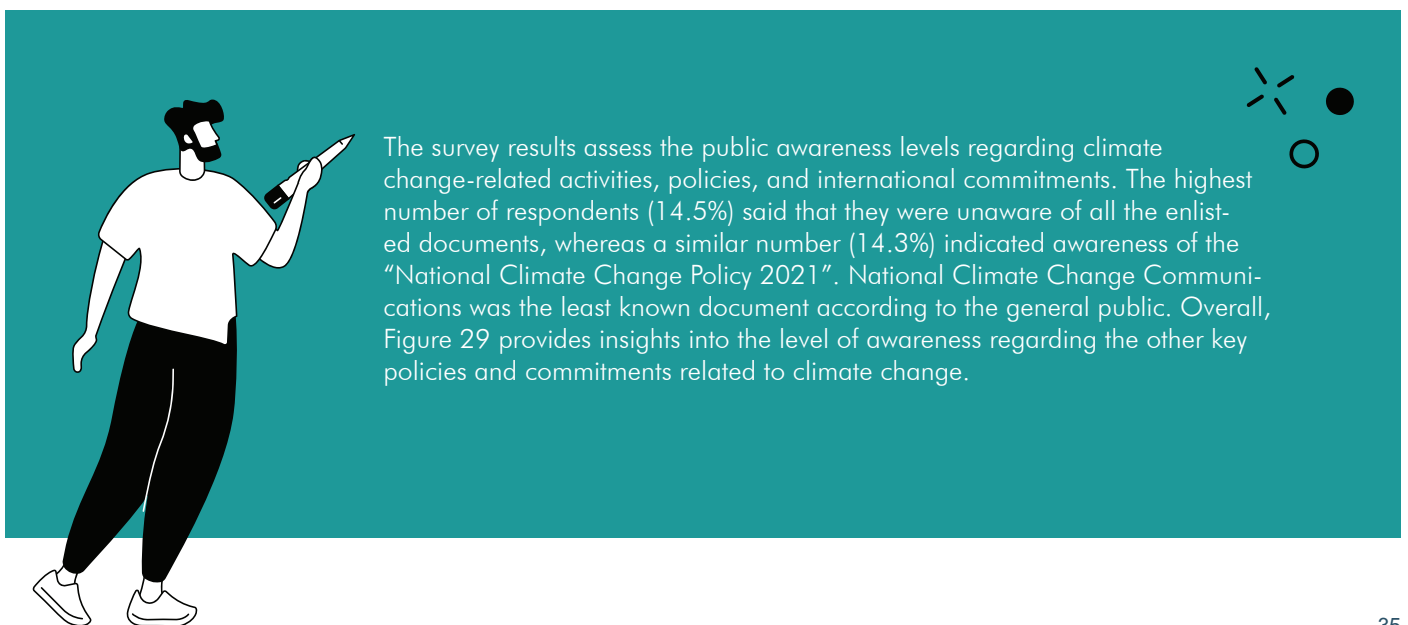
In response to the question of whether the survey respondents are aware of any climate change campaigns in Pakistan, around 59% of the survey respondents reported in the affirmative, whereas, the remaining 41% replied in the negative (Figure 28). Thus, although a considerable population indicated awareness of such campaigns there is still room for improvement.

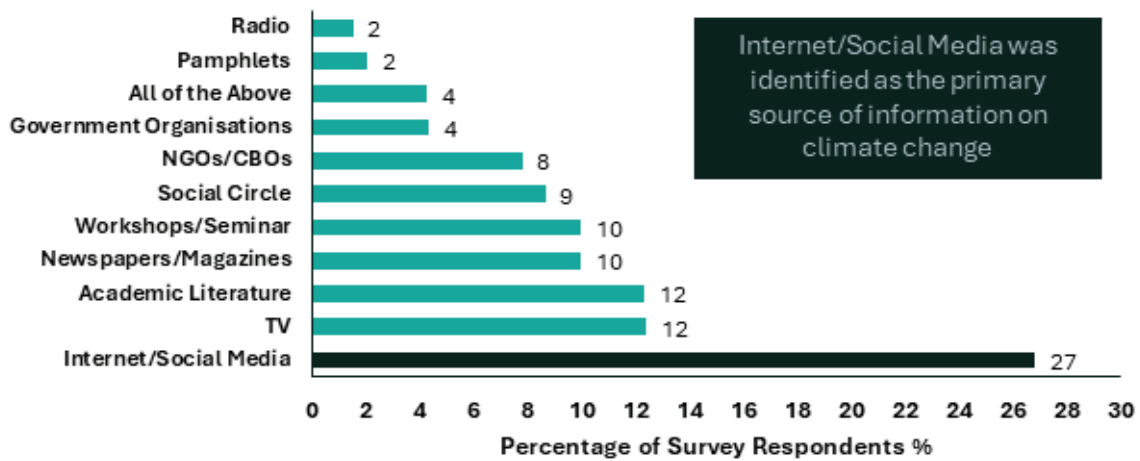


**Figure 28: Public Awareness Level of Climate Change Campaigns**



**Figure 29: Public Awareness of Climate change-related Activities, Policies and International Commitments**





**Figure 30: Main Source of Information on Climate Change as per Survey Respondents**

Among the sources of information, “Internet/Social Media” was identified as the primary source of information on climate change, with 27% of respondents relying on it. This was followed by “Academic Literature” at 12% and “Workshops” and “Newspapers” both at 10%. Other sources of information included, “Friends and Family” at 9%, “NGOs/CBOs” at 8%, “Government Organizations at 4%,” and “Radio at 2% which played a smaller role in educating individuals about climate change campaigns (Figure 30). The result highlights that the internet and social media can be used as an effective tool to deliver targeted climate change campaigns and information.

## Provincial Workshops Organized under the Third National Communication

WWF-Pakistan with the support of the MoCC, organized a series of workshops across Pakistan with an aim to enhance climate change awareness and capacity building of relevant local-level stakeholders. In this regard, four workshops were held in Khyber Pakhtunkhwa, Balochistan, Punjab, and Sindh.

The overarching aim of the workshops was to highlight the implementation status of climate-related education, training, and public awareness in the province. Particularly, focusing on identifying the extent of alignment of said activities with the policy measures denoted in the 2021 Climate Change Policy of Pakistan. Furthermore, through the scheduled interactive sessions with experts and participants in the panel discussion and working group sessions; the workshop intends to formulate province-specific critical pathways for the enhancement of education, training, and public awareness. The insights from the workshops have been incorporated in the present report.



A total of 211 key representatives took part in the 4 workshops from local government departments, academia, NGOs, CBOs, media, and corporates, participated in the workshop. Through a unified platform for engagement, the creation of a holistic roadmap for the province on climate education, training, and public awareness was drafted.



**Figure 31: Climate Change Education, Training & Public Awareness Provincial Workshops (1) KPK (2) Balochistan (3) Punjab (4) Sindh**

## Overall Objectives

- (i) Gauge the alignment of the current activities on climate change education and public awareness with the 2021 Climate Change Policy of Pakistan.
- (ii) Enhance the awareness level of the relevant local stakeholders on climate change.
- (iii) Identification of the gaps, and constraints in the implementation of activities related to climate change education, training, and public awareness.
- (iv) To give recommendations for improving the level of education, training, and public awareness of climate change.



**Figure 32: Working Group Sessions at Provincial Workshops**



Four post-event narrative reports were prepared for all four workshops (see, Annexure 5). Moreover, all the workshops received extensive media coverage (both electronic and print); Figure 33 provides a snapshot from the media, links have been annexed in Annexure 6.



Figure 33: Snapshots from Electronic & Print Media on Climate Change Education, Training & Public Awareness Workshops

## Recommendations for Effective Implementation of Climate Change Education Training and Public Awareness

Recommendations derived from the national stakeholder survey for effective implementation of climate change education, training, and public awareness include (Figure 34): (i) prioritization of climate change in all policies, plans, and programs; (ii) promotion of public-private partnerships for mobilization of technical and infrastructural resources (iii) increased willingness of governmental organizations to implement existing policies and plans; (iv) establishment of a coordinated platform for knowledge dissemination and stakeholder engagement; and (v) provision of adequate financial/non-financial resources.

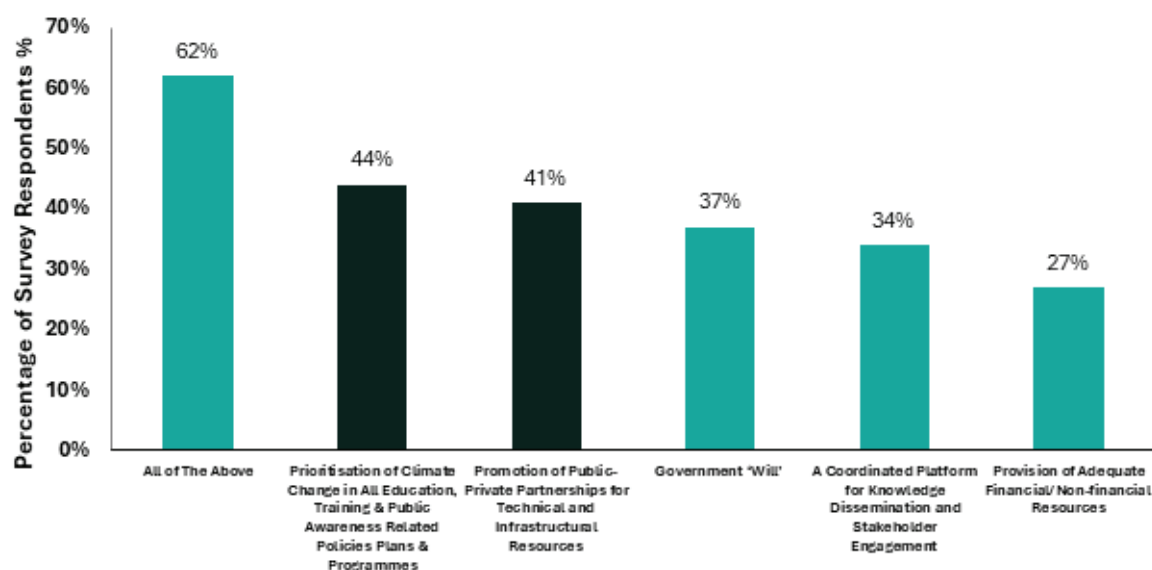


Figure 34: Recommendations to Overcome Identified Constraints for Climate Change-related Education, Training & Public Awareness

In addition to the recommendations received via the surveys, the working group session findings from provincial workshops suggested critical pathways for the enhancement of climate change education, training, and public awareness at the local level.

## Major Outcomes from the Workshop

### Khyber Pakhtunkhwa

- Expand notable climate education initiatives in the province: Clean and Green Pakistan Movement for Schools, Child and Youth Action, and Green Youth Movement (Grant Program).
- Train teachers, media persons, and religious institutes to raise awareness and increase community outreach.
- Prioritize local community education through targeted workshops (e.g., farming communities, and rural women in disaster-prone areas) and establish coordinated platforms (in-person/online).
- Place monitoring and evaluation systems, linked to real-time dashboards, for timely data/alerts.
- Introduce climate-change-related courses across educational levels and establish a dedicated advisory group for overseeing implementation and monitoring.
- Develop hands-on learning educational materials and campaigns addressing language/technical barriers, with clear call-to-action points post-sensitization.
- Create a framework with stakeholders to enhance training opportunities via public-private partnerships.

### Balochistan

- Set up a centralized resource facility in Balochistan to facilitate province-wide implementation of programs via a coordinated platform.
- Mobilization of resources to overcome financial constraints viz local and international donors.
- Inclusion of females, youth, and influential community leaders (e.g., religious clerics) for advocacy campaigns.
- Capacity building and awareness raising on climate change of key relevant stakeholders.
- Introduce climate change-related cross-cutting themes in the educational curriculum alongside creating Information, Education, and Communication (IEC) materials.

### Sindh

- Extend education beyond formal domains to include community members as active "education participants".
- Restructure curriculum, training, and awareness campaigns to be contextual, adaptive, age-specific, and learner-centric, aiming to bridge the urban-rural divide.
- Design strategies using an evidence-based approach by collecting, collating, and communicating data and information on climate change and stakeholder capacity needs.
- Enhance the role of scientific and research organizations in offering current data, capacity-building, and translating technical skills and complex jargon for diverse stakeholders.
- Facilitation of citizen engagement and providing accessible information to the public.
- Utilization of various financing options e.g., government budget allocation, donors, & private sector contributions.
- Creation of a business case, is crucial to engage the private sector in capacity building.

### Punjab

- Usage of mass communication methods such as PEMRA's free-of-cost 'public-message' dissemination service to phone users.
- Post-sensitization; communication of plan of action and resources required for climate action, including information on low-cost materials in different regions and city areas.
- Enhanced inclusion of community leaders, such as village elders, religious scholars, women, and young people in climate change awareness and advocacy.
- Decentralization of work and efforts to the grass-roots level through a community-based approach.
- Establishment of linkages between (public/private sectors) departments and organizations.



# Conclusions

The findings gathered from the surveys and workshops bring forth pertinent recommendations for the enhancement of climate change-related education, training and public awareness. The following section encapsulates the key takeaways.



A need to prioritize the integration of climate change as an underlying theme in all policies, plans, and programs related to education, training, and public awareness. This includes restructuring the curriculum to include themes of climate change and developing pathways of “non-formal” educational interventions that can be impactful beyond the scope of formal education and additionally cater to vulnerable populations that may not have access to such facilities.

Designing programs to make them more hands-on and contextual (in line with language and cultural norms), to ensure it is being well-received by the target audience.

Beyond this integration, it is vital to have a plan of action for effective implementation, this calls for training of teachers and community members (leaders, women, young people, religious leaders) to be able to transfer the knowledge and skills. This entails, not only building up the capacity of human resources but also the provision of relevant material to support the execution.

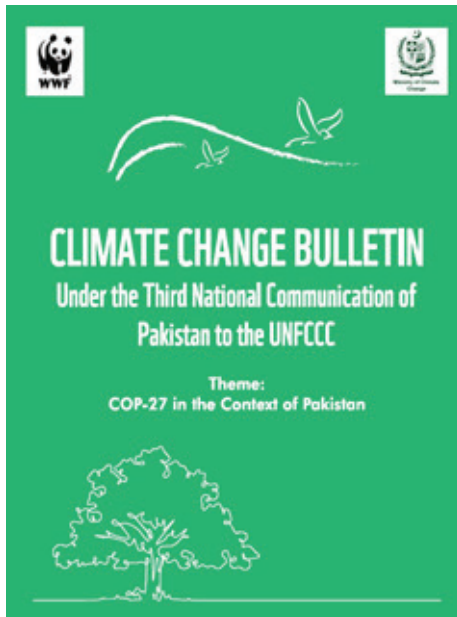
In order to overcome the lack of resources and financial needs, a multi-pronged approach has to be employed wherein it can be sourced from dedicated budgetary allocation (by the government), donor-funded grants, and investments from the private sector. Moreover, the promotion of public-private partnerships can form a critical link for the mobilization of technical and infrastructural resources.

To substantiate that interventions are well executed and resources are transparently utilized, it is key to develop and maintain robust monitoring and evaluation systems linked to real-time dashboards; this can allow for feedback on ongoing programs, and provide the basis for the creation of evidence-based decision-making and future planning. This however is only viable if all key stakeholders work collaboratively, instead of in silos as is observed currently.



In terms of public awareness levels; although there is a general understanding surrounding climate change within the studied population, as citizens of a climate-vulnerable country, the knowledge is very much rooted in their lived experiences. This implies that the respondents have a basic know-how, but are unaware of the more technical aspects of the issue and its resolution, and therefore their roles and responsibilities. Thus, it necessitates the mainstreaming of climate change programs and interventions that are targeted and result-oriented, on the basis of recommendations outlined above.

# Materials Developed and Disseminated Under the Third National Communication



## Climate Change Bulletin:

COP 27 in the Context of Pakistan WWF-Pakistan developed the first Climate Change Bulletin under the TNC, with the aim to highlight, and disseminate recent climate change-related news and updates for the Islamic Republic of Pakistan; to key public and private stakeholders, on a quarterly basis.

The first issue **“COP-27 in the Context of Pakistan”**, captures all the key moments and takeaways from the recent Conference of Parties (Annexure 7). Including Pakistan’s agenda at COP-27, the Sharm El Sheikh Implementation Plan, and the way forward for Pakistan in the run-up to COP-28. The bulletin was launched at WWF’s Climate Change Education, Training & Public Awareness Workshop in Balochistan, on 31st January 2023.

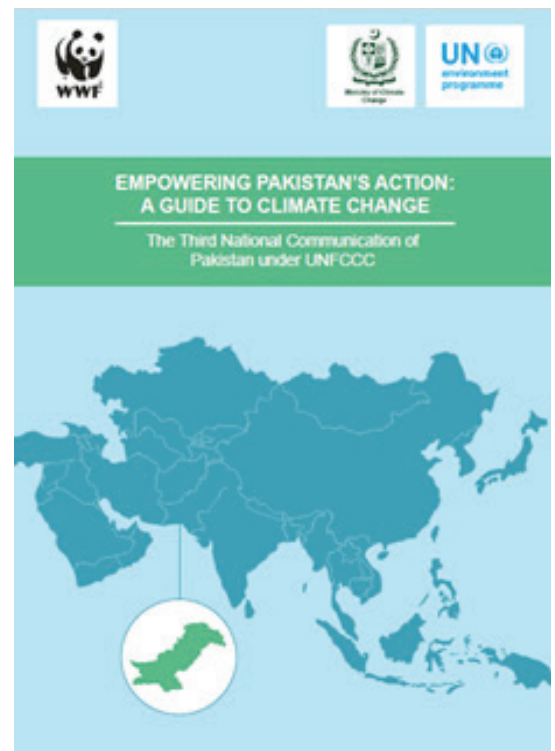
To date, the bulletin has been shared with key stakeholders: 100+ hard copies, and 100+ soft copies of the bulletin have been disseminated in person or via email. Moreover, the bulletin was also published on WWF-Pakistan’s official website, and social media platforms (Facebook, Instagram, and Twitter).

**Figure 35: The Climate Change Bulletin developed under the TNC**

## Development of Education Material on Climate Change (Annexure 8)

One of the elements of the education, training, and public awareness component is the development of dissemination material and methods for education and public awareness based on previous and ongoing interventions.

The education material designed by the WWF-Pakistan team incorporates the following sections in detail: (i) Climate Change Basics; (ii) Impacts of Climate Change; (iii) Climate Change Action and Advocacy; (iv) Policies & International Commitments, and (v) Pakistan’s Progress & Way Forward.



**Figure 36: Education Material Developed Under TNC**

<sup>1</sup>Climate Change Bulletin Developed by WWF-Pakistan

# Annexure 1: Survey A

## Assessing the Implementation of Education, Training, and Public Awareness Activities on Climate Change in Pakistan

General Information	
Name of Institute & Address	
Name of Respondent ( <i>optional</i> )	
Function/Position	
Email of Respondent	

**1. Which sector does your organisation belong to?**

- ☐ Academia  
☐ Public/ Government  
☐ Private/ Corporate sector  
☐ Civil Society (NGOs, CBOs)  
☐ Press or Media  
☐ Other, *please specify* \_\_\_\_\_

**2. Does your organisation develop and/or offer learning activities or courses related to climate change?**

- ☐ Yes
 ☐ No

**3. If yes, what is the learning outcome of the activities or courses being offered on climate change?**

- ☐ Sensitization and Awareness Raising
 ☐ All of These  
☐ Skills Development
 ☐ Other, *please specify* \_\_\_\_\_  
☐ Job Requirement  
☐ Dissemination of Knowledge

**4. Who are the target audiences of these climate-related learning activities?**

- ☐ Youth
 ☐ Educators  
☐ Government/ Policymakers
 ☐ Business/ Industry  
☐ Others, *please specify* \_\_\_\_\_

**5. Approximately, how many participants take part in these climate-related learning activities, each year?**

☐ Less than 500  
☐ More than 10,000

☐ Between 1000 - 10,000  
☐ More than 100,000

**6. Are the following themes covered under the climate-related *courses and/or learning activities* being offered?**

Theme	Currently Offered (Yes or No)	Prospective (Yes or No)	Title of Course and/or Learning Activity
Fundamentals of Climate Change			
Vulnerability and Adaptive Capacity Assessment			
Adaptation and Climate Resilience			
Loss and Damage			
Disaster Risk Management			
Greenhouse Gas Inventory			
Mitigation and Emission Reduction Strategies			
Green Economic Growth			
Climate Finance			
Carbon Markets			
Cleaner Development Mechanism (CDM)			
Green Technologies/Renewable Energies			
Climate Change Laws and Policies			
Social Dimensions of Climate Change			
Gender and Climate Change			
Climate Change and Health			
Other, <i>please specify</i>			

7. Has your organisation developed any *learning materials* relevant to climate change? (Tick all that apply)

- ☐ E-learning Courses
- ☐ Guides/Booklets/Manuals
- ☐ Informational Flyers
- ☐ Publications (e.g., Research Papers, Books)
- ☐ Other, please specify \_\_\_\_\_

8. If yes, please provide a brief description in the table below.

Learning Material	Description

9. What are the *human resource capacity gaps* in your organisation that may obstruct the effective delivery of education and training on climate change?

- ☐ Insufficient Number of Staff
- ☐ Gaps in Knowledge & Skills
- ☐ Lack of Access to Updated Training and Skill Development Activities
- ☐ All of The Above
- ☐ There are No Gaps ☐ Other, please specify \_\_\_\_\_

10. What are the *technical and/or infrastructural capacity gaps* in your organisation that may obstruct the effective delivery of education, training & awareness on climate change?

- ☐ Lack of Physical Resources (e.g., Space, Equipment)
- ☐ Lack of Technological Support (e.g., ICT, Internet)
- ☐ Lack of Funding Resources
- ☐ Lack of Monitoring and Evaluation System
- ☐ All of The Above
- ☐ There are No Gaps ☐ Other, please specify \_\_\_\_\_

11. What kind of tools need to be developed for the effective implementation of education, training, and public awareness of climate change in Pakistan?

- ☐ Digital Apps  
☐ Online Learning System/Portal  
☐ Low-cost educational material (e.g., books, guides)  
☐ Information Centers  
☐ All of The Above
 ☐ Other, *please specify* \_\_\_\_\_

**12. Do you think that the existing policies and plans on climate education, training, and public awareness in Pakistan are sufficient to fulfil the country's needs?**

- ☐ Yes
 ☐ No

**13. What are the biggest constraints in the implementation of policies and plans regarding climate education, training, and public awareness in Pakistan?**

- |   |  |
|---|--|
| <input type="checkbox"/> Lack of Government Willingness         | <input type="checkbox"/> Lack of Human Resources             |
| <input type="checkbox"/> Weak Enforcement of Legislation        | <input type="checkbox"/> Lack of Technical Resources         |
| <input type="checkbox"/> Lack of Financial Resources            | <input type="checkbox"/> Development of Conflicting Policies |
| <input type="checkbox"/> Lack of Infrastructural Resources      | <input type="checkbox"/> All of These                        |
| <input type="checkbox"/> Poor Monitoring & Evaluation           |  |
| <input type="checkbox"/> Poor Coordination Between Stakeholders |  |
| <input type="checkbox"/> Other, <i>please specify</i> _____     |  |

**14. What is the way forward, to overcome the above-mentioned constraints?**

- ☐ Prioritisation of Climate Change in All Education, Training & Public Awareness Related Policies Plans & Programmes.  
☐ Government 'Will'  
☐ Provision of Adequate Financial/Non-financial Resources  
☐ Promotion of Public-Private Partnerships for Technical and Infrastructural Resources  
☐ A Coordinated Platform for Knowledge Dissemination and Stakeholder Engagement  
☐ All of The Above  
☐ Other, *please specify* \_\_\_\_\_



# Annexure 2: Survey B

## Assessment of Public Awareness Level of Climate Change in Pakistan

General Information	
Age Group	<input type="checkbox"/> 15-25 <input type="checkbox"/> 25-39 <input type="checkbox"/> 40-54 <input type="checkbox"/> 55-65 <input type="checkbox"/> >65
Gender	<input type="checkbox"/> Male <input type="checkbox"/> Female <input type="checkbox"/> Prefer Not to Say
City of Residence	
Highest Level of Education	<input type="checkbox"/> Middle School <input type="checkbox"/> High School <input type="checkbox"/> Higher Secondary <input type="checkbox"/> Bachelor's <input type="checkbox"/> Master's (MS/MPhil) <input type="checkbox"/> Doctorate <input type="checkbox"/> Technical/Vocational Training <input type="checkbox"/> Others, <i>please specify</i> _____
Current Work Sector/Status	<input type="checkbox"/> Public/Government <input type="checkbox"/> Private/Corporate <input type="checkbox"/> NGOs/ CBOs <input type="checkbox"/> Academia <input type="checkbox"/> N/A (Student) <input type="checkbox"/> N/A (Unemployed) <input type="checkbox"/> Daily-wager <input type="checkbox"/> Other, <i>please specify</i> _____

### I: General Climate Change Knowledge

#### 1. Do you think climate change exists?

☐ Yes  
 ☐ No

#### 2. On a scale of 1 to 5 (5 being the highest), please rate, which issues are more concerning for Pakistan:

Issue	1	2	3	4	5
Social Inequalities					
Climate Change/Global Warming					
Overpopulation					
Law and Order					
Declining Economic Situation					

3. In your opinion, what are the main causes of climate change?

- ☐ Natural Process
 ☐ Agriculture (e.g., methane from livestock)
- ☐ Deforestation or Change in Land use
 ☐ Unsustainable Consumption Patterns
- ☐ Burning of fossil fuels (vehicular emissions, industrial emissions, etc.)
- ☐ All of These
 ☐ Others, please specify \_\_\_\_\_

4. Have you noticed any climate-related changes in the last five years in your surroundings? (Tick all that apply)

- ☐ Sea-level Rise
 ☐ Forest Fires
- ☐ Droughts
 ☐ Water Scarcity
- ☐ Change in Rainfall Patterns
 ☐ Rise in Temperature
- ☐ Glacial Lake Outburst Flooding (GLOF)
 ☐ Flash Flooding
- ☐ All of These
 ☐ None of These
- ☐ Others, please specify \_\_\_\_\_

5. On a scale of 1-5 (with 5 being the highest), how would you rate your knowledge on the following:

Topic	1	2	3	4	5
Air Pollution					
Land Pollution					
Water Pollution					
Carbon Footprint					
Economic/Social Losses Due to Climate Crisis					
Disaster Risk Management					
Sustainable Development					
Natural Resource Conservation					

**II: Climate Change Adaptation and Mitigation**

6. Do you know what climate change adaptation and mitigation mean?

	Yes	No
Adaptation		
Mitigation		

7. If yes, what do you think is more important for Pakistan, mitigation or adaptation to climate change?

☐ Adaptation      ☐ Mitigation      ☐ Both

8. Which of the following is the most important action to address climate change in Pakistan?

☐ Reduction in Harmful Emissions      ☐ Sustainable Use of Resources (Reuse/Recycle)  
☐ Biodiversity Conservation      ☐ Building Climate Resilient Communities  
☐ Water Replenishment      ☐ All of the These  
☐ Restore Damaged Ecosystems      ☐ Others, please specify \_\_\_\_\_

### III: Climate Change Action and Advocacy

9. Who in your opinion is responsible for addressing climate change?

☐ Government      ☐ Business/Industry  
☐ Community Organisations      ☐ Multilateral Organisations  
☐ General Public      ☐ All of the These  
☐ Others, please specify \_\_\_\_\_

10. Are you aware of any climate change campaigns organised by government bodies, municipalities, or international organisations in Pakistan?

☐ Yes, please specify \_\_\_\_\_  
☐ No

11. Are you aware of the following climate change-related activities and policy changes/developments:

☐ National Climate Change Policy (2021)      ☐ Climate Change Act (2017)  
☐ Paris Agreement (2015)      ☐ UNFCCC (1992)  
☐ Kyoto Protocol (1997)      ☐ National Determined Contributions  
☐ All of These      ☐ Conference of Parties (COP)  
☐ None of the Above      ☐ National Climate Change

Communication

12. What is your main source of information on climate change:

☐ Newspapers/Magazines      ☐ TV      ☐ Internet/social media      ☐ Radio      ☐ Pamphlets  
☐ Academic Literature      ☐ Workshops/Seminars      ☐ Friends & Family      ☐ GOs

☐ NGOs/CBOs      ☐ Other, please specify \_\_\_\_\_

# Annexure 3: List of Cities for Public Awareness Survey (B) Respondents

<b>Punjab (42 cities/villages)</b>	Nankana	Sheikhupura	Kallar Kahar
	Okara	Mailsi	Kot Addu
	Toba Tek Singh	Shorkot	Lahore
	Arifwala	Pir Mahal	Rawalpindi
	Rahim Yar Khan	Multan	Faisalabad
	Hasilpur	Vehari	Fateh Jang
	Jhelum	Basirpur	Sargodha
	Chakwal	Sambrial	Sadhoke
	Khanewal	Chashma	Dera Ghazi Khan
	Shujabad	Attock	Jhang
	Jauhrabad	Sahiwal	Khushab
	Wah	Narowal	Bahawalpur
	Mamu Kanjan	Muridke	Gujar Khan
	Sialkot	Gujrat	Kamalia
<b>Sindh (31 cities/villages)</b>	Karachi	Sukkur	Mirwah
	Nawabshah	Jamshoro	Ghotki
	Mithi	Khairpur	Pir Wasan
	Qamber	Sangi	Meerak
	Khipli	Kot Ghulam	Bozdar Wala
	Sann	Mirpur Khas	Kuhara
	KotLaloo	Hyderabad	Sobhodero
	Machur	Thatta	Deparja

	Warah	Tando Allah Yar	Bachal Bhan Bhro
	Naushehro	Tando Jam	Thari
	Umerkot		
<b>KPK (18 cities/villages)</b>	Swabi	Haripur	Mohmand
	Mansehra	Charsadda	Kohat
	Balakot	Kohistan	South Waziristan
	Bannu	Mingora	Wanna
	Abbottabad	Nowshera	Peshawar
	North Waziristan	Dera Ismail Khan	Mardan
<b>Balochistan (9 cities/villages)</b>	Qila Saifullah	Musa Khail	Khuzdar
	Loralai	Zhob	Turbat
	Quetta	Muslim Bagh	Chaghi
<b>Gilgit Baltistan (9 cities/villages)</b>	Skardu	Gilgit	Hunza
	Khaplu	Chitral	Nagar
<b>Azad, Jammu &amp; Kashmir (3 cities/villages)</b>	Muzaffarabad	Kotli	Pallandri

# Annexure 4: Details of gaps identified in implementation of Education, Training and Public Awareness

Education	Training	Public Awareness
<b>Khyber Pakhtunkhwa Workshop</b>		
Absence of climate change-related topics in the curriculum.	No specific course or program has been developed for climate change training and capacity building for relevant stakeholders.	One of the biggest challenges in KPK province is the language barrier.
Very few experts on climate change in the province in comparison to the needs.	The lack of trainers and expertise on climate change is also a main concern for the province.	There are different sectors of society with different levels of awareness. Therefore, it is difficult to identify what is needed to teach to different sectors.
Lack of coordination and collaboration between the public and private sectors of the province.	Lack of motivation is a factor due to which people don't participate owing to different economic and social factors.	There is a media trust deficit present in the province. The media is a major source of communication but due to its prejudices, the trust deficit is rising.
Lack of funds is one of the biggest hindrances in the implementation of climate change education.	Prioritization in decision-making is lacking at the policy-making level.	KPK has been unable to materialize climate change awareness in the province.
<b>Balochistan Workshop</b>		
Lack of governance is an issue in Balochistan due to which policies related to climate change education could not be implemented effectively.	Lack of entrepreneurial approach in the province.	Tribal politics is causing hindrances.
There is a lack of public sensitization regarding climate change in Balochistan.	Lack of climate change education and knowledge.	Lack of media engagement in climate change-related issues.
There is no province-specific database available regarding climate education.	Absence of central resource facility.	Lack of Information, Education, and Communication (IEC) material in Balochistan.
There is a lack of qualified teachers and coordination of field experts in the field	The low priority is given to the environment and climate change.	Lack of community mobilization offices in Balochistan.



of climate change in Balochistan.		
There is a lack of finance available due to the poor economic situation.	Lack of coordination between departments.	Lack of funds to implement policies.
<b>Punjab Workshop</b>		
Lack of policies to include climate change in the curriculum especially in primary school.	There is a dearth of risk assessment at the district level, thus current efforts are ineffective.	A deep disconnect between implementing organizations, leading to overlapping efforts, and wastage of resources.
The capacity-building training is negligible hence teachers are not up to date with the current knowledge and interventions.	There is an absence of industry-specific environmental standards.	Weak regulatory system to monitor and evaluate ongoing/planned interventions.
Lack of financial resources is an issue as it restricts us from exploring opportunities.	Lack of coordination between and within governmental departments on climate-related issues.	Organizations use awareness as an adaptation tool instead of a mitigation tool (i.e., emphasis is on post-disaster sensitization versus pre-disaster early warning).
Tertiary education is not linked with primary education. In short, there is no coherence in education levels.	The role and strength of departments are not specified to address climate change.	Rural and marginalized communities are largely sidelined, content is not suitable and access to information for communities is difficult.
There is a lack of coordination amongst various stakeholders that are implementing education in Punjab.		Lack of appropriate content development.
<b>Sindh Workshop</b>		
The theme of climate change is largely missing from the education curriculum, topics included remain generic.	Consensus on the lack of knowledge information and technical capacity across the board in stakeholder groups (public, private, academia, the scientific community, and NGOs).	Indigenous people who form the largest group of vulnerable people (e.g. within the rural flood-impacted communities), are left behind in knowledge and information sharing and campaigns.
At the tertiary level, there are a few courses, however, research work remains slow. At secondary and primary levels this remains missing	The abovementioned point raises the issue of the lack of human resources to cater to the needs for climate-related education and training.	There is no system to monitor the effectiveness or success of the informational campaigns.

or includes only basic information.		
No practical or demonstrative methods of teaching are currently being used.	There is missing data in terms of specific stakeholders' needs for the enhancement of capacity and information.	Due to the lack of sensitization among stakeholders, there is a poor response to collaborative climate action.
There is a stark urban-rural divide in the province, presently the curriculum does not cater to these differences.	There are no monitoring and evaluation systems in place to assess the effectiveness of training and information-sharing activities.	Some government departments have unused funds and are unable to figure out their utilization, there is a need to explore pathways to opening up to the public.
The required infrastructure, governance, and policy mechanisms for implementation are ineffective.		In line with the previous point, there is a lot of information flowing from the local communities, however, there are barriers at the top level in response and integration of this information.
There is a dearth of trained teachers for the implementation of existing or proposed climate change-related knowledge and information.		Information currently being disseminated is at times not contextual, and does not pinpoint the root cause of the issues, similarly, it is not relatable for the audience.



The background of the page is a solid teal color. Overlaid on this are several horizontal, wavy lines in a lighter shade of teal, creating a ripple effect. In the lower half of the page, there is a faint, light-colored map of Pakistan, showing its coastline and major landmasses.

# WORKSHOP REPORT

Prepared by WWF-Pakistan



## Executive Summary

The Ministry of Climate Change (MoCC), alongside its four implementing partners (WWFPakistan, Global Change Impact Studies Centre (GCISC), Pakistan Council for Renewable Energy Technologies (PCRET) & National Energy Efficiency & Conservation Authority (NEECA)), is currently preparing Pakistan's Third National Communication (TNC) on Climate Change under the UN Framework Convention on Climate Change (UNFCCC).

As the lead of the Climate Education, Training, and Public Awareness Working Group, WWFPakistan with the support of the MoCC will be organizing a series of workshops across Pakistan. This exercise will aid in understanding, and ultimately enhancing the climate change awareness and capacity-building needs of relevant local-level stakeholders. In this regard the first workshop was held in Peshawar, KPK on December 8, 2022. The objectives of the workshop were to (i) highlight the implementation status of the province's climate-related education, training, and public awareness. Particularly, focusing on identifying the extent of alignment of said activities with the policy measures denoted in the 2021 Climate Change Policy of Pakistan, and (ii) formulating KPK-specific critical pathways for the enhancement of education, training, and public awareness through the scheduled interactive sessions with experts and participants in the panel discussion and working group sessions.

To achieve the aforementioned objectives the workshop program included presentations highlighting the communication itself, Pakistan's vulnerability to climate change, the current status of implementation of climate change education, training, and public awareness in KPK. As a case study example, WWF-Pakistan shared its efforts on climate education and public awareness. This was followed by a comprehensive panel discussion by experts focusing on "Recommendations on Implementation of Climate Change Policy Measures on Awareness Raising". As a key conclusion to the workshop, participants were divided into three main working groups on education, training & capacity building, and awareness raising.

Participants identified a dearth of climate change education, training, and awareness in the province owing to a lack of prioritization in policies and programs' implementation, interstakeholder coordination, and critical insufficiency of human and financial resources. Overall recommendations derived from the discussions include (i) training of teachers, media persons, and religious institutes as key resource persons for raising awareness and increasing outreach in communities; (ii) creation of educational materials and campaigns that provide hands-on learning, address language/ technical barriers, and provide call-to-action points postsensitization; (iii) development of a framework in consultation with stakeholders, to increase training opportunities through public-private partnerships; and (iv) establishment of effective monitoring and evaluation systems, for timely data/alerts dissemination to frontline communities; augmenting proactive strategies.

## Introduction

### Background

The Ministry of Climate Change (MoCC), alongside its four implementing partners (WWFPakistan, Global Change Impact Studies Centre (GCISC), Pakistan Council for Renewable Energy Technologies (PCRET) & National Energy Efficiency & Conservation Authority (NEECA)), is currently preparing Pakistan's Third National Communication (TNC) on Climate Change under the UN Framework Convention on Climate Change (UNFCCC).

The TNC will succeed the Second National Communication, submitted by Pakistan in 2019. The Communication will enable Pakistan to fulfill its requirement under Articles 4.1 and 12 of the UNFCCC (to prepare and submit its national communication). Furthermore, it will entail how the country has been implementing the Convention, whilst also highlighting critical issues, constraints, and capacity requirements for climate mitigation and adaptation.

WWF-Pakistan has been declared as 'Team Lead' for Thematic Working Groups (TWG) on 'Education Training and Public Awareness', 'Capacity Building', 'Knowledge and Information Sharing and Networking', 'Information on Steps Taken to Integrate Climate Change', 'Information on Gender Equality and Women's Empowerment on Climate Change Issues', and 'Technical Assistance and Support to Project Management Units to Execute the TNC Project'.

As the leader of the Climate Education, Training, and Public Awareness Working Group, WWF-Pakistan with the support of the MoCC will be organizing a series of workshops across Pakistan. This exercise will aid in understanding, and ultimately enhancing the climate change awareness and capacity-building needs of relevant local-level stakeholders.

## Objectives of the Workshop in Khyber Pakhtunkhwa

(i) Highlight the implementation status of the province's climate-related education, training, and public awareness. Particularly, focusing on identifying the extent of alignment of said activities with the policy measures denoted in the 2021 Climate Change Policy of Pakistan.

(ii) Formulate KPK-specific critical pathways for the enhancement of education, training, and public awareness through the scheduled interactive sessions with experts and participants in the panel discussion and working group sessions.

## Venue & Participation

Pakistan Forest Institute, Peshawar, KPK.

A total of 54 participants attended the workshop, consisting of members from relevant government bodies/ministries, NGOs/CBOs, think tanks, academia, the corporate sector, and media personnel (refer to Appendix 1).

## Workshop Program - see, Appendix

The opening session of the workshop included an introductory presentation on the Third National Communication on Climate Change by Ms. Nazifa Butt (Senior Manager, Climate & Energy Program WWF-Pak) followed by opening remarks by Mr. Afsar Khan (Deputy Director EPA, KPK), and presentation on Climate Change and Pakistan's Vulnerability by Mr. Irfan Tariq (Technical Expert TNC). Subsequently, there were two final presentations on the Implementation of Education, Training, and Public Awareness in KPK by Dr. Bushra Khan (University of Peshawar) and WWF-Pakistan's Efforts on Climate Education and Public Awareness by Mr. Taseer Ali Mirza (Manager, Environment Education Program WWF-Pak).

The second session included a panel discussion focused on "Recommendations on Implementation of Climate Change Policy Measures on Awareness Raising" moderated by Prof. Dr. Shafiq-ur-Rehman (Ex-Chairman Department of Environmental Sciences, University of Peshawar). The panelists included Dr. Masood Arshad (Senior Director Footprint, WWFPak), Dr. Shehla Gul (Lecturer, University of Peshawar), Dr. Sajid Ali Khan Bangash (Assistant Professor, University of Agriculture, Peshawar). The panel discussion was followed by the working group session WG 1: Education WG 2: Training or Capacity Building; WG 3: Awareness Raising. The workshop concluded with closing remarks from Muhammad Akbar Khan (DG, Pakistan Forest Institute).

## Opening Session

Introduction to the Third National Communication on Climate Change Ms. Nazifa Butt in the opening presentation gave an overview of the project on the Third National Communication under the UNFCCC. She started her presentation with a briefing on the current state of climate change in Pakistan. Highlighting the most recent climate-induced disasters (floods, droughts, GLOF), and the country's consistent ranking among the top 10 most vulnerable countries on the Climate Risk Index with around 10,000 fatalities due to climate-related disasters and financial losses amounting to about \$4 billion; for the past 20 years.

She further emphasized the role Pakistan played at COP 27 in the aftermath of the 2022 floods, leveraging on its position as the chair of the G77 + China group to lead the inclusion of loss and damage on the conference agenda. About the preparation of the Third National Communication under articles, 12 and 4.1 of the UNFCCC Convention Ms. Nazifa described the overall objectives and outcomes of the exercise and introduced the project management unit and the implementing partners of this Communication (MoCC, WWF-Pak, GCISC, NEECA, PCRET) and their respective work.

She concluded her presentation by outlining the role of WWF-Pakistan regarding the TNC outcome on climate change education, training, and public awareness, under which the workshop in KPK was held. Reiterating the objectives of unpacking the current status of implementation of climate change education, training, and public awareness in KPK, and addressing the identified gaps through the interactive dialogue between the workshop participants.

Remarks by the Deputy Director of Environmental Protection Agency (EPA), KPK Mr. Afsar Khan represented the DG EPA on the occasion. He outlined the ongoing activities by EPA KPK, on climate and environmental policies and projects (under the MoCC). He spoke about the formulation of the provincial climate change policy, and the establishment of 'climate cells'; designed in line with the local conditions (as observed in past climate-induced disasters).

Mr. Afsar cited that the KPK government is currently continuously working on multilateral agreements related to the environment; additionally, more than 12 pc of the total provincial government budget is being spent on environmental-related projects.

While concluding his remarks, he said that "We (EPA-KPK) are ready to support the relevant stakeholders and would love to work on climate change adaptation and mitigation under the Third National Communication."

## Climate Change and Pakistan's Vulnerability

Mr. Irfan Tariq began his presentation by narrating the impact of climate-induced disasters that affect energy, food, livestock, infrastructure, transport, and all aspects of life, and Pakistan's evident vulnerability.

He added that "Last week IPCC published some facts which prove that this change is all about anthropogenic emissions and the whole globe is feeling the impacts; the temperature in Pakistan is rising higher than the global levels."

He further observed that Pakistan has experienced various disasters in the past, and remains one of the only three countries that are under the radar of the German Watch owing to the country's vulnerability to climate change; for the last twenty years. Enlisting the various climate change disasters arising from increasing temperatures (such as floods, droughts, heatwaves, GLOF, locust attacks, etc.), Mr. Irfan emphasized that climate science predicts that the intensity and frequency of climate-induced disasters would be much larger in the future.

Furthermore, he highlighted the impact on:

(i) Water: "Water is important for Pakistan as our energy, livelihood, and security depend on it; Kabul River is drying due to climate change and Pakistan is heading toward a water-scarce country."

(ii) Agricultural Productivity: "The production of wheat will decrease up to 14 to 15 % in Pakistan due to the rising temperatures."

(iii) Energy: "Energy not only contributes to climate change but the sector also gets affected by it. Almost 50 pc of our emissions are from the energy sector. On the other hand, due to the unavailability of water, it has become increasingly difficult for us to generate electricity from hydropower; pushing towards alternate sources.

(iv) Climate Injustice & Impact on Health: "In the heatwave of Karachi, thousands of deaths occurred and the lower strata of society were the most affected." It is important to understand that climate change does not impact everyone equally, rather it further exacerbates existing inequalities in the system.





## Implementation of Education, Training, and Public Awareness in KPK

Dr. Bushra began her presentation by stating that “climate change is predominantly a scientific phenomenon; however, it has both social and economic consequences”. She further stated: In higher education, students are reluctant to join environmental science and climate change-related degrees, due to a lack of opportunities in the job market.

Academia is often time left out of policy-making processes and international conferences (such as COP).

The National Climate Change Policy (NCCP) which is the main policy document providing an overarching framework has 14 priority sectors; education is not one of them.

However, it does propose the development of a curriculum on ‘climate change and environmental planning with particular emphasis on Disaster Risk Reduction (DRR) in the formal education system at all levels, and in particular in the higher education system.

There is limited investment in climate change education in terms of financial support; especially for financing climate research (“we rely heavily on data and research from other countries, as there are not enough resources in Pakistan.”)

Similarly, there is a lack of sufficient human resources for the implementation of the same.

The Framework for Implementation of Climate Change Policy (2014-30) proposes actions involving the education sector; however, is limited to the “development of local water harvesting measures and integration of water conservation, forest ecosystem and biodiversity in the curriculum”; all pinpointed as short-term (i.e., 5 years) actions.

The National Environmental Policy 2005 proposed the curriculum integration of environmental education at all levels ensuring ‘participatory approaches and practices.

In the National Education Policy 2017-2025 climate change is mentioned only once in tertiary education research, with no reference to primary and secondary school education. At the school level, it is addressed under various subjects such as biology, English, Geography, Pakistan Studies, etc.

There are no systematic climate change-specific in-service and pre-service teacher training programs and materials in Pakistan. Teacher capacity-building programs and climate change components can be integral parts of such development.

Concerning Khyber Pakhtunkhwa, Dr. Bushra noted that:

The provincial education sector plan has so far, no components concerning climate change risk reduction and resilience building for schools.

Due to overall resource scarcity, no government resource has been allocated for DRR/school safety initiatives; all existing initiatives have been funded by external donors.

Climate change-related topics are ‘non-existent’ or ‘limited’ at the primary level and ‘limited’ at the secondary level.

“Generally, the teaching community expresses that treatment of existing climate change and environment-related curricular opportunities is insufficient, and they welcome the idea of including more climate and environment-related content, specifically lessons oriented towards practical knowledge and skills.”

There are ongoing efforts to develop and implement teacher-training programs on DRR and school safety coordinated by the School Safety Cell.

In terms of the coordination between the Ministry of Climate Change and the education authorities, there is coordination for seasonal tree planting activities involving schools. However, in terms of climate change curriculum development, formal arrangements have not been made at the federal and provincial levels.

She concluded her presentation by highlighting (informal) education activities in the province:

Clean and Green Pakistan Movement for Schools.

Child and Youth Engagement and Action (Under the Ten Billion Tree Tsunami (2014-2017)), wherein more than one billion trees were planted across 350,000 hectares and energized youth to become ‘custodians of a green future.

Green Youth Movement: through the GYM scheme, youth (15 to 24 years old) will be offered small grants to come up with innovative solutions for tackling the climate crisis and environmental problems focusing on areas such as solid and liquid waste management, water conservation, renewable energy, agriculture and forestry, and eco-tourism. It is envisaged that a nationwide network of GYM clubs will be established in all public and private universities to support youth ‘eco-innovators’; linked to the Ten Billion Tree Tsunami Program.

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<sup>2</sup>At provincial level, with support from UNICEF the School Safety Cell (SSC) was established within the Directorate of Elementary and Secondary Education Khyber Pakhtunkhwa to institutionalize school safety, DRR and resilience building in schools.

## WWF-Pakistan's Efforts on Climate Education and Public Awareness

Mr. Taseer Ali Mirza briefed the workshop participants on WWF-Pak's climate education programs made for different age groups. He stated that Pakistan has a large population that falls under the age of 30; to cater to them and complement its conservation work, WWF-Pak started a climate education initiative in 1980. "We started with some awareness walks, teacher training, and awareness material." Keeping in view the educational levels in Pakistan, he further expanded on the various programs launched by WWF-Pak over the years:

Spellathon as its official campaign in 1997 as a spelling competition; reaching out to 150,000 students with around 400 – 500 schools annually. Nature Carnival in which more than 160 schools and universities participated in a 3D model competition. Green School Certification Program (launched in 2009) with on-ground and on-campus activities. Certifying both the schools and the students at the end of the year (for one year). Students are allocated different tasks (under the monitoring of schools). Under the Green school program, some other initiatives include; art competitions, plantation drives, and recycling projects. Eco-internship (now transformed into a Youth Development Program (YDP)) to provide climate education and to involve our youth in engagements. It includes session-based workshops with field experience; on themes such as conservation, energy conservation, climate change, food security, plastic pollution, and leadership. Tackling Plastic Pollution Project 3000 students were engaged in 3 months. Earth Hour is another initiative with COP-related simulation events.

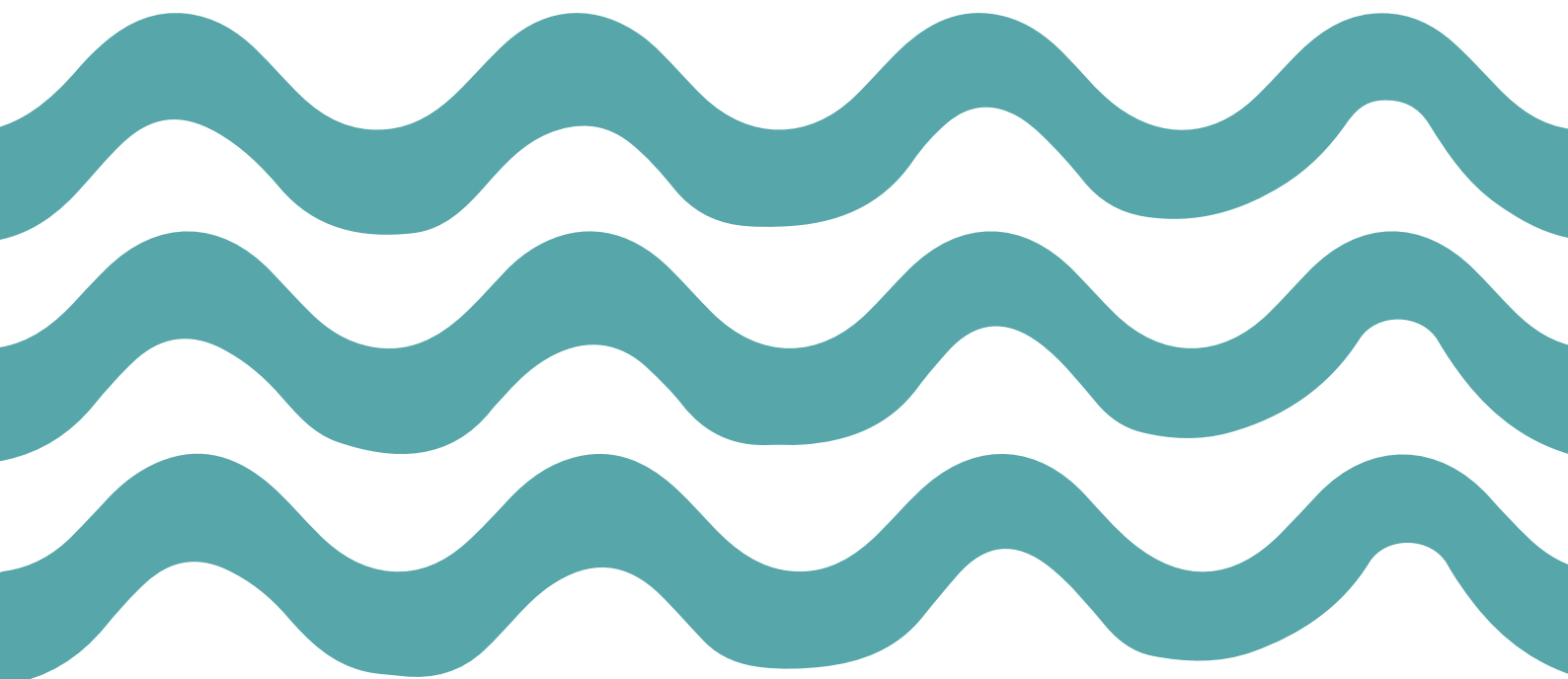
Furthermore, WWF-Pak has collaborated with the Federal Directorate of Education to cover more than 400 educational institutes. WWF-Pak alongside the National Curriculum Council is continually reviewing the national curriculum regularly to include the component of climate change in it. Similarly, WWF-Pak collaborated with the Government of Punjab on a green school initiative and is now working in 10 schools.

The organization continues to create partnerships with the public and private sectors to mainstream environmental and climate education, including organizations such as Pakistan Boy Scouts, and AIESEC.

"These initiatives are highly valuable for the promotion of climate change awareness. Our achievement includes 80,000 students outreached, more than 150 schools, colleges, and universities, 20,000+ students engaged through Spellathon, over 1000+ students taken on excursion trips, 3000+ youth engaged through YDP, 50 community action projects initiated by youth, Green School Certification Program to be carried out in 10 public and private schools catering to more than 10,000 students."

### Panel Discussion

The panel discussion was moderated by Prof. Dr. Shafiq Ur Rehman, Advisor Quality Assurance Program, Higher Education Program, KPK. The panelists included Dr. Masood Arshad (Senior Director Footprint, WWF-Pak), Dr. Shehla Gul (Lecturer, University of Peshawar), Dr. Sajid Ali Khan Bangash (Assistant Professor, University of Agriculture, Peshawar).



## Key Takeaways

The panel discussion touched upon the various recommendations of experts on the implementation of the climate change policy measures on climate education, training, and public awareness about the climate crisis and related mitigation and adaptation measures.

Dr. Shafiq opened the plenary with an overview of the current scenario of climate education, training, and public awareness in the province of KPK.

He remarked that “Around seven universities have included an undergraduate general climate change program. The University of Peshawar was the first to start a BS Environmental Science program in KPK in 2002 and after that, the number kept increasing and now there are more than a thousand graduates in it.”

He added that though the National Standing Committee suggested an increase in climate change awareness in universities, it has been difficult to initiate dedicated courses on the subject matter due to the existing load of programs. However, he noted that there are several awareness seminars, competitions, and activities that take place regularly in the universities and colleges (e.g., in Charsadda and Peshawar).

About the human resource capacity for the implementation of climate education and public awareness, Dr. Shafiq made the observation that media groups and academic faculty are the main pillars of communication, and need targeted training to cover challenging climate-related topics; which is currently non-existent.

He further highlighted that “The legislators also lack basic capacity about climate science which is very alarming as they make the policies regarding climate change. As for the civil servants, they know about general things but not about specific topics”. Adding that, “Pakistan is the signatory of more than 15 international environmental agreements but we do not see the trickle-down effect of those agreements. We do make the policies but somehow lack federal-provincial coordination”.

In response to questions on climate-induced food insecurity, climate-smart farming practices, and existing capacity in terms of the provision of coordinated platforms for knowledge and information sharing between frontline communities (farmers) and researchers in KPK. Dr. Sajid Ali Khan Bangash (University of Agriculture Peshawar) agreed that climate change is causing major setbacks to the agriculture sector. Adding that to deal with such threats, work is underway on the techniques of soil mitigation, carbon neutrality, and other sustainable practices in the farming sectors, especially with the addition of newer techniques such as biotechnology. He recommended that “social media is key to success for providing a coordinated platform for knowledge sharing. Similarly, the development of a real-time dashboard for updates and necessary information is also essential, because the unavailability of data is a very serious constraint. Parallel to which awareness campaigns and capacity-building workshops to supplement ongoing formal education in relevant academic institutes can play a major role”.

The second panelist Dr. Masood Arshad (WWF-Pak) spoke about the need for involving local communities in climate change awareness programs to ensure their resilience to climate change. He noted that it is ‘very unfortunate’ that decision-making processes are not inclusive for local communities, and by large there are very few awareness campaigns targeting them. Adding that “Resilience can be achieved by targeting and understanding the specific needs of people, we should tell them about the basics to develop their understanding, so that they can grasp the more complex topics and are prepared to follow the practical steps when interventions are introduced”. A key impediment to the implementation of programs and actions on-ground is the lack of coordination, thus it is important to enhance networking between all the relevant stakeholders. Moreover, creating proactive strategies rather than reactive ones.

The final panelist Dr. Shehla Gul (University of Peshawar) reflected on the improvement of early warning systems in KPK to ensure that timely alerts are received by climate-vulnerable communities. Seconding Dr. Masood’s stance on the need for proactive approaches, she emphasized that currently “most departments follow the reactive approach”. She further outlined three major components that can pave the way for improved awareness and early warning mechanisms. (1) identification of the existing risks; (2) timely dissemination of required data and alerts to all the relevant stakeholders; and finally (3) strict monitoring and evaluation of the programs and policies in place. She further added that management and mitigation go hand in hand, what is important is the allocation and understanding of responsibilities. “You need good managers in difficult times along with experts working in mitigation and relief focus”.

Responding to the question on the role women’s empowerment can play in combating climate change through participating in mitigation and adaptation practices and their evident enhanced vulnerability to climate change; Dr. Shehla expressed graveness on the low level of awareness amongst women in KPK, regarding climate change and their role. She concluded that outreach through media, creation of targeted forums or groups catering to gender-specific issues, alongside training and capacity-building activities (especially for women residing in disaster-prone rural areas).

## Working Group Session

During the working group session, all the workshop participants were assigned to three Working Groups namely (i) Education (ii) Training or Capacity Building (iii) Awareness.

The objective of the WG discussion was to identify: (1) Existing gaps in the system (Challenges); (2) What is it that we want to achieve? (End Goal); (3) How we get there (Pathways).

## Working Group Findings:

WG 1: Education: How can we effectively incorporate climate education into the national/provincial curriculum in KPK?	
Gaps or Challenges	<ul style="list-style-type: none"><li>(i) There is an absence of climate change-related topics in the curriculum.</li><li>(ii) Very few experts on climate change in the province in comparison to the needs.</li><li>(iii) Lack of coordination and collaboration between the public and private sectors of the province. If someone is working on climate change it is not coordinated properly with the other relevant departments.</li><li>(iv) Lack of funds is one of the biggest hindrances in the implementation of climate change education.</li></ul>
End Goal	<p>To overcome all of the identified gaps and challenges there is an urgent need for the addition of climate change-related courses to the existing curriculum of KPK. With the addition of climate courses, awareness levels will increase automatically.</p>
Pathways	<ul style="list-style-type: none"><li>(i) There should be an immediate formation of an advisory group or governing body that will deal with climate change education in the province.</li><li>(ii) Reward-based learning should be introduced for the teachers and the students. The same format goes for the corporates and the other stakeholders.</li><li>(iii) The learning of climate change should be activity based so that the people can get hands-on experience of climate change causes and effects.</li></ul>

## WG 2: Training or Capacity Building: What type of ‘continuous’ climate-related education and training courses are needed for relevant sectors of KPK?

### Gaps or Challenges

- (i) No specific course or program has been developed for climate change training and capacity building for relevant stakeholders.
- (ii) Lack of trainers and expertise on climate change is also a main concern for the province. The number of highly trained experts should be increased.
- (iii) Lack of motivation is a factor due to which people don't participate owing to different economic and social factors.
- (iv) Lack of funds to conduct training and capacity-building activities.
- (v) Prioritization in decision-making is lacking at the policy-making level.

### End Goal

- (i) Public will be sensitized and trained at a larger scale in the province.
- (ii) Introduction of sustainable initiatives and practices in society.
- (iii) Creation of a climate-resilient society in the province or a model climate-resilient town or city before implementation across the province.

### Pathways

- (i) Develop a framework or program with the consensus of all our stakeholders.
- (ii) Utilization of public-private partnerships for effective take-out of climate training.
- (iii) Improve coordination and collaboration between different departments. Moreover, some gaps can be filled with the mutual collaboration of industry and academia.

### WG 3: Awareness Raising: How can we raise awareness on climate change within the various segments of society (children, youth, adults, elderly, employed, unemployed, etc.) in KPK?

<h2>Gaps or Challenges</h2>	<ul style="list-style-type: none"> <li>(i) One of the biggest challenges of our province is the language barrier. Even if there are some public awareness activities, many are unable to grasp the concepts due to the language barrier.</li> <li>(ii) There are different sectors of society with different levels of awareness. Therefore, it is difficult to identify what is needed to teach to different sectors.</li> <li>(iii) There is a lack of coordination and knowledge-sharing actions within different departments.</li> <li>(iv) There is a communication barrier present in the province due to different technical capacities.</li> <li>(v) There is a media trust deficit present in the province. As the media is a major source of communication but due to its prejudices, the trust deficit is rising.</li> <li>(vi) We are unable to materialize climate change awareness in the province. Nobody knows what to do after getting the required sensitization.</li> </ul>
<h2>End Goal</h2>	<p>We need to give targeted awareness to the targeted audience of the society and then develop a proper road map that will help us in developing behavioural change in the province.</p>
<h2>Pathways</h2>	<ul style="list-style-type: none"> <li>(i) Introducing climate change education in all levels of curriculum in the province.</li> <li>(ii) Training of teachers and media personnel to be carried out rigorously in the province.</li> <li>(iii) Similarly, we cannot neglect religious institutes as they can play a major role in creating awareness among the masses. Therefore, we need to train them accordingly.</li> <li>(iv) Use of social media for the promotion of climate-related activities and programs. The medium of FM and electronic media can be utilized in the province.</li> </ul>

Closing Remarks by Director General, Pakistan Forest Institute Mr. Muhammad Akbar Khan concluded the workshop with the final remarks:

“It is my pleasure that this session took place at PFI. I want to thank the large group of stakeholders for participating and appreciate the organizers and efforts of the WWF, a very old partner in climate change projects. I would also appreciate the MoCC leading this project.

PFI would always welcome all of you for any future collaboration on climate change and related topics. The agenda of the workshop was informative and thorough. I hope that the outcome of the workshop will be helpful in future policy outcomes and amending strategies. I wish you the best of luck in your future endeavors.”



# Key Takeaways and Recommendations

Climate Change education in policies and plans (at both the federal and provincial level) is mainly focused on tertiary education, reference to primary or secondary levels are non-existent.

Regardless of the emphasis on inclusion of climate change in the curriculum, it was noted that with the existing load of programs, it is difficult to start dedicated programs; thus, currently awareness is limited to seminars and workshops in universities.

There remains a dearth of job opportunities for graduates from environment/climate-related degrees. On the contrary, there also remains a lack of sufficient human resource for the implementation of climate education, training and awareness programs.

There is insufficient climate-related educational content; specifically, content in the local languages.

Academic faculty & communication experts need targeted training to cover challenging climate-related topics; at present, there is no systematic climate-change-specific in-service or pre-service (teacher) training programs.

A crucial roadblock to implementation identified by most participants was the lack of coordination for implementation and knowledge sharing (whether inter-departmental, provincial-federal, or public-private partnering); this requires the building of strong networks through coordinated platforms of engagement.

There are inadequate financial resources dedicated to climate education, training, and public awareness.

Currently, there is a lack of up-to-date data and monitoring, which hinders the timely dissemination of data, information, and alerts.

## Recommendations

Noteworthy climate education and awareness activities within the province: Clean and Green Pakistan Movement for Schools; Child and Youth Action (under the Ten Billion Tree Tsunami) and the Green Youth Movement (Grant Program) should be expanded. Training of teachers, media persons and religious institutes can be key in raising awareness, and increasing outreach in communities. Awareness, training, and education of local communities must be prioritized, through targeted awareness and capacity-building workshops at the local level (e.g., engaging farming communities, rural women in disaster-prone areas, etc.), and the creation of coordinated platforms (in-person) or through social media for awareness dissemination at the local level. Strict monitoring and evaluation systems need to be put in place, linked to real-time dashboards for timely data/alerts dissemination to frontline communities; supporting proactive strategies. Urgent need to add climate-change-related courses to the existing curriculum, at all educational levels, parallel to which there needs to be the formation of a dedicated advisory group that can ensure the implementation and monitoring of climate education in the province. Creation of educational materials and campaigns that provide hands-on learning, address language/ technical barriers and provide call-to-action points post-sensitization. Development of a framework in consultation with all stakeholders, to increase training opportunities through public-private partnerships.

# (Appendix) Agenda

Time	Activity	Speaker
9:30 - 10:00 hrs	Registration	
OPENING SESSION		
10:00 - 10:05 hrs	Welcome Note	Abid Ali (Manager, Climate and Energy Program, WWF-Pak)
10:05 - 10:10 hrs	RECITATION OF THE HOLY QURAN	
10:10 - 10:25 hrs	Introduction - Third National Communication on Climate Change	Nazifa Butt (Senior Manager, Climate and Energy Program, WWF-Pak)
10:25 - 10:35 hrs	Opening Remarks	Afsar Khan (Deputy Director Climate Change, Forestry, Environment, and Wildlife Department, KPK)
10:35 - 10:45 hrs	Climate Change & Pakistan's Vulnerability	Irfan Tariq (Technical Expert, TNC)
10:45 - 10:55 hrs	Implementation of Education, Training, and Public Awareness on Climate Change in KPK (Current Scenario)	Dr. Bushra Khan (Professor, University of Peshawar)
10:55 - 11:10 hrs	WWF-Pakistan's Efforts on Climate Education & Public Awareness	Taseer Ali Mirza (Manager, Environment Education Programme, WWF-Pak)
11:10 - 11:25 hrs	Tea Break	
11:25 - 12:10 hrs	<p>Recommendations on Implementation of Climate Change Policy Measures on Awareness Raising</p> <p>(i) Mitigation and Adaptation</p> <p>(ii) Climate Crisis</p> <p>(iii) Education, Training, Public Awareness &amp; Capacity Building</p>	<p>Moderated by: Prof. Dr. Shafiq Ur Rehman (Ex-Chairman Department of Environmental Sciences, University of Peshawar)</p> <p>Panelists: Dr. Sajid Ali Khan Bangash (Assistant Professor, University of Agriculture, Peshawar) Dr. Masood Arshad (Senior Director Footprint, WWF-Pak)</p> <p>Dr. Shehla Gul (Lecturer, University of Peshawar)</p>
12:10 - 12:50 hrs	Working Group Session	
12:50 - 13:05 hrs	Presentations of WG 1 - WG 3 by WG Lead	
13:05 - 13:25 hrs	Summary of WG Session & Way Forward	Irfan Tariq (Technical Expert, TNC)
13:25 - 13:35 hrs	Closing Remarks	Muhammad Akbar Khan, (DG, PFI)
13:35 - 14:05 hrs	Lunch	





# Balochistan Workshop Report

Prepared by WWF-Pakistan



## Executive Summary

The Ministry of Climate Change (MoCC), alongside its four implementing partners (WWF-Pakistan, Global Change Impact Studies Centre (GCISC), Pakistan Council for Renewable Energy Technologies (PCRET) & National Energy Efficiency & Conservation Authority (NEECA)), is currently preparing Pakistan's Third National Communication (TNC) on Climate Change under the UN Framework Convention on Climate Change (UNFCCC).

As the lead of the Climate Education, Training, and Public Awareness Working Group, WWF-Pakistan with the support of the MoCC will be organizing a series of workshops across Pakistan. This exercise will aid in understanding, and ultimately enhancing the climate change awareness and capacity-building needs of relevant local-level stakeholders. In this regard the second workshop was held in Quetta, Balochistan on January 31, 2023; similar to the workshop in Peshawar KPK, in the month of December. The objectives of the workshop were to (i) highlight the implementation status of the province's climate-related education, training, and public awareness. Particularly, focusing on identifying the extent of alignment of said activities with the policy measures denoted in the 2021 Climate Change Policy of Pakistan, and (ii) formulating Balochistan-specific critical pathways for the enhancement of education, training, and public awareness through the scheduled interactive sessions with experts and participants in the panel discussion and working group sessions.

To achieve the aforementioned objectives the workshop program included presentations highlighting the communication itself, the current status of implementation of climate change education, training, and public awareness in Balochistan. WWF-Pakistan shared its efforts on climate education, training, and public awareness. This was followed by an interactive working group session, in which participants were divided into three main working groups education, training & capacity building, and awareness raising.

The workshop participants recognized the insufficiency of climate change education, training, and awareness programs and activities in the province. The main points of concern identified in the discussion are (i) lack of prioritization of climate change in the province by the government and private organizations; (ii) poor governance structures and lack of coordination between stakeholders; (iii) dearth of human, technical and financial resources; (iv) low level of community mobilization in the province, especially of frontline climate-vulnerable populations.

Key recommendations concluded from the speaker presentations, and working group session include: (i) Capacity building of key stakeholders to fulfil human and technical gaps; (ii) formation of a central facility/body to ensure coordinated efforts in implementing of climate change education, training and public awareness programs; (iii) mobilization of resources through local and international donors; (iv) development of information, education material that caters to Balochistan-specific climate change issues, through targeted research, data and information collection; (v) involvement of females, youth and community leaders (e.g. tribal elders, religious clerics) for greater outreach of climate change awareness and advocacy.

## Introduction

### Background

The Ministry of Climate Change (MoCC), alongside its four implementing partners (WWF-Pakistan, Global Change Impact Studies Centre (GCISC), Pakistan Council for Renewable Energy Technologies (PCRET) & National Energy Efficiency & Conservation Authority (NEECA)), is currently preparing Pakistan's Third National Communication (TNC) on Climate Change under the UN Framework Convention on Climate Change (UNFCCC).

The TNC will succeed the Second National Communication, submitted by Pakistan in 2019. The Communication will enable Pakistan to fulfill its requirement under Articles 4.1 and 12 of the UNFCCC (to prepare and submit its national communication). Furthermore, it will entail how the country has been implementing the Convention, whilst also highlighting critical issues, constraints, and capacity requirements for climate mitigation and adaptation.

WWF-Pakistan has been declared as 'Team Lead' for Thematic Working Groups (TWG) on 'Education Training and Public Awareness', 'Capacity Building', 'Knowledge and Information Sharing and Networking', 'Information on Steps Taken to Integrate Climate Change', 'Information on Gender Equality and Women's Empowerment on Climate Change Issues', and 'Technical Assistance and Support to Project Management Units to Execute the TNC Project'.

As the leader of the Climate Education, Training, and Public Awareness Working Group, WWF-Pakistan with the support of the MoCC will be organizing a series of workshops across Pakistan. This exercise will aid in understanding, and ultimately enhancing the climate change awareness and capacity-building needs of relevant local-level stakeholders.

## Objectives of the Workshop in Balochistan

- (i) Highlight the implementation status of the province's climate-related education, training, and public awareness. Particularly, focusing on identifying the extent of alignment of said activities with the policy measures denoted in the 2021 Climate Change Policy of Pakistan.
- (ii) Formulate Balochistan-specific critical pathways for the enhancement of education, training, and public awareness through the scheduled interactive sessions with experts and participants in the panel discussion and working group sessions.

## Venue & Participation

Serena Hotel, Quetta, Balochistan.

A total of 56 participants attended the workshop, consisting of members from relevant government bodies/ministries, NGOs/CBOs, think tanks, academia, the corporate sector, and media personnel (refer to Appendix 1).

## Workshop Program - see, Appendix

The opening session of the workshop included a welcome note by Dr. Masood Arshad (Senior Director Footprint, WWF-Pakistan), an introductory presentation on the Third National Communication on Climate Change by Mr. Safir Ahmed (TNC Coordinator, WWF-Pak) followed by opening remarks by Mr. Mujeeb Ullah Panezai (Director, EPA Balochistan). Subsequently, there were two final presentations on the Implementation of Education, Training, and Public Awareness in Balochistan by Dr. Shafiq-ur-Rehman (University of Balochistan) and WWF-Pakistan's Efforts on Climate Education and Public Awareness by Fatima Khan (Coordinator, Climate and Energy Program WWF-Pak).

The presentations were followed by the working group session WG 1: Education (Chair: Dr. Sajida Naureen (Vice Chancellor Sardar, Bahadur Khan Women's University, Quetta); WG 2: Training or Capacity Building (Chair: Muhammad Ali Batur, Deputy Director, Balochistan EPA); WG 3: Awareness Raising (Chair: Qurban Gharsheen (CEO, Balochistan Environmental & Educational Journey). The workshop concluded with closing remarks from Hamza Shafqaat, Secretary of Information.

## Welcome Note by Dr. Masood Arshad (Senior Director Footprint, WWF-Pakistan)

Dr. Masood Arshad while opening the event noted that the process of a National Communication is extremely crucial because it captures all the existing challenges, possible recommendations, and the pathways to achieve those goals for the implementation of the Convention in the country. He further remarked that owing to existing constraints, the country has only been able to submit two reports in the past nineteen years.

"Now as we are preparing the third national communication of Pakistan, we hope to ensure that we build on our previous efforts, our emphasis therefore is to make the process inclusive and targeted, through a continuous process of stakeholder consultations at the local-level."

Talking about the climate catastrophes that unfolded in the year 2022, Dr. Masood observed that there was immense loss of lives and livelihoods in the province. Adding that Pakistan has an insignificant role in global greenhouse gas emissions; however, it remains at the frontline of climate-induced disasters. "We are a victim of our geography; therefore, we must expand our efforts on the adaptation side."

Adding that, "Despite this realisation, we need to ask ourselves are we prepared to fight against climate change? More efforts need to be made to install early warning systems and enact local-level disaster management plans. In the Pak-NDCs 2021, Pakistan clearly stated that it would require 7 to 14 billion dollars per year for adaptation and mitigation." He further suggested that in order to finance these interventions and overcome the 'loss & damages', in addition to internationally-funded initiatives, the country needs to divert its public expenditure towards building climate-resilient communities.

He closed his remarks by noting that it is delightful that there is now an influx of climate-related projects being designed for Balochistan, with the help of international donors. In a similar context, WWF-Pakistan with the help of the Ministry of Climate Change will also be targeting the vulnerable and remote areas of Balochistan through its upcoming flagship project 'Re-charge Pakistan'. Similarly, with regard to the workshop, Dr. Masood stated that "I believe today is the opportunity for all of us to find the best possible and effective solutions for Balochistan."

## **Introduction to the Third National Communication on Climate Change by Mr. Safir Ahmed (TNC Coordinator, MoCC/WWF-Pakistan)**

Mr. Safir Ahmed briefed the workshop participants on the details of the National Communication on climate change. He noted that the National Communication is a report that annex and non-annex countries submit to the UNFCCC; through which countries show their needs, constraints, and gaps related to the implementation of the Convention.

For the Third National Communication, the Ministry of Climate Change has onboard relevant implementing partners that are working on the designated working group themes. The findings of the working groups will be incorporated into eight broad chapters. Expanding on the work being undertaken by the implementing partners, Mr. Safir explained the responsibilities of each organization:

“GCISC is working on the Chapters on National Circumstances, GHG Inventory, Vulnerability and Adaptation assessment, Analysis of Constraints and Gaps related to Financial and Technical Capacity Needs, and information on Research and Systematic Observation. NEECA and PCRET are working on mitigation actions and environmentally sound technologies, respectively. Finally, WWF-Pakistan will work on education training and public awareness, capacity building, information sharing & networking, gender and climate change, and integration of climate change into relevant policies and actions.”

Opening Remarks by Mr. Mujeeb Ullah Panezai (Director, EPA Balochistan)

Mr. Panezai in his remarks emphasized that “Climate change is no doubt a global issue but we lack awareness and capacity building related to it”. Reiterating the sentiment of previous speakers he noted that Pakistan has contributed very less to the climate crisis, yet is facing the worst circumstances, similarly. Furthermore, much like the country, as a province, Balochistan is contributing very less to Pakistan’s total GHG emissions but is being badly affected by climate change.

He added that despite the lack of funds, the Balochistan EPA has been performing effectively. In recent times, the organization has won its court case against stone crushing plants, in the area surrounding Quetta, which had been causing damage to the environment. Similarly, the process of replacing conventional brick kilns with modern-day zig-zag technology has been initiated.

Mr. Panezai highlighted a critical issue in the province, stating that there is a need to enhance inter-departmental coordination, if we are to fight climate change effectively. Quoting an example, he stated that “If we ban plastic bags in Quetta, you will see an increase in the border trade of plastic bags, which is clearly not good from the execution point of view”.

Concluding his remarks, Mr. Panezai observed that there is a severe lack of awareness and capacity building, especially considering the unique circumstances of Balochistan. “We must embrace the fact that organizations (government & private) should be the first ones to get the awareness of climate change”.

## **Implementation of Education, Training, and Public Awareness in Balochistan Dr. Shafiq-ur-Rehman (Vice Chancellor, University of Balochistan)**

Dr. Shafiq-ur-Rehman, in his presentation stated that “there is no doubt in it that climate change is a concerning thing for the whole world, and especially for Pakistan as we are in the list of top 10 most affected countries due to climate change. But still, we have taken no solid precautionary measures against it. In other words, our actions do not speak about the threat we are facing”.

He further gave the example of University of Balochistan’s hydrology department, which was discontinued due to unknown reasons. He said the department had been working on numerous water-related projects in collaboration with Japan. However, now that Quetta is facing an acute water crisis, we do not have the required information or data. This exemplifies the lack of priorities regarding climate/environment-related issues.

In the wake of the recent floods, a total of thirty-four districts got affected, 3.6 lac people got affected, 238 lost their lives, 106 got injured and about 1000 kilometres of roads got destroyed in Balochistan. “We should have been sitting down and making a solid plan of action but we are still waiting for loans to rescue us.”

In the context of climate change education, Dr. Shafiq-ur-Rehman noted that within the higher education curriculum, “excluding the department of environmental sciences, we don’t see even a chapter dedicated to the issue of climate change in other departments; they are not ready to add it to public administration or language courses because they are unaware of its importance and urgency”.

Therefore, there is a need to add cross-cutting themes of climate change in all departments of universities in Balochistan, so that youth can get the awareness of the basic concepts related to climate change. Ending his presentation, Dr. Shafiq-ur-Rehman called for immediate action on climate change, “We always complain about the developed countries’ emissions, yes, they are responsible but we should also see our commitments”.



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## WWF-Pakistan's Efforts on Climate Education and Public Awareness by Ms. Fatima Khan, (Coordinator Climate and Energy Program, WWF-Pakistan)

Ms. Fatima in her presentation, outlined the achievements of WWF-Pakistan in the last 52 years in the context of climate change. She underscored that, "WWF-Pakistan, has always tried to organize outcome-based workshops and events; the aim of which has always been to equip people with the relevant knowledge and skills through focused training, awareness and education".

WWF-Pakistan is currently working on climate change-related interventions under 6 major 'practices': Climate & Energy, Freshwater, Oceans, Forestry, Wildlife, and Food & Markets. Highlighting some of the successful intervention Ms. Khan gave the participants an overview of the organisation's role in:

- (i) Pakistan's Nationally Determined Contributions (NDCs) 2021 (in collaboration with MoCC): through consultative workshops and one-on-one meetings with stakeholders across Pakistan.
- (ii) Gender Inclusive Programing: 5000 women in around 9 districts of Punjab and Sindh were given awareness on sustainable production and consumption of natural resources, along with skill enhancement training.
- (iii) Food & Markets: Capacity building of 25,000 farmers on climate-smart agriculture. In villages, SMD vans carrying portable video-based stories for farmer education were launched on a large scale.
- (iv) Green Office Program: Awareness raising and training of personnel from industry and corporations to decrease their greenhouse gas emissions, reduce usage of energy, and paper. Each year WWF-Pakistan trains more than 1200 personnel. Through these efforts, 8700 MTCO<sub>2</sub> have been reduced by 130 companies over the last thirteen years.
- (v) Youth Development Program: More than fifty community projects were completed by youth, and to-date 80,000 young people have been sensitized through these awareness sessions.
- (vi) Campaigns and Activities: awareness raising on wildlife hunting and ecosystem conservation through excursion trips. Numerous Clean-up Drives and Smog Campaign, etc. stand out as the programs to train and aware corporates, policymakers, industries, youth, and marginalized communities. Similarly, 10 thousand solar base stoves were provided in 2016 to promote green energy.
- (vii) Awareness Raising through Digital Media Platforms: Approximately two lac people participated in environment-related campaigns e.g., Earth Hour. Similarly, the organization frequently uses its social media platforms Instagram, Twitter, and Facebook & Official WWF-Pakistan website to campaign on climate-related issues. In addition to the organisation's own platforms, experts from WWF-Pakistan also utilize mediums like radio and television to spread their messages to far-flung areas.

## Working Group Session

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The objective of the WG discussion was to identify: (1) Existing gaps in the system (Challenges); (2) What is it that we want to achieve? (End Goal); (3) How we get there (Pathways).



# Working Group Findings:

## WG 1: Education: How can we effectively incorporate climate education into the national/provincial curriculum in Balochistan?

### Gaps or Challenges

- (i) Lack of governance is an issue in Balochistan due to which policies related to climate change education could not be implemented effectively.
- (ii) There is a lack of public sensitization regarding climate change in Balochistan.
- (iii) There is a lack of finance available due to the poor economic situation.
- (iv) There is a lack of coordination between government departments and public-private organisations.
- (v) There is no province specific database available regarding climate education.
- (vi) There is a lack of qualified teachers and field experts in the field of climate change in Balochistan.
- (vii) Lack of focus on cross cutting themes related to climate change.

### End Goal

- (i) Climate friendly environment through provision of education.
- (ii) Mitigate the challenges of climate change.
- (iii) Thorough implementation of action plan at ground level.
- (iv) Development of a follow-up mechanism.

### Pathways

- (i) Development of an environment friendly curriculum for Balochistan after consultations with relevant stakeholders.
- (ii) Extensive research and creation of province specific databases.
- (iii) Creation of cross cutting themes on different courses.
- (iv) Strengthening capacity building and human resource of Balochistan.
- (v) District wide surveys to assess ground situation for better planning.
- (vi) Awareness programs for relevant stakeholders.







## WG 2: Training or Capacity Building: What type of ‘continuous’ climate-related education and training courses are needed for relevant sectors of Balochistan?

### Gaps or Challenges

- (i) Presence of financial constraints.
- (ii) Lack of entrepreneurial approach in the province.
- (iii) Lack of coordination between departments.
- (iv) Lack of climate change education and knowledge.
- (v) Technical human resource constraints.
- (vi) Absence of central resource facility.
- (vii) Low priority given to environment and climate change.

### End Goal

- (i) Development of sufficient financial resource allocation.
- (ii) Effective and efficient coordination mechanism.
- (iii) Establishment of central resource centres.
- (iv) Adopting trickle down policy mechanism.
- (v) Arrangement of training sessions for relevant stakeholders.

### Pathways

- (i) Orientation training of public office holders.
- (ii) Training needs assessment for various sectors of society.
- (iii) Programmes on effective involvement of the public and academic sectors.
- (iv) Development of a synergic and integrated approach for Balochistan.

## WG 3: Awareness Raising: How can we raise awareness on climate change within the various segments of society (children, youth, adults, elderly, employed, unemployed, etc.) in Balochistan?

### Gaps or Challenges

- (i) Lack of awareness/importance related to climate change in public-private departments.
- (ii) Tribal politics is causing hindrances.
- (iii) Lack of community mobilisation offices in Balochistan.
- (iv) No gender specific centres present in the province related to climate change.
- (v) Lack of government willingness to implement policies.
- (vi) Lack of coordination between farmers-agriculture community, trade unions and industries.
- (vii) Lack of financial resource mobilisation.
- (viii) Lack of media engagement in climate change related issues.
- (ix) Lack of Information, Education and Communication (IEC) material in Balochistan.

### End Goal

- (i) Raising awareness on climate change in academia and local communities.
- (ii) Improvement of coordination between departments and enhancement of government willingness to implement existing policies.
- (iii) Enhancement of media engagement related to climate change in Balochistan.

### Pathways

- (i) Introduction of climate penalties for different sectors of society and implement them properly.
- (ii) Resource mobilization from international and local donors.
- (iii) Advocacy campaigns (workshops, seminars, etc.) to raise awareness with hands-on activities. Participation of females, clerics, and youth should be on a priority basis.
- (iv) Monthly and quarterly meetings of organisations working on climate change with set targets to discuss.
- (v) Involvement of celebrities and influencers to attract mass public awareness related to climate change.
- (vi) Development of IEC material, especially cartoons/climate change related updates and concepts in local language.
- (vii) Promotion of inclusivity and harmony in the province.





## Closing Remarks by Hamza Shafqaat, Secretary Information, Balochistan

To conclude the workshop, Mr. Hamza Shafqaat remarked that, “I am very happy to see some nice suggestions and way forward from all of the esteemed members and I am very hopeful that everyone would be more educated after this session.” He added that IPCC in their 2020 report, presented some shocking statistics on the impacts of climate change. In order for us to plan against those threats, we must work on raising awareness. He further gave examples of Balochistan, where they have launched a mass tree plantation campaign under the name of “Har Bashar, Dou Shajar” translated as “Every Human, Two Trees”. Similarly, there is now a complete ban on plastic bags in the market of Quetta.

Mr. Shafqaat stressed that, “We know that our emissions are very less but our vulnerability is extremely high. We often say this is injustice but we should ask this question: why is it always us? We all are responsible for this matter. Our teachers, politicians, and bureaucrats didn’t play their roles properly.

Concluding his talk, he added that “Despite all of these limitations, I am very hopeful about the future. The level of awareness in our governments and civil society is increasing. In Balochistan, we already see some positive changes, for example in the PSDP schemes, projects on water treatment and sewage plants are being introduced. Similarly, the alignment of Sabzal Road was changed to protect trees. Seeing this, I am very hopeful that we can fight climate change together”.



## Key Takeaways and Recommendations

1. There is a lack of prioritization of climate change in the province by the government and private organizations, which stems from the general lack of awareness surrounding the subject.
2. Poor governance structures and lack of coordination between stakeholders (inter-departmental, between organizations, and local communities).
3. Financial and human resource constraints for development and implementation of sustainable education, training and public awareness programs.
4. There is an absence of provincial/local level monitoring or inventory to capture the ongoing climate-related activities, which makes it difficult to create targeted plans/programs.
5. Community mobilization remains low in the province, especially vulnerable populations.

## Recommendations

1. Capacity building and awareness raising on climate change of key relevant stakeholders.
2. Establishment of a central resource facility for Balochistan, that facilitates the implementation of programs on climate change education, training and public awareness across the province, through a coordinated platform.
3. Mobilization of resources to overcome financial constraints viz local and international donors.
4. Prioritization of research studies and projects linked to Balochistan-specific climate change issues; to formulate a better understanding of local conditions, and required interventions.
5. Development of Information, Education, and Communication (IEC) material and introduction of climate change-related cross-cutting themes/topics in the educational curriculum.
6. Creation of a database to house province-specific information and statistics regarding the impact of climate change, education, training, and/or awareness material and ongoing activities.
7. Inclusion of females, youth, and influential community leaders (e.g., religious clerics) for advocacy campaigns.



## TNC BALOCHISTAN WORKSHOP REGISTRATION LIST

Sr. No.	NAME	ORGANIZATION/COMPANY	DESIGNATION
1	Mukhtar Ahmed	PMD	Director
2	Bijar Khan	QDA	Assistant Director
3	Hussain Farooq	Radio Pak	News Editor
4	Mahwish Afridi	Hashoo Foundation	Head of Strategic Support Programme
5	Tabassum Ahmed	Planning and Development	Joint Chief Economist
6	Abdul Basit	UNICEF	Communication Officer
7	Yayha Musakhel	PPAF	Manager Business Development
8	Ghulam Muhammad	BRSP	Manager
9	Nasrullah	CPD	CEO
10	Usman Ghani	PMD	Assistant Manager
11	Bashir Agha	NEP – NIC	P. O
12	Prof. Dr. Sajida Naureen	SBKWU	Vice Chancellor
13	M. Ali Batur	EPA	Director
14	Syed M. Hussain	SHDC	Executive Director
15	Nazar Muhammad	APP	Bureau Chief
16	Adnan	APP	Cameraman
17	Mohsin	APP	Photographer
18	Nusrat Tahira	BOC	SSS BOC
19	Dr. Masood	WWF	Senior Director - Footprint
20	Nazifa Butt	WWF	Senior Manager
21	Safir Ahmed	MoCC	Coordinator - TNC
22	Fatima Khan	WWF	Coordinator - CEP
23	Haseeb Khan	WWF	Project Officer - TNC
24	Ahad Agha	QCCI	Vice President
25	Ihtesham	FAO	Irrigation Specialist
26	Talal Amjad	IDO	Assistant Project Manager
27	Muhammad Iqbal	Industries Directorate	Director
28	Muhammad Bilal	PIDS	Program Officer
29	Dr. Abdul Mateen	BRSP	Coordinator
30	Shafique Ahmed	PMD	Assistant Meteorologist
31	Abid Hussain	PMD	Met Assistant
32	Dr. Shafique	UOB	Vice Chancellor
33	Dr. Mujeeb	EPA	Director
34	Dr. Amin	BUIITEMS	Chairperson - Chemical Dept
35	Muhammad. M	UNDP	Communication Officer
36	Hamid Sarfaraz	Dev Com	
37	Munazza Nawab	Bureau of Curriculum	Senior Research Officer
38	Nagina Rehman	BOC	

## Agenda for Workshop on Education, Training & Public Awareness on Climate Change (Quetta, Balochistan)

Time	Activity	Speakers
9:30 - 10:00 hrs	Registration	
OPENING SESSION		
10:00 - 10:10 hrs	Welcome Note	Dr. Masood Arshad (Senior Director Footprint, WWF-Pakistan)
10:10 - 10:15 hrs	Recitation of the Holy Quran	
10:15 - 10:30 hrs	Introduction - Third National Communication on Climate Change	Safir Ahmed (TNC Coordinator)
10:30 - 10:40 hrs	Opening Remarks	Dr. Mujeeb (Director Environmental Protection Agency, Government of Balochistan)
10:40 - 10:55 hrs	Current Status of Implementation of Education, Training, and Public Awareness on Climate Change in Balochistan	Dr. Shafiq-ur-Rehman (Vice Chancellor, University of Balochistan)
10:55 - 11:10 hrs	WWF-Pakistan’s Efforts on Climate Education & Public Awareness	Fatima Khan (Coordinator, Climate and Energy Programme, WWF-Pak)
11:10 - 11:30 hrs	Tea Break	
WORKING GROUP SESSION		
11:30 - 12:20 hrs	WG 1: Education: How can we effectively incorporate climate education into the national/provincial curriculum in Balochistan?	WG1 Chair: Dr. Sajida Naureen (Vice Chancellor Sardar, Bahadur Khan Women’s University, Quetta)
	WG 2: Training or Capacity Building: What type of ‘continuous’ climate-related education and training courses are needed for relevant sectors of Balochistan?	WG 2 Chair: Muhammad Ali Batur Deputy Director, Balochistan EPA
	WG 3: Awareness Raising: How can we raise awareness on climate change within the various segments of society (children, youth, adults, elderly, employed, unemployed, etc.) in Balochistan?	WG 3 Chair: Qurban Gharsheen (CEO, Balochistan Environmental & Educational Journey)
12:20 - 12:35 hrs	Presentations of WG 1 - WG 3 by WG Chairs	
CLOSING SESSION		
12:35 - 12:45 hrs	Summary of WG Session & Way Forward	Dr. Masood Arshad (Senior Director Footprint, WWF-Pakistan)
12:45 - 12:55 hrs	Closing Remarks	M. Hamza Shafqaat (Secretary Information, Government of Balochistan)
13:00 hrs	Lunch	





# Lahore Workshop Report

Prepared by WWF-Pakistan



## Executive Summary

The Ministry of Climate Change (MoCC), alongside its four implementing partners (WWF-Pakistan, Global Change Impact Studies Centre (GCISC), Pakistan Council for Renewable Energy Technologies (PCRET) & National Energy Efficiency & Conservation Authority (NEECA)), is currently preparing Pakistan's Third National Communication (TNC) on Climate Change under the UN Framework Convention on Climate Change (UNFCCC).

As the lead of the Climate Education, Training, and Public Awareness Working Group, WWF-Pakistan with the support of the MoCC will be organizing a series of workshops across Pakistan. This exercise will aid in understanding, and ultimately enhancing the climate change awareness and capacity-building needs of relevant local-level stakeholders.

In this regard the third workshop was held in Lahore, Punjab on March 15, 2023; similar to the workshops in Peshawar, KPK, and Quetta, Balochistan, in the months of December and January, respectively. The objectives of the workshop were to (i) highlight the implementation status of the province's climate-related education, training, and public awareness. Particularly, focusing on identifying the extent of alignment of said activities with the policy measures denoted in the 2021 Climate Change Policy of Pakistan, and (ii) formulating Punjab-specific critical pathways for the enhancement of education, training, and public awareness through the scheduled interactive sessions with experts and participants in the panel discussion and working group sessions.

To achieve the aforementioned objectives the workshop program included presentations highlighting the communication itself, the current status of implementation of climate change education, training, and public awareness in Punjab. WWF-Pakistan shared its efforts on climate education, training and public awareness. This was followed by an interactive working group session, in which participants were divided into three main working groups on education, training & capacity building, and awareness raising.

The working group findings concluded that there is an evident gap between the policies and implementation on-ground. This was largely attributed to differing on-ground conditions both inter- & intra-province, low level of knowledge on climate change-related activities within implementing bodies, and lack of coordination between departments and organisations. As highlighted during previous workshops, participants emphasized on the lack of resources financial, infrastructural, human and technical) to effectively design and implement programs/interventions.

Key recommendations brought forward included (i) a baseline assessment of risks and 'type' of awareness required at the local levels to ensure targeted design of policies, programs and interventions; (ii) decentralisation of work and efforts to the grass-roots level; (iii) formulation of linkages between departments and organisations (public/private sectors); (iv) acquisition and equitable allocation of technical, human and financial resources; (v) creation of sector-specific Standard Operating Procedures; (vi) hands-on training of trainers/academia/advocates; (vii) utilisation of diverse platforms for increased outreach; inclusion of community leaders, such as village elders, religious scholars, women, young people in climate change awareness and advocacy.

## Introduction

### Background

The Ministry of Climate Change (MoCC), alongside its four implementing partners (WWF-Pakistan, Global Change Impact Studies Centre (GCISC), Pakistan Council for Renewable Energy Technologies (PCRET) & National Energy Efficiency & Conservation Authority (NEECA)), is currently preparing Pakistan's Third National Communication (TNC) on Climate Change under the UN Framework Convention on Climate Change (UNFCCC).

The TNC will succeed the Second National Communication, submitted by Pakistan in 2019. The Communication will enable Pakistan to fulfill its requirement under Articles 4.1 and 12 of the UNFCCC (to prepare and submit its national communication). Furthermore, it will entail how the country has been implementing the Convention, whilst also highlighting critical issues, constraints, and capacity requirements for climate mitigation and adaptation.

WWF-Pakistan has been declared as 'Team Lead' for Thematic Working Groups (TWG) on 'Education Training and Public Awareness', 'Capacity Building', 'Knowledge and Information Sharing and Networking', 'Information on Steps Taken to Integrate Climate Change', 'Information on Gender Equality and Women's Empowerment on Climate Change Issues', and 'Technical Assistance and Support to Project Management Units to Execute the TNC Project'.

As the leader of the Climate Education, Training, and Public Awareness Working Group, WWF-Pakistan with the support of the MoCC will be organizing a series of workshops across Pakistan. This exercise will aid in understanding, and ultimately enhancing the climate change awareness and capacity-building needs of relevant local-level stakeholders.

## Venue & Participation

Pakistan Engineering Congress, Lahore, Punjab.

A total of 40 participants attended the workshop, consisting of members from relevant government bodies/ministries, NGOs/CBOs, think tanks, academia, the corporate sector, and media personnel (refer to Appendix 1).

Workshop Program - see, Appendix 2 (attach the agenda)

The opening session of the workshop included a welcome note by Dr. Masood Arshad (Senior Director Footprint, WWF-Pakistan), an introductory presentation on the Third National Communication on Climate Change by Mr. Irfan Tariq (TNC Technical Expert, WWF-Pak/MoCC) followed by opening remarks by Dr. Amir Farooq (Director (Planning & Coordination), Environmental Protection Department (EPD), Punjab). Subsequently, there were two final presentations on the Implementation of Education, Training, and Public Awareness in Punjab by Mr. Ahmad Rafay Alam (National Climate Change Council) and WWF-Pakistan's Efforts on Climate Education and Public Awareness by Ms. Nazifa Butt (Senior Manager, Climate and Energy Program WWF-Pak).

The presentations were followed by the working group session WG 1: Education (Chair: Prof. Dr. Faiza Sharif (Director/Professor, Sustainable Development Study Center, GC University)); WG 2: Training or Capacity Building (Chair: Mr. Ali Habib, Managing Partner, Hima Verte); WG 3: Awareness Raising (Chair: Ms. Sharmeen Tariq (CEO/Director, Umbrella Consulting)). The workshop concluded with closing remarks from Mr. Hamid Javed Awan, (Director, Public Relations, Information Department Punjab).

## Opening Session

### Welcome Note by Dr. Masood Arshad (WWF-Pakistan)

Dr. Masood Arshad while opening the event noted that one of the biggest challenges the world currently confronts is climate change. He stated that "Pakistan has been working on its climate change policy as a responsible member of the international community, and it has updated it over time to reflect the shifting global environment." He further added that Pakistan's Second National Communication (SNC) on Climate Change was a thorough report that detailed the nation's present circumstances, risks, and on-going mitigation and adaptation measures. "The SNC emphasized Pakistan's high susceptibility to the effects of climate change and the hardships that its people already experienced due to extreme weather conditions like floods, droughts, and heatwaves".

Reflecting on Pakistan's updated Nationally Determined Contributions (NDCs), which included a target to reduce 50% of its projected emissions by 2030. Dr. Masood said that the accomplishment of these targets is important for Pakistan because it demonstrates the nation's commitment to the global fight against climate change". However, he noted that "Although comprehensive policies have been created, the implementation is slow". He attributed the gap in implementation to a number of factors, including a dearth of political will, administrative obstacles, and insufficient technical capacity.

He further asserted that post the 18th amendment, successful implementation of Pakistan's climate change policies requires the engagement of provinces. As a result, greater coordination and collaboration between the federal government, provinces, and local governments is essential. Concluding his remarks, Dr. Masood expressed that in Pakistan's efforts to combat climate change, the Third National Communication (TNC) is a major turning point. "The TNC will present an updated evaluation of Pakistan's climate change vulnerability, its achievements in putting climate change policies into practice, and its upcoming plans to lessen and adjust to the negative effects of climate change".

Introduction to the Third National Communication on Climate Change by Irfan Tariq (TNC Technical Expert)

Mr Irfan Tariq began his presentation by outlining the significance of Pakistan being a signatory of the UN Framework Convention on Climate Change (UNFCCC). A commitment which stipulates countries in reporting on the progress, issues, and constraints in the context of impacts of climate change, and in the implementation of the Convention. Giving the example of the 2022 floods, he said that Pakistan needs to elaborately capture and report the event and its impacts, in order to justify the country's vulnerability and coping ability. He further stated that the reporting system should be consistent over time, and transparently presented.

Detailing the Third National Communication to the UNFCCC, Mr. Irfan, explained that the Ministry of Climate Change has onboard relevant implementing partners that are working on the designated thematic working groups. The findings of the working groups will be incorporated into eight broad chapters. "Including chapters on National Circumstances, GHG Inventory, Vulnerability and Adaptation assessment, Analysis of Constraints and Gaps related to Financial and Technical Capacity Needs, and information on Research and Systematic Observation being undertaken by GCISC. NEECA and PCRET which are working on mitigation actions and environmentally sound technologies, respectively. Finally, WWF-Pakistan which is working on education training and public awareness, capacity building, information sharing & networking, gender and climate change, and integration of climate change into relevant policies and actions."



## Opening Remarks by Dr. Arif Farooq (EPD, Punjab)

Dr. Arif Farooq in his remarks observed that “although their contribution towards causing climate change is minimal, the impacts of climate change is an emerging threat for people living in the developing countries including Pakistan”. He noted that Pakistan has developed a sector-wise policy and related action plans for climate change that have been shared with the provinces. Furthermore, a steering committee on climate change has also been formulated, consisting of various different departments including government representatives and development partners. “However, it is unfortunate that the response from the departments is slow up till now”.

Dr. Arif emphasized that “The current state of the country’s vulnerability, necessitates that all the stakeholders work together on realizing these action plans, and the relevant projects linked to it.” He concluded his remarks by noting that the current workshop can play a very important role to not only educate the stakeholders, but also train them to make programs, plans and projects that can help us make a more consolidated strategy.

## Implementation of Education, Training, and Public Awareness in Punjab Mr. Ahmad Rafay Alam (Member, Pakistan Climate Change Council)

Mr. Rafay Alam initiated his talk on implementation of environmental and climate change education in the province by sharing his experience of a pilot project underway in collaboration with Lahore Biennial Foundation (LBF), Lahore University of Management Sciences (LUMS) School of Education and WWF-Pakistan. He explained that the Green School Certification project entails the development of ‘greener’ schools in Lahore, which can be further extended to other areas of Punjab. Overviewing the progress, he said that, currently, the curriculum has been piloted in twelve schools, from the private and public sector; with an outreach of approximately 10,000 students. Besides the development of age-wise curriculum concepts (e.g., plastics, water, ecologies), the pilot project also included a component of teacher training, to ensure effective implementation.

He further noted that “Seeing the success of the pilot project, the curriculum can be mainstreamed across Punjab in the future. However, there are certain issues, identified during the initial phase, that need to be addressed before scaling up such initiatives.” Exemplifying the issues identified in the initial phase, Mr. Rafay outlined the following gaps:

Introduction of hands-on activities such as composting from school canteen food waste is a great way to demonstrate to children the entire life-cycle of processes, however on-ground realities are different. For example, a lot of schools (especially government schools), do not have basic facilities like canteens, suggesting difficulty in implementation.

Similarly, there is a lack of resources; although private schools can afford to shift to renewables such as solar panels or work on energy conservation, most public schools are unable to afford this, whilst others do not have access to electricity.

Concluding that the lack of resources, and diversity in working conditions (infrastructural, technical and/or human resource) means that a singular curriculum or plan of action cannot be implemented across the board. He noted that, “this also highlights the fact that climate change operates on the scale of affluence; the poorer you are, the more strongly you are going to be impacted by climate change”. Adding that, Pakistan is a vulnerable country not only because of its inadequate governance structures, but also due its financial woes. “Therefore, it is imperative that affluent people understand how their actions impact the patterns of climate change”.

With regard to awareness of climate change in the province, Mr. Rafay Alam observed that, “it is important to recognise that the impacts of climate change vary across the country. Forests, coastal areas, and glacial-related climate change problems are all different. Thus a ‘singular’ climate change policy or plan of action isn’t suitable” - “Rather we need to have a provincial level understanding of climate impacts, in order for a provincial level response”. Disintegrating it further, he noted that even the intra-province impacts vary immensely; “urban flooding risks in Lahore are very different from those in Sialkot, similarly South and North Punjab too have distinct ground realities”. That’s how policies must be formulated: “local problems need local solutions”.

Mr. Rafay noted that within the provincial frontline departments, which have an active role in the implementation of NDCs; “very few provincial departments have been able to translate back and understand the requirements of NDCs”.

Recollecting his correspondence with these departments in 2022, in the backdrop of three incidents of large-scale forest fires, during a prolonged heatwave in Punjab. He made the following observations:

**Forest Department:** Although the department has good knowledge regarding climate change, being a key part of the REDD+ program. It does not have the equipment or manpower to deal with the increasing frequency of forest fires.

**Transport Department:** Despite that the national greenhouse gas inventory indicates a 73% emission contribution from the transport sector, there remain some grave caveats in regulation. For example, the transport department is only mandated to regulate public/goods transport, but private vehicles & motorcycles are not regulated by the transport department. Similarly, although a national Electric Vehicle policy exists, since the provincial excise & taxation departments treat automobile registration as a revenue exercise, and as such treat combustion engines and EVs the same, the effort remains futile. “We have policies at the federal level, but at provincial level departments don’t know how to lay them out”.

Environment Protection Department: The EPD in Punjab does not within its mandate cover climate change, the department largely focuses on the regulation and implementation of Pakistan Environmental Protection Act (PEPA) 1997; and specifically industrial pollution control. Thus, as there is a dearth of capacity within the EPD to fully understand climate change, their ability to strategize climate mitigation and adaptation remains low.

Finance Department: In conversation with the finance department in 2022, Mr. Rafay relayed that the department “frankly admitted that at that point in time there was absolutely nothing on his table for allocating a climate change specific budget.” He further noted that this is alarming for a province that is not only the breadbasket of the country but is also home to more than 100 million people, who are heavily reliant on agri-based livelihoods.

Concluding his talk regarding the awareness levels of frontline departments, Mr. Rafay Alam highlighted that “the Provincial Disaster Management Authority (Punjab), and the Irrigation department are two departments at the frontline with greatest awareness levels; largely because they first-hand respond to climate-related impacts.”

“All of this illustrates that the state of awareness, especially of government departments, is a grim story. Therefore, we must build the capacity at the provincial level, and increase awareness at the local level; and most importantly we need better democracy and devolution of power”.

## **WWF-Pakistan’s Efforts on Climate Education and Public Awareness by Nazifa Butt, (Senior Manager Climate and Energy Program, WWF-Pakistan)**

Ms. Nazifa Butt in her presentation, outlined the achievements of WWF-Pakistan in the last fifty-two years in protecting biodiversity, nature, and humans living in harmony. She highlighted that the footprint of WWF-Pakistan’s activities is present across Pakistan. The organisation carries out these initiatives through a multi-pronged approach; including, physical interventions, and capacity development, alongside engagement and advocacy with diverse stakeholders (ranging from policymakers to grassroots communities). Ms. Nazifa noted that currently, the organisation is working on climate change-related interventions under all six major ‘practices’: Climate & Energy, Freshwater, Oceans, Forestry, Wildlife, and Food & Markets. Following are a few of the initiatives highlighted:

1. Stakeholder consultations (e.g., Preparation of Nationally Determined Contributions 2021). Community upliftment programs (e.g., capacity building of 25,000 farmers on climate-smart agriculture, especially women).
2. Plantation Drive (e.g., Rung Do Pakistan).
3. Corporate engagement (Green Office Program); 8700 MTCO<sub>2</sub> have been reduced by 130 companies over the last thirteen years.
4. Sensitization and outreach to young people (Youth Development Program, Spellathon); more than fifty community projects were completed by youth, and to date 80,000 young people have been sensitized.
5. Awareness raising: Earth hour, cyclo-thons, clean-up drives, digital campaigns (e.g., #TheFifthSeason Smog Campaign).
6. WWF-Pakistan ambassadors: writers, actors, celebrities taken on board to ensure diverse outreach in terms of target audiences and influence.

Concluding her presentation, Ms. Nazifa emphasized that, “The greater the number of mediums utilized, the greater the outreach will be for the cause. All stakeholders are equally responsible for bringing around change, and increasing accessibility to information and resources”.

## **Working Group Session**

During the working group session, all the workshop participants were assigned to three Working Groups namely (i) Education (ii) Training or Capacity Building (iii) Awareness.

The objective of the WG discussion was to identify: (1) Existing gaps in the system (Challenges); (2) What is it that we want to achieve? (End Goal); (3) How we get there (Pathways).

## Working Group Findings:

### WG 1: Education: How can we effectively incorporate climate education into the national/provincial curriculum in Punjab?

#### Gaps or Challenges

Lack of policies to include climate change in the curriculum especially in primary school.

The capacity building training is negligible hence teachers are not up to date with the current knowledge and interventions.

Lack of financial resources is an issue as it restricts us to explore opportunities.

Tertiary education is not linked with primary education. In short, there is no coherence in education levels.

There is a lack of coordination amongst various stakeholders that are implementing education in Punjab.

#### End Goal

Enhanced climate change awareness sensitized citizens.

#### Pathways

Establishment of coherent and inclusive education policy.

Horizontal and vertical integration of climate change within education curricula.

Increased emphasis on informal activities for climate education, e.g., development of Environmental Education Apps.

Hands on training for teachers and technical staff.

Establishment of linkages between the academia and public-private sectors.

Equitable allocation of technical, human and financial resources.



## WG 2: Training or Capacity Building: What type of 'continuous' climate-related education and training courses are needed for relevant sectors of Punjab?

### Gaps or Challenges

There is a dearth of risk assessment at district-level, thus current efforts are ineffective.

There is an absence of industry-specific environmental-standards.

Lack of coordination between and within governmental departments on climate-related issues.

Role and strength of departments is not specified to address climate change.

### End Goal

Identification of risks and strengths at the district level to create targeted training programs.

Trained and well-equipped workforce to implement projects on-ground.

Defined Standard Operating Procedures (SOPs) for the private and public sector.

### Pathways

Training on climate change and NDC 2021 priority interventions of workforce within organizations implementing projects.

Creation of SOPs for organizations across the province.

Updating of Vocational Training Curricula to include green skills & training workshops and awareness seminars on green skills (e.g., solarization of buildings, paperless environment, energy efficiency, etc.).

Defining and resolving climate-change-related issues at the district level, through localised risk assessment and recognising roles of local public/private sector organisations.

Major Chambers of Commerce (e.g., Sialkot, Gujranwala) can engage, train and raise awareness of the private sector (industry/corporates), so as to ease the implementation of governmental standards.

Pakistan Skills Development Authority as a regulatory body, can play a major role in climate change-related skills development alongside TVETA and private training institutes implement policies that can streamline green skill development across the province.

## WG 3: Awareness Raising: How can we raise awareness on climate change within the various segments of society (children, youth, adults, elderly, employed, unemployed, etc.) in Punjab?

### Gaps or Challenges

Lack of coordination between relevant governmental departments.

Deep disconnect between implementing organisations, leading to overlapping efforts, and wastage of resources.

Weak regulatory system to monitor and evaluate on-going/planned interventions.

Lack of appropriate content development.

Organisations use awareness as an adaptation tool instead of a mitigation tool (i.e., emphasis is on post-disaster sensitisation versus pre-disaster early warning).

Rural and marginalised communities are largely sidelined, content is not suitable and access to information for communities is difficult.

### End Goal

Positive behavioural change  
Sensitisation  
Awareness  
Bringing everybody on the same page and/or platform  
Development of targeted content  
Monitoring and Evaluation

### Pathways

Assessment and identification of the 'type' of awareness required.

Appointment of a focal person within departments who can oversee on-going projects in the context of climate change and communicate efforts through mass communication media.

Decentralisation of work and efforts to the grass-roots level through community-based policies and program designs, and engaging community working groups.  
Schools and institutions should be used as tools of communication of climate change challenges and their solutions.

Emphasis on practical climate solutions, rather than issues and challenges.  
Utilisation of diverse platforms for increased outreach (e.g., TikTok is a popular digital medium used by rural youth, hence can be used as a tool for targeted information dissemination).

Engagement with community leaders, such as village elders, religious scholars, women, and young people as agents of change.

Communication of plan of action and resources required for climate action, including information on low-cost materials in different regions and city areas for planting and other nature-based solutions.

Pakistan Electronic Media Regulatory Authority (PEMRA) has a free-of-cost information dissemination service, which can be utilized through the provision of targeted content for public awareness messaging.

Corporate Social Responsibility/Corporate Social Value should include financing the creation of curated content that can then be disseminated on mass media.



## Closing Remarks by Hamid Javed Awan, Director of Public Relations, Department of Information, Punjab

In his closing remarks, Mr. Hamid Javed Awan stated that the contribution of the participants was extremely valuable and enthusiastic, noting that “The Working Group findings have raised some very important points, which are all very realistic and need to be implemented at the grass-roots level.” He observed that there remains a lack of coordination in the implementation of current initiatives, “Public and private institutions are undertaking a lot of work, and it’s important that whatever we have discussed or learnt today should be shared via various mediums of communication to increase cohesion in efforts”. Referencing the South Punjab Green Book initiative, Mr. Hamid remarked that “this is a great example of how climate change can be taught in simple language to the masses; such initiatives should be replicated”. Deliberating on the need for mass communication, he reiterated that “As mentioned previously, PEMRA has a telemetry slot available 24 hours, thus can be an effective medium for message delivery.” Similarly, Mr. Hamid emphasized on the importance of digital campaigns and reaching out to and sensitising community leaders including religious scholars in ensuring targeted dissemination of information to diverse audiences. Concluding his remarks, Mr. Hamid reiterated that “The connections made today should be capitalized, we have diverse representation of participants and if we forge inter-departmental coordination, real progress can be made on ground.”

### Key Takeaways

1. Singular policies/programs/interventions cannot be applicable across the board, due to differing on-ground conditions at local levels.
2. Dearth of risk assessment and information at local-level, thus current efforts are ineffective.
3. Gap between policy makers and implementing bodies (provinces are unable to translate devised policies into action) this hinders effective implementation.
4. Lack of coordination within and between departments & organisations, leading to disjointed efforts.
5. Rural and marginalised communities are largely sidelined as existing content is not suitable (language & context), and access to information is difficult.
6. Lack of resources (financial, infrastructural, human and technical) to effectively design and implement programs/interventions.

### Recommendations

1. Assessment of risks and identification of the ‘type’ of awareness required at the local level.
2. Decentralisation of work and efforts to the grass-roots level through community-based policies and program designs, and engaging community working groups.
3. Establishment of linkages between (public/private sectors) departments and organizations.
4. Equitable allocation of technical, human and financial resources.
5. Creation of Standard Operating Procedures (SOPs) for organizations across the province.
6. Hands-on training through a “train the trainer” approach.
7. Utilisation of diverse platforms for increased outreach (e.g., social media (TikTok, Facebook, WhatsApp), television, radio).
8. Usage of mass communication methods such as PEMRA’s free-of-cost ‘public-message’ dissemination service to phone users can be a valuable resource.
9. Post-sensitisation; communication of plan of action and resources required for climate action, including information on low-cost materials in different regions and city areas.

10. Pakistan Skills Development Authority as a regulatory body, can play a major role in climate change-related skills development alongside TVETA and private training institutes to ensure green skill development across the province.

11. Enhanced inclusion of community leaders, such as village elders, religious scholars, women, and young people in climate change awareness and advocacy.

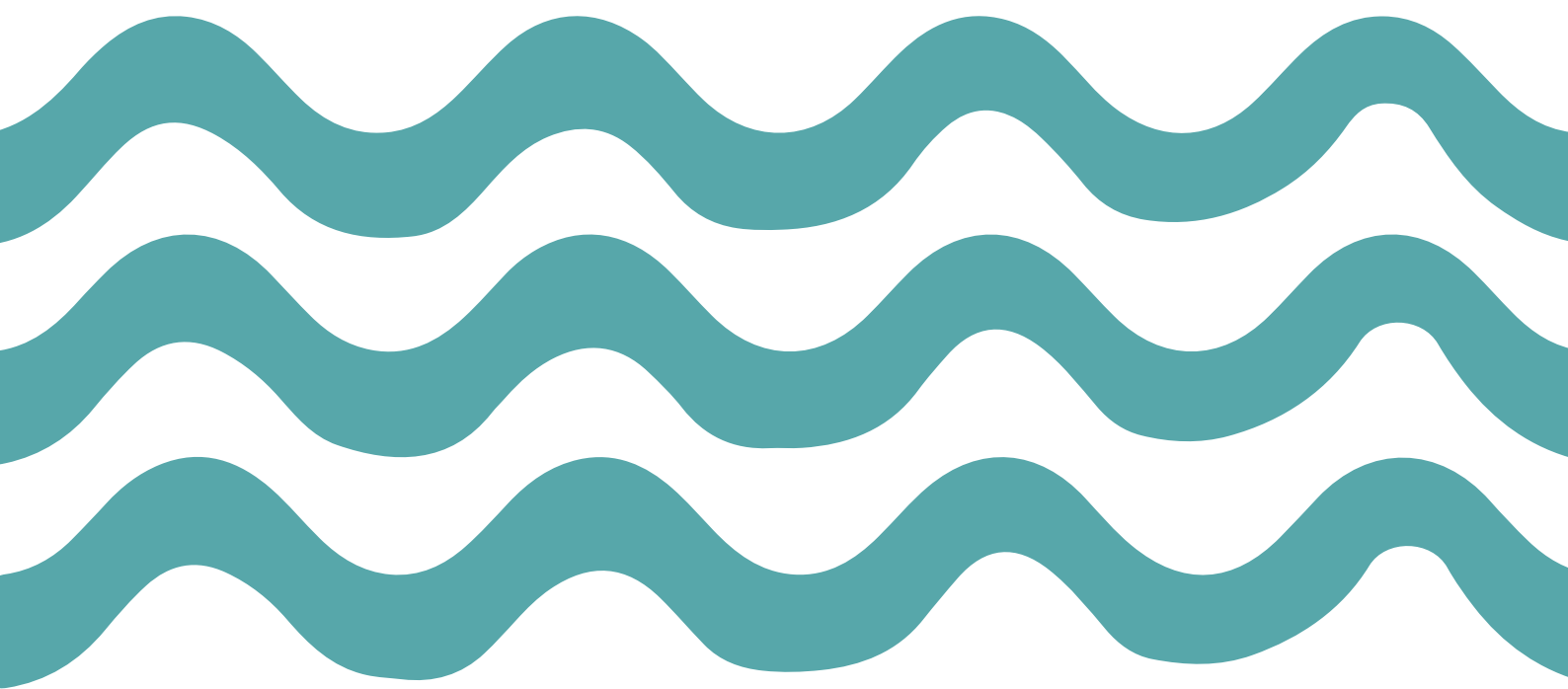
TNC LAHORE WORKSHOP REGISTRATION LIST			
Sr. No.	NAME	ORGANIZATION/COMPANY	DESIGNATION
1	Ayesha Aziz	Packages Limited	Group Manager Sustainability
2	Hashim Ali	Idara e Taleem o Agahi	Manager Communication
3	Dr. Rana Atif	Met Department	Deputy Director
4	Niazullah Khan	AWF Pvt Limited	CEO
5	Manahal Fatima	AWF Pvt Limited	Management Executive
6	Maham Faraz Abbasi	AWF Pvt Limited	Management Executive
7	Nawaz Sindheela	Forest Department	Conservator Forests
8	Safwan Naeem	Communication and Works	Assistant Director
9	Razia Sadik	LUMS	Associate Professor
10	Muhammad Faran	Punjab Vocational Training Council	Assistant Manager
11	Haseeb Anwar	C & W Department	Director Tech
12	Sharmeen Tariq	Umbrella Consulting	Director
13	Dr. Masood	WWF	Senior Director Programs
14	Nazifa Butt	WWF	Senior Manager
15	Zuhab Bhatti	Govt Islamia College	Lecturer
16	Ali Habib	Sama Verte	Managing Partner
17	Muhammad Musa	PMU	Director
18	Dr. Mehreen Khan	LSE	Assistant Professor
19	Hina Choudhary	School Education Dept	Sen
20	Syed Atif	C & W Dept	Senior Research Officer
21	Irfan Tariq	Consultant	TNC
22	Fatimah Mahmood	WWF	Senior Project Officer - TNC
23	Haseeb Khan	WWF	Project Officer - TNC
24	Rafay Alam	Independent	Lawyer
25	Hiba Dar	Coca Cola	Senior Comms Manager
26	Areeb Hussain	Sama Verte	PCAP Project Coordinator
27	Hamid Javed	DG PR	Director
28	Usman Zubair	DG PR	Digital Media
29	Nayyar Saeed	PEC	Chief Engineer
30	Iqbal P Sheikh	In Consult	CEO
31	Summera Islam	In Consult	R & S Expert
32	Khan M Faiz	Planning Dept	
33	Muttyab Ahmad	Social Welfare	Assistant Director
34	Abid Ali	WWF	Manager CEP
35	Dr. Faiza Sharif	GC University	Director Sustainability

## Agenda for Workshop on Education, Training & Public Awareness on Climate Change (Lahore, Punjab)

Time	Activity	Speakers
9:30 - 10:00 hrs	Registration	
OPENING SESSION		
10:00 - 10:10 hrs	Welcome Note	<b>Dr. Masood Arshad</b> <i>(Senior Director Footprint, WWF-Pakistan)</i>
10:10 - 10:15 hrs	Recitation of the Holy Quran	
10:15 - 10:30 hrs	Introduction - Third National Communication on Climate Change	<b>Irfan Tariq</b> <i>(TNC Consultant/Ex DG MoCC)</i>
10:30 - 10:40 hrs	Opening Remarks	<b>Dr. Amir Farooq</b> <i>(Director Environmental Protection Agency, Government of Punjab)</i>
10:40 - 10:55 hrs	Current Status of Implementation of Education, Training, and Public Awareness on Climate Change in Punjab	<b>Rafay Alam</b> <i>(Vice President (Punjab), Pakistan Environmental Law Association)</i>
10:55 - 11:10 hrs	WWF-Pakistan’s Efforts on Climate Education & Public Awareness	<b>Nazifa Butt</b> <i>(Senior Manager, Climate and Energy Programme, WWF-Pak)</i>
11:10 - 11:30 hrs	Tea Break	
WORKING GROUP SESSION		
11:30 - 12:20 hrs	<b>WG 1: Education:</b> How can we effectively incorporate climate education into the national/provincial curriculum in Punjab?	<b>WG1 Chair:</b> <b>Prof. Dr. Faiza Sharif</b> <i>(Director/Professor, Sustainable Development Study Center, GC University)</i>
	<b>WG 2: Training or Capacity Building:</b> What type of ‘continuous’ climate-related education and training courses are needed for relevant sectors of Punjab?	<b>WG 2 Chair:</b> <b>Ali Habib</b> <i>(Managing Partner, Hima Verte)</i>
	<b>WG 3: Awareness Raising:</b> How can we raise awareness on climate change within the	<b>WG 3 Chair:</b> <b>Sharmeen Tariq</b> <i>(Environmental Strategist, Nestle/MoFA &amp; CEO, Umbrella Consulting)</i>

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12:20 - 12:35 hrs <b>Presentations of WG 1 - WG 3 by WG Chairs</b>		
<b>CLOSING SESSION</b>		
12:35 - 12:45 hrs	<b>Summary of WG Session &amp; Way Forward</b>	<b>Dr. Masood Arshad</b> <i>(Senior Director Footprint, WWF-Pakistan)</i>
12:45 - 12:55 hrs	<b>Closing Remarks</b>	<b>Hamid Javed Awan</b> <i>(Director Media, DG PR Government of Punjab)</i>
<b>LUNCH</b>		







# Sindh Workshop Report

Prepared by WWF-Pakistan



## Executive Summary

The Ministry of Climate Change (MoCC), alongside its four implementing partners (WWF-Pakistan, Global Change Impact Studies Centre (GCISC), Pakistan Council for Renewable Energy Technologies (PCRET) & National Energy Efficiency & Conservation Authority (NEECA)), is currently preparing Pakistan's Third National Communication (TNC) on Climate Change under the UN Framework Convention on Climate Change (UNFCCC).

As the lead of the Climate Education, Training, and Public Awareness Working Group, WWF-Pakistan with the support of the MoCC will be organizing a series of workshops across Pakistan. This exercise will aid in understanding, and ultimately enhancing the climate change awareness and capacity-building needs of relevant local-level stakeholders.

In this regard the fourth workshop was held in Karachi, Sindh on September 21, 2023; similar to the workshops in Khyber Pakhtunkhwa (KPK), Balochistan, and Punjab in the months of December, January, and March respectively. The objectives of the workshop were to (i) highlight the implementation status of the province's climate-related education, training, and public awareness. Particularly, focusing on identifying the extent of alignment of said activities with the policy measures denoted in the 2021 Climate Change Policy of Pakistan, and (ii) formulating Sindh-specific critical pathways for the enhancement of education, training, and public awareness through the scheduled interactive sessions with experts and participants in the presentations and working group sessions.

To achieve the aforementioned objectives the workshop program included speakers highlighting the communication itself, climate change impacts on the current status of implementation of climate change education, training, and public awareness in Sindh. This was followed by an interactive working group session, in which participants were divided into three main working groups: education, training & capacity building, and awareness raising.

The working group findings concluded that there are disparities within the province in terms of access to information on climate change, due to lack of contextualization of content. Furthermore, there is a dearth of data and information on both the subject of climate change itself and the capacity needs of various stakeholders, which makes it difficult to create evidence-based interventions. The participants identified insufficient financial resources and inter-stakeholder engagement and collaboration as a serious caveat in streamlining climate change education, training, and public awareness in the province.

Key recommendations highlighted included: (i) expanding the scope of education beyond the formal domains and considering community members as "education participants" as well; (ii) creating interventions that are contextual, adaptive, age-specific, and learner-centric; (iii) focusing on Sustainable Development Goals 17 (Partnerships for Goals) and 4 (Quality Education) for streamlining efforts; (iv) collection, collation, and communication of data and information regarding climate change and stakeholder capacity needs (v) building up scientific and research organizations to translate climate change jargon and technical skills, catering to a diverse group of stakeholders (vi) facilitating citizen engagement and access to information (vii) Utilizing a blend of finance options including but not limited to government budget allocation, donors, and more so the private sector, and (viii) creation of a business case for why climate-change-related action & capacity building aligns with business strategies.

## Introduction

## Background

The Ministry of Climate Change (MoCC), alongside its four implementing partners (WWF-Pakistan, Global Change Impact Studies Centre (GCISC), Pakistan Council for Renewable Energy Technologies (PCRET) & National Energy Efficiency & Conservation Authority (NEECA)), is currently preparing Pakistan's Third National Communication (TNC) on Climate Change under the UN Framework Convention on Climate Change (UNFCCC).

The TNC will succeed the Second National Communication, submitted by Pakistan in 2019. The Communication will enable Pakistan to fulfill its requirement under Articles 4.1 and 12 of the UNFCCC (to prepare and submit its national communication). Furthermore, it will entail how the country has been implementing the Convention, whilst also highlighting critical issues, constraints, and capacity requirements for climate mitigation and adaptation.

WWF-Pakistan has been declared as 'Team Lead' for Thematic Working Groups (TWG) on 'Education Training and Public Awareness', 'Capacity Building', 'Knowledge and Information Sharing and Networking', 'Information on Steps Taken to Integrate Climate Change', 'Information on Gender Equality and Women's Empowerment on Climate Change Issues', and 'Technical Assistance and Support to Project Management Units to Execute the TNC Project'.

As the leader of the Climate Education, Training, and Public Awareness Working Group, WWF-Pakistan with the support of the MoCC will be organizing a series of workshops across Pakistan. This exercise will aid in understanding, and ultimately enhancing the climate change awareness and capacity-building needs of relevant local-level stakeholders.

## Objectives of the Workshop in Sindh

(i) Highlight the implementation status of the province's climate-related education, training, and public awareness. Particularly, focusing on identifying the extent of alignment of said activities with the policy measures denoted in the 2021 Climate Change Policy of Pakistan.

(ii) Formulate Sindh-specific critical pathways for the enhancement of education, training, and public awareness through the scheduled interactive sessions with experts and participants in the panel discussion and working group sessions.

## Venue & Participation

Beach Luxury Hotel, Karachi, Sindh.

A total of 61 participants attended the workshop, consisting of members from relevant government bodies/ministries, NGOs/CBOs, think tanks, academia, the corporate sector, and media personnel (refer to Appendix 1).

## Workshop Program - see, Appendix 2 (attach the agenda)

The opening session of the workshop included a welcome note by Dr. Masood Arshad (Senior Director Footprint, WWF-Pakistan), an introductory presentation on the Third National Communication on Climate Change by Ms. Nazifa Butt (Senior Manager Climate & Energy, WWF-Pak/MoCC) followed by opening remarks by Dr. Samina Kidwai (Director General National Institute of Oceanography). Subsequently, there was a final presentation on the Implementation of Education, Training, and Public Awareness in Sindh by Dr. Fouzia Khan (Chief Advisor Curriculum Wing, Sindh Education & Literacy Department). The presentations were followed by the working group session WG 1: Education (Chair: Dr. Fozia Perveen (Assistant Professor, Agha Khan University, Institute of Educational Development); WG 2: Training or Capacity Building (Chair: Ms. Hira Wajahat Malik, Program Manager, Stimulus); WG 3: Awareness Raising (Chair: Mr. Yasir Hussain (Founder, Darya Lab). The workshop concluded with closing remarks from Mr. Imdad Hussain, (Provincial Disaster Management Authority, Government of Sindh).

## Opening Session

### Welcome Note by Dr. Masood Arshad (Senior Director Programmes, WWF-Pakistan)

Dr. Masood opened the event by saying that "at present, it is common knowledge that climate change has severe impacts on Pakistan, we must now look towards solution and adaptation." He noted that the country recognizes climate change as one of its biggest challenges and has been actively working on creating climate change policies and plans (e.g., National Adaptation Plan); most recently. He further said that Pakistan's Second National Communication (SNC) on Climate Change in 2018 provided a comprehensive overview of the nation's climate circumstances, risks, and ongoing mitigation and adaptation measures. As a continuing commitment to the UN Framework Convention on Climate Change; the Third National Communication (TNC) is being prepared and will serve as a critical and updated assessment of Pakistan's climate change vulnerability, policy implementation progress, and future plans to address the negative effects of climate change.

He remarked that the current workshop is a prime example of the engagement needed to create holistic plans of action, as we have key representatives from local government departments, academia, NGOs, CBOs, and corporates. Emphasizing on the aim of the scheduled interactive sessions with experts and participants in working group sessions; is to discuss the current issues and identify Sindh-specific critical pathways for enhancing education, training, and public awareness.

### Introduction to the Third National Communication on Climate Change by Ms. Nazifa Butt (Senior Manager Climate & Energy Program, WWF-Pakistan)

Nazifa Butt began her presentation by outlining the recent disasters in Pakistan in the shape of GLOFs, Flooding, and Drought. She gave an overview of the National Communication Process to the attending stakeholders and the requirements under the UNFCCC; expanding on the development of the various chapters and activities underway, by the five implementing partners. (i) Ministry of Climate Change; (ii) WWF-Pakistan; (iii) Global Change Impact Study Centre (GCISC); (iv) National Energy Efficiency and Conservation Authority (NEECA); (v) Pakistan Council for Renewable Technologies (PCRET). Ms. Butt continued with a detailed summary of the role of WWF-Pakistan under the TNC, under the specified thematic working groups: Climate Change Education, Training & Public Awareness, Capacity Building, Information Sharing & Networking, Integration of Climate Change Considerations into Policies & Actions, Gender Equality & Women's Empowerment on Climate Change Issues. She specified that all the reporting is based on the real-time information that is being collected through surveys and stakeholder consultations as the current workshop. It is therefore important that all the key stakeholders are not only incentivized but are made part of the process of consultation.

## Opening Remarks by Dr. Samina Kidwai (Director General, National Institute of Oceanography):

Dr. Samina Kidwai opened her remarks noting that in terms of climate action, some of the major leaders of the world, the biggest contributors to climate change, are not taking responsibility; leaving the smaller contributors to bear the brunt of the responsibility. She emphasized that when we look at where Pakistan stands, Pakistan is amongst the countries that are most vulnerable. Sectors that are very closely being impacted are agriculture, health, forests, and coastal areas.

She recognised that, “we were talking about how last year’s floods have impacted some of the water systems in areas that received high rains. The water has been impacted, and we’ve seen the shifts in the weather patterns as well. Every year we experience that the monsoons are shifting. We don’t see the patterns that we were seeing twenty years ago. We are now experiencing cyclones and natural hazards. They’ve become more frequent and more intense over the years.” She further added that “we also see that Pakistan lies within the semi-arid zone, which means that we used to have less than 200 millimeters of rain every year. We had a weather pattern where we would have four years of drought in a year but now, we see that those patterns are changing drastically and we are not following any pattern at all.”

Commenting on the unpredictability of the weather patterns, Dr. Kidwai expressed that “the prediction and the planning are highly impacted because now we are not quite sure when we should be expecting droughts and when we should be expecting rains”.

Recounting other climate change impacts she highlighted that, “heat waves have become more and more intense and we see a lot of the general public being affected. We’ve seen melting glaciers, we’ve seen the warming of the seas, which are changing the context of the oceans”. Furthermore, the trends show that sea level rise is definitely taking place and we should be paying more attention to this.” She cited that the oceans are also a very good indicator of climate change, as oceans are the largest sink for carbon dioxide. “We know that if the temperature rises by 1.5 degrees celsius by 2100, we should be okay. However, we haven’t even reached 2030 yet; we still have over 75 years and we are already close to 1.5 degrees. This is hugely alarming.” Dr. Kidwai re-emphasized that “for Pakistan, going up to 1.6 degrees celsius, means we may lose our delta”. She concluded her remarks, saying that “we see a lot of shifts in learning tools these days, it is important that Pakistan benefit from such opportunities”.

## Implementation of Education, Training, and Public Awareness in Sindh Dr. Fouzia Khan (Chief Advisor Curriculum Wing, Sindh Education & Literacy Department)

Dr. Fouzia Khan brought to light the efforts being undertaken by the Education and Literacy Department in Sindh. She underscored that as the eighth most vulnerable country to climate change, there is an imminent threat, especially to children and young people. Giving the example of the 2010, and 2022 floods, Dr. Khan noted that the department understands that “emergencies and displacements are a frequent reality of Pakistan”. Added to this is as per the latest statistics 62% of the country resides in rural areas, and there is a preexisting lack of facilities and social inequalities to address. It is, therefore, not only important to assess the impact of disasters on education and learning losses (which is currently difficult to assess, as no tool is available), but also responses must cater to this continuing learning crisis by introducing child-friendly learning spaces. She further mentioned that at present, UNICEF is supporting the education department in designing and implementing effective learning practices and priorities for foundational learning and early childhood within the emergency framework. She added that this is in addition to the Disaster Risk Reduction (DRR) Technical Working Group consisting of civil society, NGOs, and GOs that is also operational. Over time it has defined the following “call-to-action” themes, including integrating climate change, health, nutrition, WASH, and gender perspectives into the education system by adopting best practices from Pakistan and the region. Dr. Khan suggested that “one of the reasons we are not prepared for emergencies is because we think it won’t impact us; working with this perception means that things are not effective”; adding that “a multi-sectoral approach which is vital is non-existent, as departments don’t share data or ideas amongst each other”.

She gave the example of the department’s collaboration with the planning and development department, wherein 132 schools with pre-fabricated structures have been installed mainly in the flood-impacted areas of Sindh, and a further 22 schools are in the process. Similarly, she stated that subject-wise content for textbooks has been identified. “Nevertheless, Dr. Khan stressed that the “information that researchers or NGOs have, the education department may not have that knowledge and technical resources, therefore information sharing is critical”. She further added that departments such as “Idar-e-Taleem-O-Agahi” are closely working with the education department to create targeted content. Giving the example of “Mahaul Sahelian”, she acknowledged that it “received a very good response from schools”.

However, she stressed that “making a book and curriculum is one part, delivery, and implementation in another part. “We need to also focus on teacher training, as no matter how good the books are, if the teacher isn’t able to deliver the content, implementation will be ineffective”.

She concluded by saying that the current situation is alarming, and we need to educate our kids, the parents, and the community and prepare them to be able to cope with the changes and impacts. There are four main priorities to enhance the implementation of climate change education, training, and public awareness in the province, which include (1) evidence-based planning, (2) teacher training, (3) collaboration, and (4) dedicated financial resources for emergencies and climate change under the school education budget.

## Working Group Session

During the working group session, all the workshop participants were assigned to three Working Groups namely (i) Education (ii) Training or Capacity Building (iii) Awareness.

The objective of the WG discussion was to identify: (1) Existing gaps in the system (Challenges); and (2) What is it that we want to achieve. (End Goal); (3) How we get there (Pathways).

WG 1: Education: How can we effectively incorporate climate education into the national/provincial curriculum in Sindh?	
Gaps or Challenges	<p>The theme of climate change is largely missing from the education curriculum, topics included remain generic.</p> <p>At the tertiary level, there are a few courses, however, research work remains slow. At secondary and primary levels this remains missing or includes only basic information.</p> <p>No practical or demonstrative methods of teaching are currently being used.</p> <p>There is a stark urban-rural divide in the province, presently the curriculum does not cater to these differences.</p> <p>The required infrastructure, governance, and policy mechanisms for implementation are ineffective.</p> <p>There is a dearth of trained teachers for the implementation of existing or proposed climate change-related knowledge and information.</p>
End Goal	To create an inclusive education system (formal and informal) that can cater to the various knowledge and information needs of both the rural and urban populations.
Pathways	<p>Focus energies on two main Sustainable Development Goals: SDG 17 (Partnership for the Goals) and SDG 4 (Quality Education). This would require inter-stakeholder collaboration to resolve challenges (e.g., academia-government-industry nexus).</p> <p>Upgradation of the curriculum, restructuring it to become more contextual, adaptive, age-specific, and learner-centric.</p> <p>Development of more visual material (for demonstration-based learning), rooted in real-life examples and communicative storytelling, instead of only rigorous data-laden content.</p> <p>Community members should be considered as 'education participants', and thus beyond the formal education, knowledge, and information sharing should be disseminated through diverse mediums, including but not limited to books, radio stations, mosques, and existing cultural and religious mediums.</p> <p>To create accessibility and utilization of a reward system for community members in response to involvement in climate change-related education.</p> <p>Training of teachers should be a priority, to ensure that the delivery and implementation complement the updates in curriculum and learning material.</p>



## WG 2: Training or Capacity Building: What type of 'continuous' climate-related education and training courses are needed for relevant sectors of Sindh?

### Gaps or Challenges

Consensus on the lack of knowledge, information and technical capacity across the board in stakeholder groups (public, private, academia, the scientific community, and NGOs).

The abovementioned point raises the issue of lack of human resources to cater to the needs for climate-related education and training.

There is missing data in terms of specific stakeholders' needs for enhancement of capacity and information.

There are no monitoring and evaluation systems in place to assess the effectiveness of training and information-sharing activities.

### End Goal

Creation of a collaborative environment to build up the capacities of various stakeholders in line with the needs, through a data-driven, evidence-based approach in designing climate change-related trainings.

### Pathways

Data needs to be collectively pooled so that capacity-building training can be designed accordingly.

The role of scientific organizations is pivotal in building capacities, however, requires building internal capacities on priority, in order for them to transfer the required information and technical capacities to different stakeholder groups.

Vulnerability assessment of various stakeholder groups needs to be carried out, to gauge the impending needs.

Financial needs to carry out aforementioned activities must be addressed through a blend of financial capital options including government budget allocation, donors, and the relatively untapped private sector.

To capture the private sector's interest, it is important to create a business case for why capacity building is important, a cost-benefit analysis, and how it should align with the business strategies.

The governmental bodies need to ensure the implementation of activities and a non-partisan 'watchdog' to monitor and oversee implementation must be put in place; with the added benefit of improving processes through a feedback mechanism.

Multi-stakeholder collaboration and usage of diverse mediums to carry out targeted capacity building.



## WG 3 Awareness Raising: How can we raise awareness on climate change within the various segments of society (children, youth, adults, elderly, employed, unemployed, etc.) in Sindh?

### Gaps or Challenges

Indigenous people who form the largest group of vulnerable people (e.g. within the rural flood-impacted communities), are left behind in knowledge and information sharing and campaigns.

There is no system to monitor the effectiveness or success of the informational campaigns.

Due to the lack of sensitization among stakeholders, there is a poor response to collaborative climate action.

Some government departments have unused funds, and are unable to figure out their utilization, there is a need to explore pathways to opening up to the public.

In line with the previous point, there is a lot of information flowing from the local communities, however, there are barriers at the top level in response and integration of this information.

Information currently being disseminated is at times not contextual, and does not pinpoint the root cause of the issues, similarly, it is not relatable for the audience.

### End Goal

Creation of easily communicable material to raise awareness of the various segments of society in line with context and linguistic requirements.

### Pathways

Information and messaging need to be focused, contextual, and realistic. For example: "When you are talking about air quality, you must also talk about transport and petrol, because 60 percent of your air pollution arises from the transport sector." Similarly, "we had a lot of nice satellite imaging on oceans, but there was also a mention of oxygen depletion in oceans" When discussing this aspect, we must also highlight the sewerage water that is being dumped into our Lyari and Malir rivers."

Radio Pakistan currently airs a regular series of programming on climate change, mediums such as these are critical in expanding the audience base of awareness raising regarding climate change.

Government departments need to be sensitized about climate change, in order for them to design and implement the required actions for climate mitigation, and adaptation.

There needs to be greater facilitation and citizen engagement, allowing greater access to information and collaboration between various stakeholders.

Creation of a system to monitor the effectiveness of awareness-raising campaigns.

## Closing Remarks by Imdad Hussain (Director of Operations, Pakistan Disaster Management Authority):

Imdad Hussain concluded the workshop by congratulating the organizers for a successful and insightful event. Noting that these engagements are a critical component in the development of the National Communication that is currently being prepared, under the UNFCCC. Especially, as we improve our processes of information gathering, to make it more inclusive and up-to-date.

Observing the impacts of climate change on the province of Sindh, he reiterated that "rising temperature, increased frequency of extreme weather events, water scarcity and melting glaciers in the Himalayas, which impacts agriculture and water resources, and overall socio-economic instability". He informed the participants regarding the extent of the 2023 floods, where average rainfall was recorded at 307 and 726 percent above the normal recorded rain in Sindh in the months of July and August, respectively.

He further explained that the PDMA recognized the critical situation and had designed a monsoon contingency plan well in advance of the rain event, including “formulation of SOPs for all line departments, pre- and post-monsoon activity guidelines, identification of high-risk areas and assessment of available resources, and provisional needs in face of potential crises”. However, he observed that “despite this preparation, Sindh sustained huge losses, 1000 lost their lives, 9000 were reported injured, 10.3 million people were affected, 7.3 million were displaced around half-million livestock, 3.7 MA cropland were impacted, houses and infrastructure was damaged”. He noted that it is therefore critical that the government, academia, NGOs, CBOs, and private sector each play their respective roles in their shared commitment to tackling climate change.

## Key Takeaways

1. It is well documented that climate change impacts the country severely, as is evident from the frequent extreme weather events, this necessitates that we must focus on solutions and adaptive measures.
2. There is an urban-rural divide within the province; besides the variation in vulnerabilities and needs, indigenous people who form the largest group of vulnerable people (e.g., within the rural flood-impacted communities), are left behind in knowledge and information sharing and campaigns, due to lack of contextualization of content.
3. There is a lack of data and information on local climate change-related issues, which is compounded by the lack of credible information regarding the needs of various stakeholders in terms of capacity and awareness.
4. There is a missing link between departments and stakeholders in terms of information sharing and/or collaboration on climate action. Much of the work being undertaken is in silos, and thus at times overlap and waste resources and efforts.
5. There is a dearth of dedicated financial resources to feed into climate change-related education, training, and public awareness.

## Recommendations

1. The alarming on-ground situation calls for educating the next generation and the community at large. This requires expanding the scope of education beyond the formal domains and considering community members as “education participants” as well.
2. In order to overcome the urban-rural divide, there needs to be a restructuring of the curriculum, training, and awareness campaigns to become more contextual, adaptive, age-specific, and learner-centric.
3. Collaboration is a key theme that emerged throughout the sessions and expert presentations. Sustainable Development Goals 17 (Partnerships for Goals) and 4 (Quality Education) were identified as two SDGs to be focused on for streamlining efforts.
4. It is important that strategies are planned and designed through an evidence-based approach; this requires the collection, collation, and communication of data and information regarding climate change and stakeholder capacity needs.
5. Scientific and research organizations are critical in providing up-to-date data and information and capacity-building training, translating difficult jargon and technical skills to a diverse group of stakeholders.
6. The decision-making bodies need to ‘open’ themselves up to the public in terms of facilitating citizen engagement and access to information.
7. Dedicated financial resources need to be available to mainstream climate change education, training, and public awareness. This can be done through a blend of finance options including but not limited to government budget allocation, donors, and more so the private sector.
8. To capture the private sector’s interest, creation of a business case for why capacity building is important, a cost-benefit analysis, and how it should align with the business strategies is a key entry-point.

## Appendix I: Registration List for Workshop on Education, Training & Public Awareness on Climate Change (Karachi, Sindh)

	Name	Organization/Company	Designation
1	M. Rafiq Gatta	Packages	Admin/In charge
2	M. Ahsan Ibrahim	Artistic Milliners	Associate ESG
3	Dr. Azeem Ashraf Memon	Director General (Health Services, Sindh)	Deputy Director, Non-communicable Diseases
4	Dr. Waqar Ahmed	National Institute of Oceanography	Principal Scientific Officer
5	Dr. Samina Kidwai	National Institute of Oceanography	Director General
6	Dr. Fouzia Khan	School Education and Literacy Department	Chief Advisor Curriculum Wing
7	Ghazi Salah Uddin	WWF-Pakistan	Regional Head, Sindh-Baluchistan
8	Dr. Masood Arshad	WWF-Pakistan	
9	Amra Javed	Shehri-CBE	Executive Member
10	Naimatullah	Agriculture Supply & Prices Department, Government of Sindh	Section Officer
11	Zofeen Ebrahim		Freelance Journalist
12	Kinza Naseem	Darya Lab	Researcher
13	Shahryar	Sindh Coastal Development Authority, ECC & CDD	Deputy Director (Engineering)
14	Hiba Ali		Head of Partnerships
15	Mehwish Aun	Pakistan Fisherfolk Forum	
16	Bisma Rafique		
17	Haseeb Khan	WWF-Pakistan	Project Officer
18	Fatimah Mahmood	WWF-Pakistan	Senior Project Officer
19	Usama Hussain	WWF-Pakistan	Research Officer
20	Tehreem Siddiqui	WWF-Pakistan	
21	Nazifa Butt	WWF-Pakistan	Senior Manager
22	Hira Muzaffar	WWF-Pakistan	Field Officer
23	Suman Kishore	Packages Limited	Corporate Sector Associate
24	Hassan Mirza	Artistic Milliners	Senior Coordinator
25	Abid Omer	Pakistan Air Quality Initiative	



## Appendix II: Agenda for Workshop on Education, Training & Public Awareness on Climate Change (Karachi, Sindh)

Time	Activity	Speakers
9:30 - 10:00 hrs	Registration	
OPENING SESSION		
10:00 - 10:10 hrs	Welcome Note	<b>Dr. Masood Arshad</b> <i>(Senior Director Programmes, WWF-Pakistan)</i>
10:15 - 10:30 hrs	<b>Introduction - Third National Communication on Climate Change</b>	<b>Ms. Nazifa Butt</b> <i>(Senior Manager, Climate &amp; Energy Programme, WWF-Pakistan)</i>
10:30 - 10:40 hrs	Opening Remarks	<b>Dr. Samina Kidwai</b> <i>(Director General, National Institute of Oceanography)</i>
10:40 - 10:55 hrs	<b>Current Status of Implementation of Education, Training, and Public Awareness on Climate Change in Sindh</b>	<b>Dr. Fouzia Khan</b> <i>(Chief Advisor Curriculum Wing, Sindh Education and Literacy Department)</i>
11:00 - 11:30 hrs	Tea Break	
WORKING GROUP SESSION		
11:30 - 12:40 hrs	<b>WG 1: Education:</b> How can we effectively incorporate climate education into the national/provincial curriculum in Sindh?	<b>WG1 Chair:</b> <b>Dr. Fozia Perveen</b> <i>(Assistant Professor, AKU-IED/Board Member WWF-Pakistan)</i>
	<b>WG 2: Training or Capacity Building:</b> What type of ‘continuous’ climate-related education and training courses are needed for relevant sectors of Sindh?	<b>WG 2 Chair:</b> <b>Hira Wajahat Malik</b> <i>(Program Manager)</i>
	<b>WG 3: Awareness Raising:</b> How can we raise awareness on climate change within the various segments of society (children, youth, adults, elderly, employed, unemployed, etc.) in Sindh?	<b>WG 3 Chair:</b> <b>Mr. Yasir Hussain</b> <i>(Darya Lab)</i>
12:20 - 12:35 hrs	Presentations of WG 1 - WG 3 by WG Chairs	
CLOSING SESSION		
12:35 - 12:45 hrs	Summary of WG Session & Way Forward	
12:45 - 12:55 hrs	Closing Remarks	<b>Mr. Imdad Hussain</b> <b>(Director Operations, PDMA)</b>
13:00 hrs	Lunch	

# Annexure 6: Climate Change Bulletin

First Workshop on Education, Training, and Public Awareness under the TNC, Peshawar, KPK:

- PTV National Special Show
- Second Workshop on Education, Training, and Public Awareness under the TNC, Quetta, Balochistan:
- WWF Pakistan Holds Workshop on Climate Change: The Nation
- WWF Pakistan Holds Workshop on Climate Change: APP
- WWF Pakistan Holds Workshop on Climate Change: Technology Times
- WWF Pakistan Holds Workshop on Climate Change: Pak Observer
- WWF Pakistan Holds Workshop on Climate Change: Balochistan Times
- WWF Pakistan Holds Workshop on Climate Change: Daily Independent
- Daily 6 AM Quetta
- FM Quetta
- PTV Special Show

Third Workshop on Education, Training and Public Awareness under the TNC, Lahore, Punjab:

- Holistic Scheme on Climate Drawn: Express Tribune
- WWF working for awareness in nature conservation, capacity building: The Nation
- Workshop on Climate Change Education, Training and Public Awareness: Urdu Point

Fourth Workshop on Education, Training and Public Awareness under the TNC, Karachi, Sindh:

- Workshop on Climate Change Education, Training and Public Awareness: The Nation
- Workshop on Climate Change Education, Training and Public Awareness: Dawn
- Workshop on Climate Change Education, Training and Public Awareness: News Pakistan
- Workshop on Climate Change Education, Training and Public Awareness: MM News
- Radio Pakistan (Karachi) Show

# Annexure 7: Climate Change Bulletin



**CLIMATE CHANGE BULLETIN  
COP27 EDITION**

This Bulletin has been launched under the Third National Communication on Climate Change for UNFCCC in order to disseminate recent climate change related news and updates, for the Islamic Republic of Pakistan.

**PRIME MINISTER SHAHBAZ SHARIF'S STATEMENT AT THE COP27**

"We became a victim of something we had nothing to do with"

- 1) The global goal of adaptation needs to be prioritized both in terms of financing and timelines; the current financing gap is too high to sustain any real recovery needs for those on the frontline of the climate catastrophe.
- 2) Loss and Damage need to be part of the core agenda of COP27; to meet the pressing humanitarian needs of those that are trapped in a crisis of public financing fuelled by debt, and yet have to fund climate disasters; this is simply unjust and unfair.
- 3) Climate finance must be clearly defined as new additional and sustained resources with a transparent mechanism that meets the needs of developing and vulnerable countries with the required speed and scale; there should be total clarity on what counts as climate transfer and what counts as development finance."
- 4) A "Global Climate Risk Index" of all parties of the UNFCCC must be created under the auspices of the UN system; projects from the most vulnerable countries on this index must be prioritized, and given speedy approval for climate finance.
- 5) Mitigation ambition needs to be revived in a clear burden-share formula: the promise of common but differentiated responsibilities must be respected, as we race towards a much higher trajectory of warming than defined in the Paris Agreement.

Source: The Nation (2022)

**PAKISTAN'S AGENDA AT COP27  
WHAT GOES ON IN PAKISTAN WON'T STAY IN PAKISTAN**

- Bring the global goal of adaptation to the front and center of COP's agenda
- Nature of green financing must change
- Mainstream loss and damage as part of the green diplomacy agenda
- The principle of common but differentiated responsibilities must be held



**PAKISTANI REPRESENTATION AT COP27**

"This climate carnage is so much more than an exogenous shock to the entire body of our social and economic fabric."

**Prime Minister Shahbaz Sharif**

"I hope this conference will be able to decide & review the way the International Financial System works in order for Pakistan to have access to effective debt relief and concessional funding that is necessary for reconstruction and rehabilitation taking into account the devastating impact of the floods; the UN will be side by side with Pakistan." —

**António Guterres (Secretary-General of the United Nations)**

**WWF-Pakistan Updates from COP**

Hamid Naqi Khan (Director General, WWF-Pakistan) spoke at a panel discussion organized by the Islamic Development Bank Pavilion "highlighting the synergy between Bankable Nature Solutions (BNS) and Islamic Social Finance and the role these can play together in accelerating climate adaptation."

WWF-Pakistan highlighted the immense loss and damage that the country continues to battle, in the aftermath of the 2022 floods. The Pakistan Climate Crisis Charter was also presented, developed earlier this year, in consultation with government and civil society organizations.

**Nazifa Butt (Senior Manager Climate & Energy Program, WWF-Pakistan) at the Climate Justice Protest**



## NEW AVENUES OF COOPERATION FOR CONTINUED AND URGENT CLIMATE ACTION GLOBALLY AND IN PAKISTAN

"Critical for COP27 see solidarity, financing, loss & damage & ambitious climate action. The poor cannot keep paying the bill."

Inger Andersen (UNEP Executive Director)

"Loss and Damage needs to move beyond a bumper sticker to what can be done for the Global South, to the bargain that is broken between the Global North and South. This is high time to seek to build consensus, because the whole system is tottering on consensus."

"Pakistan is one of the pathfinder countries for the Global South against Climate Risk which we developed with the Vulnerable 20 Group of Ministers of Finance. It will be the first country under the Global South to gather the necessary climate data and build the knowledge needed for that."

Svenja Schalte (Federal Minister for Economic Cooperation and Development, Germany)

## MINISTER OF CLIMATE CHANGE, SHERRY REHMAN'S ADDRESS AT COP27



On Loss and Damage: "The announcement offers hope to vulnerable communities all over the world who are fighting for their survival from climate stress and gives some credibility to the COP process. Now it's up to the transitional committee to move it forward by December 2023 as decided."

### BEHIND THE SCENE

"This is no longer about saving our future; it is about saving our present."

1) "The political advances we make here will have very little meaning on the ground unless there is a transfer of resources that shifts the needle on how people face the future."

2) "Developing countries to scale up climate finance: new collective quantified goals must meet the needs & priorities of developing countries, capitalize adaptation fund, and deliver 100 billion dollars goal per year."

3) "Climate financing to move away from debt as a tool, as this stresses countries like us facing loss & damages."

4) "The international financial system is no longer wired to meet the accumulated needs of grant-based financing; there will be a great disappointment if no Loss & Damage facility is announced."

5) "Climate action is now a fundamental right: people in vulnerable countries have rights too, to breathe cleaner air, to farm, to live in cities that are not burning up, to have predictability and to have a future. Delaying action is delaying justice."

## Key takeaways from COP27 as per the Sharm El Sheikh implementation plan

### LOSS & DAMAGE



Loss and Damage Fund: New and additional funding arrangements were established for "assisting developing countries that are particularly vulnerable to the adverse effects of climate change." A "transitional committee" has been established to make recommendations on how to operationalize both the new funding arrangements and the fund at COP28 next year. Initiation of the "Global Shield", from Germany and the G7 with the V20 group of climate-vulnerable nations. Its aim is to provide climate risk insurance and social protection schemes in developing countries (including Pakistan). COP27 also saw through the adoption of decisions around the institutional arrangements of the Santiago Network.

### FINANCE

- USD 4 trillion per year needs to be invested in renewable energy up until 2030 to be able to reach net zero emissions by 2050.
- Climate finance gap between needs and support is currently estimated at USD 5.8 to 5.9 trillion for the pre-2030 period.
- The USD 100 billion per year by 2020 has not been met yet.
- Simplification of access to finance.



### READINESS

Early Warning and Systemic Observation: Creation of an Executive Action Plan for the Early Warnings for All initiative: initial new targeted investments of \$ 3.1 billion between 2023 and 2027.  
Implementation - Pathways to Just Transition: Establishment of a Work Programme on Just Transition for "discussion of pathways to achieve goals of the Paris Agreement, and expedite scaling up mitigation ambition and implementation, whilst ensuring decent jobs for all".  
Technology transfer and deployment: Establishment Joint Work Programme of the Technology Mechanism for 2023/2027 will focus on "high-potential sectors and high-potential actions" across: (i) water, (ii) energy, (iii) food, (iv) industry, and (v) other systems to facilitate the transformational change needed to achieve the goals of the Convention and the Paris Agreement.  
Capacitybuilding: Developed country parties to increase support for long-term country-driven capacitybuilding interventions to overcome capacity gaps in developing countries.



### MITIGATION

Mitigation Working Programme: Created to "urgently scale up mitigation ambition and implementation in this critical decade".



### ADAPTATION



Sharm El Sheikh Adaptation Agenda: 30 adaptation outcomes to enhance resilience for 4 billion people living in the most climate-vulnerable communities by 2030. Relying both state and non-state actors behind a shared set of adaptation actions across five impact systems: (i) food and agriculture, (ii) water and nature, (iii) coastal and oceans, (iv) human settlements, and (v) infrastructure, and including enabling solutions for planning and finance.

### MONITORING & EVALUATION

Transparency: First biennial transparency report and national inventory to be submitted by 2024; with increased support to be provided to developing countries.

Taking Stock: Initial progress made on the first global stocktake. United Nations Secretary-General to "convene a climate ambition summit in 2023 ahead of the conclusion of the first global stocktake at COP28".

Adoption of decisions on Article 6 (Cooperative Implementation) and the resolution of impending issues. Incorporation of nature-based solutions or ecosystem-based approaches (for mitigation and adaptation).



### WAY FORWARD



The focus of Government of Pakistan's climate actions during the decade ahead is decided by the current climate-induced vulnerabilities, aimed at achieving reduced poverty and ensuring a stable economy. Pakistan, recognizing the role of nature in climate adaptation and mitigation, has developed robust natural capital restoration efforts. Pakistan has undertaken a number of initiatives to address these varied climate issues. The Living River Initiative for Ecological Restoration of Indus River Basin for Climate Resilient Future, Scaling-up of Global Late Onset Flood (GLOF) risk reduction in Northern Pakistan and the ambitious Ten Billion Tree Tsunami project has resulted in massive reforestation across Pakistan.

Muhammad Farooq  
(Senior Joint Secretary (Dev.),  
Ministry of Climate Change)



Technical and capacity-building needs of developing countries during their transition from MRV to ETF in preparing NCA and BURs must be addressed promptly. Amongst priority actions within the NDCs for Pakistan is the commitment to developing the Pakistan Cooling Action Plan (PCAP). For the implementation of PCAP, the following actions were identified with key stakeholders: 1) efficiency policies and programs for cooling appliances, 2) enhanced cooling access, and 3) incorporating efficient appliances in building back greener efforts.

Arif Ghafoor  
(Principal Scientific Officer/Head,  
Agriculture & Coordination  
Coordinator, GCSQ)



"The loss and damage deal agreed at COP 27 is a positive step for climate-vulnerable countries, but how and when it will be operationalized is a big question. The parties have not agreed on quelling local risks which put us on track for more climate catastrophes. We as a nation need to slash emissions and limit global warming below 1.5°C. As the climate crisis will affect different people and places unevenly, and so a trade to lead to further inequalities and injustice within and across nations."

Nasir Butt  
(Senior Manager Climate &  
Energy Program, WWF-Pakistan)

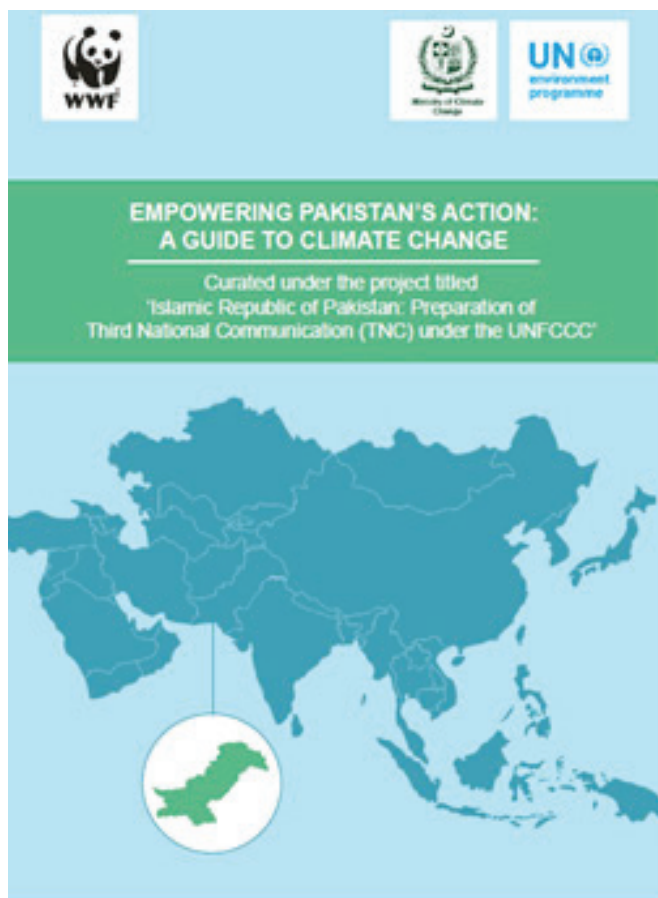
## ABOUT THE THIRD NATIONAL COMMUNICATION

The Ministry of Climate Change (MoCC), Government of the Islamic Republic of Pakistan is pursuing a Project titled, Islamic Republic of Pakistan: Preparation of Third National Communication (TNC) under UN Framework Convention on Climate Change (UNFCCC). The objective of the project is to enable Pakistan to prepare and submit its National Communication on Climate Change as required under Article 4.1 and 12 of the UNFCCC and based on the COP8 Guidelines for National Communications for Non-Annex-I Parties (decision 1/7 CP.8).

The completed communication will delineate the country's national GHG inventory by sources and removals by sinks and provide a general description of steps taken by the country to implement the Convention. This document will be a follow-up to the Second National Communication submitted by Pakistan in 2018. Current work is underway on 7 Thematic Working Groups with the support of MoCC's key implementing partners: WWF-Pakistan, Global Change Impact Study Center (GCISC), National Energy Efficiency and Conservation Authority (NEECA), and Pakistan Council for Renewable Energy Technologies (PCRET).



# Annexure 8: Educational Material



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### SECTION A:

## CLIMATE BASICS

### WHAT IS CLIMATE CHANGE ?

"Climate Change" can be defined as a long-term shift in weather patterns and temperature of an area. This could result from natural variations (for example, solar cycle or volcanic activities) or by human activities (that change the composition of the global atmosphere) in addition to natural climate variability observed over comparable time periods (25-30 years).<sup>4</sup> (UN Framework Convention on Climate Change, 2014)

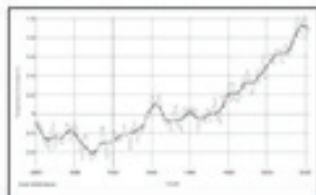


Figure 1: Change in Global Surface Temperature compared to the 1850-1980 period. Source: [NASA/NOAA](#)

### NATURAL CAUSES

#### 1. Changes in the sun's intensity

The sun has cycles of 11 years known as solar cycles where the amount of radiation it releases varies, this fluctuation can cause slight changes in the Earth's surface temperature (see, fig. 2).



### SECTION B:

## IMPACTS OF CLIMATE CHANGE

Climate change can disrupt both natural and human systems. The size or magnitude of the impact can vary in terms of frequency and intensity. The Intergovernmental Panel on Climate Change's (IPCC) Working Group I in its Sixth Assessment Report (AR6) estimates faster warming rates, with projections indicating that the 1.5°C mark may be surpassed within the coming decades. Beyond this, the changes will intensify with longer warm and shorter cold seasons; including increased frequency in heat extremes, reaching critical tolerance thresholds for agriculture and human health.

### MAJOR IMPACTS OF CLIMATE CHANGE

A few of the major impacts that climate change is linked to are illustrated below:





## SECTION C:

# CLIMATE CHANGE SOLUTIONS

In order to tackle the impacts of climate change there are majorly two main streams of global climate action: Mitigation and Adaptation. Agreements such as the UNFCCC convention, Kyoto Protocol, and Paris Agreement all support the implementation of this coordinated global response. For example, with the enactment of the Paris Agreement parties were asked to submit their Nationally Determined Contributions (ambitions) on climate action. Outlining climate pledges by countries to help meet the goal of limiting global temperatures to 1.5°C & creating resilient communities.

## 1. Mitigation

Mitigation activities refer to those interventions that prevent or slow down the process of climate change through a reduction in the sources of greenhouse gases and an increase in sinks. Examples of climate change mitigation include:

- (1) Shifting to renewable energy and technologies, reducing dependency on fossil fuels.
- (2) Changing consumption patterns (e.g., encouraging re-using, recycling).
- (2) Tree Plantation

## SECTION E:

# POLICIES AND INTERNATIONAL COMMITMENTS

## UNFCCC

The **UNFCCC**, or the United Nations Framework Convention on Climate Change, is like a global treaty dating back to 1992. It involves a whopping 197 countries! What's it all about? Well, the main goal is to keep our planet safe by stabilizing greenhouse gas levels in the atmosphere, so we don't mess up the climate. This convention promotes teamwork on a global scale to cut down on greenhouse gas emissions and prepare for the impact of climate change. Oh, and it also makes sure countries regularly report on their own climate situations and efforts.



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## SECTION D:

# CLIMATE CHANGE ACTION AND ADVOCACY

Having looked at the basics of climate change, its existing and forecasted impacts, and the need for climate mitigation, adaptation, and loss & damage. The current section explores what climate action looks like on the ground and the key players that must all step into their respective roles; for a 'whole-of-society' approach.

## WHO IS RESPONSIBLE FOR ADDRESSING CLIMATE CHANGE?

## 1. Understanding the need for targeted action and advocacy:

### i. North vs South Divide

The concept of the North-South divide in the context of climate change underscores the glaring disparities between developed and developing countries concerning their role in climate change contributions and their susceptibility to its impacts. Developed nations, primarily located in the Northern Hemisphere, bear the brunt of historical greenhouse gas emissions, whereas developing countries in the Global South have made comparatively minor contributions. This inequality is particularly evident in the case of Low Developing Countries (LDCs), which have the least historical responsibility for climate change yet find themselves on the frontline of the climate crisis. This is starkly illustrated by the fact that, over the last

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## SECTION F:

# PAKISTAN'S PROGRESS AND THE WAY FORWARD

## PAKISTAN'S EFFORTS ON CLIMATE CHANGE

Pakistan has been actively engaged in combating climate change and bolstering its ability to withstand its consequences. Here are some notable steps Pakistan has undertaken in this regard:

### 1. National Adaptation Plan (NAP)

Pakistan has embarked on the creation of a National Adaptation Plan (NAP) designed to boost its resilience against climate change. The NAP's goal is to integrate adaptive measures into national policies via comprehensive medium- and long-term strategies.

### 2. Nationally Determined Contributions (NDCs) 2021

Pakistan's NDCs lay out its commitment to reducing greenhouse gas emissions, expanding renewable energy capacity, and improving climate adaptation efforts.

### 3. Ten Billion Trees Tsunami Program

Pakistan has launched an ambitious program to plant ten billion trees across the nation. This initiative aims to increase forest cover, counteract the effects of climate change, rehabilitate degraded ecosystems, and safeguard biodiversity.

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Why we are here:

To stop the degradation of the planet's natural environment and to build a future in which humans live in harmony with nature.

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