Huqooq-ul-Ebad Development Foundation Pakistan

# CLIMATE CHANGE EFFECTS IN PAKISTAN

A Comprehensive Climate Diagnostics: Survey, Legislation, and Perspectives - 2023



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Syed Muhammad Ashfaq serves as the President of Huqooq-ul-Ebad Development Foundation (HEDF) in Pakistan. With a passion for community development and human rights, Syed Muhammad Ashfaq has been a driving force behind HEDF's initiatives aimed at empowering marginalized populations, especially impoverished women and adolescent girls at the grassroots level. Under his leadership, the organization actively engages in addressing pressing issues, including climate change, COVID-19 relief efforts, and sustainable development aligned with the United Nations Sustainable Development Goals (SDGs). Syed Muhammad Ashfaq's commitment to fostering positive change in policies and institutions for socio-economic development reflects in HEDF's mission to create a resilient, equitable, and environmentally sustainable future for communities in Pakistan.

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Established in 2010 and officially registered in 2012, Huqooq-ul-Ebad Development Foundation (HEDF) stands as an independent, non-profit, non-political, and non-governmental organization (NGO) based in District Gujrat, Punjab, Pakistan.

Focusing on community development through human rights, HEDF directs special attention to marginalized populations, particularly impoverished women and adolescent girls at the grassroots level in Pakistan. The organization operates with a commitment to community participation, aiming to empower marginalized communities to identify and address their own challenges through collective action. HEDF champions gender equality and empowerment as integral components in addressing climate change, emphasizing the importance of sustainable, environmentally sound development through collective action.

In response to pressing global challenges, HEDF actively engaged in COVID-19 and flood relief efforts in Pakistan. Recognizing the urgency of combating the adverse effects of climate change, the organization is steadfast in its commitment to mitigating and adapting to these challenges. Concurrently, HEDF is actively working towards the United Nations Sustainable Development Goals (SDGs), aligning its efforts with the global agenda for positive social, economic, and environmental impact.

With a current focus on pre-urban and rural-cum-remote areas in Sindh, Punjab, Khyber Pakhtunkhwa and Balochistan provinces, HEDF continually expands its areas of operation to address the concerns of marginalized groups in Pakistan.

Mission: HEDF is dedicated to catalyzing positive changes in policies and institutions for sustainable socio-economic development. Through mobilizing and empowering women, youth, and other marginalized groups, the organization seeks to contribute to the collective effort to combat the adverse effects of climate change, achieve the SDGs, and create a resilient, equitable, and environmentally sustainable future.

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# We do not inherit the earth from our ancestors, we borrow it from our children.

Native American Proverb

#### **DISCLAIMER:**

Every reasonable effort has been diligently made to ensure the accuracy of the information contained in this report. The data collection spanned from November 15, 2023 to December 20, 2023, and all details were deemed correct within this specific timeframe, in accordance with the sources referenced in this report. However, Huqooq-ul-Ebad Development Foundation (HEDF) cannot provide an absolute guarantee regarding the accuracy and completeness of the contents beyond the sources verified explicitly for the study's intended purpose.

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A Comprehensive Climate Diagnostics: Survey, Legislation, and Perspectives - 2023

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# Foreword

It is with great pleasure and a profound sense of responsibility that I present to you the comprehensive report, "Climate Change Effects in Pakistan, A Comprehensive Climate Diagnostic: Survey, Legislation, and Perspectives - 2023," conducted by Huqooq ul Ebad Development Foundation. As the President of this esteemed organization, I find it both an honor and an obligation to share the invaluable insights garnered from our extensive survey on the critical issue of climate change across the diverse landscapes of Pakistan.

In undertaking this survey, our foundation aimed to delve into the multifaceted dimensions of the climate crisis, recognizing its far-reaching implications on communities, ecosystems, and the overall fabric of our nation. The survey, conducted in 16 districts spanning the four provinces, meticulously addresses crucial aspects such as rescue efforts, government response, climate awareness, community engagement, biodiversity, concerns about climate change, climate resilience efforts, government policies, climate education, and the Right to Information (RTI). Further the report will also present you a critical analysis of Pakistan Climate Change Act 2017 with recommendations.

The findings presented herein encapsulate the voices of those directly affected by the changing climate, offering a nuanced understanding of the challenges faced by our fellow citizens. It is our hope that this report not only serves as a testament to the urgency of addressing climate change but also as a guiding document for policymakers, environmentalists, and advocates alike.

We extend our gratitude to all participants and collaborators who contributed to the success of this research, demonstrating a collective commitment to understanding, mitigating, and adapting to the impacts of climate change in Pakistan. As we navigate these challenges, let this report stand as a beacon, guiding us towards informed decisions, sustainable practices, and a shared vision for a resilient and ecologically balanced future.

Sincerely,

Syed Muhammad Ashfaq President, Huqooq ul Ebad Development Foundation, Pakistan

# SECTION - I LEGISLATIVE GAP ANALYSIS AND RECOMMENDATIONS

CLIMATE CHANGE EFFECTS IN PAKISTAN - 02

# BACKGROUND

#### INTRODUCTION TO CLIMATE CHANGE GOVERNANCE

The global context of climate change is characterized by the increasing concentration of greenhouse gases in the Earth's atmosphere, primarily due to human activities such as burning fossil fuels, deforestation, and industrial processes. This rise in greenhouse gas emissions is leading to a warming of the planet, resulting in a range of adverse impacts, including rising sea levels, extreme weather events, disruptions to ecosystems, and threats to food and water security2.

The scientific consensus, as highlighted by reports from the Intergovernmental Panel on Climate Change (IPCC), highlights the urgent need for coordinated and sustained efforts to mitigate the impacts of climate change5. The consequences of inaction are far-reaching and affect people, ecosystems, and economies globally.

Recognizing the transboundary nature of climate change, nations worldwide have come together under the United Nations Framework Convention on Climate Change (UNFCCC) to address this pressing issue collaboratively2. The need for coordinated efforts arises from the understanding that individual countries' actions alone are insufficient to combat the complexities of climate change. A collective and cooperative approach is essential to achieve meaningful reductions in greenhouse gas emissions, adapt to the changing climate, and foster global resilience. In this context, international agreements like the Paris Agreement play a pivotal role in bringing countries together to set common goals, share responsibilities, and mobilize resources for sustainable and climateresilient development. The coordinated efforts aim not only to mitigate the causes of climate change but also to support vulnerable communities in adapting to its unavoidable impacts3.

# THE FRAMEWORK CONVENTION ON CLIMATE CHANGE (UNFCCC)

The United Nations Framework Convention on Climate Change (UNFCCC) was established in 1992 as the foundational framework for international cooperation in addressing climate change. The Convention marked a significant milestone in recognizing the global nature of environmental challenges and the need for coordinated efforts to mitigate climate change impacts4. The UNFCCC operates under the overarching principle of achieving the stabilization of greenhouse gas concentrations in the atmosphere at a level that prevents dangerous anthropogenic interference with the climate system.

Key principles of the UNFCCC include the acknowledgment of common but differentiated

responsibilities and respective capabilities among nations, reflecting the understanding that developed countries bear a greater historical responsibility for greenhouse gas emissions and have the capacity to take the lead in addressing climate change. The principle of equity and the right to sustainable development are integral components, emphasizing the need to balance environmental and developmental goals5.

The objectives outlined in the UNFCCC encompass several key elements. Firstly, it aims to promote the stabilization of greenhouse gas concentrations in the atmosphere at a level that prevents adverse human-induced effects on the climate system. Additionally, the Convention seeks to facilitate the adaptation of nations to the impacts of climate change, recognizing the vulnerabilities of certain regions and communities. Mitigation efforts are highlighted to address the root causes of climate change, with an emphasis on the importance of international cooperation and the provision of financial and technological support to developing countries5.

The UNFCCC established a framework for regular assessments of scientific information on climate change and the implementation of measures to address its challenges. Through its Conference of the Parties (COP) meetings, the UNFCCC provides a platform for nations to negotiate, collaborate, and enhance their commitments to tackle climate change collectively. The Convention has paved the way for subsequent agreements, such as the Kyoto Protocol and the Paris Agreement, further advancing the global community's efforts to combat climate change.

#### THE KYOTO PROTOCOL

The Kyoto Protocol, adopted in 1997, represented a landmark international agreement under the United Nations Framework Convention on Climate Change (UNFCCC). One of its distinctive features was the introduction of legally binding emission reduction targets, primarily targeted at developed countries, known as Annex I parties.

The protocol set explicit commitments for these developed nations to collectively reduce their greenhouse gas emissions by an average of 5.2% below 1990 levels during the commitment period from 2008 to 2012. The allocation of emission reduction targets was based on each country's historical contribution to emissions and its economic capacity6. While the Kyoto Protocol was a pioneering effort in addressing climate change, it encountered both successes and limitations. One of its notable successes was the establishment of a structured international framework for mitigating climate change, emphasizing the principle of common but differentiated responsibilities. The protocol provided a clear mechanism for monitoring and reporting emissions, fostering transparency and accountability among participating countries.

However, the limitations of the Kyoto Protocol became evident over time. One significant challenge was the lack of universal participation, as some major emitters, including the United States, did not ratify the agreement or withdrew from it. This resulted in a significant portion of global emissions being outside the binding commitments.

Another limitation was the absence of mandatory emission reduction targets for developing countries, reflecting the principle of common but differentiated responsibilities. While this approach recognized historical responsibilities, it also meant that emerging economies with increasing emissions were not subject to legally binding targets during the Kyoto Protocol's commitment period7.

Furthermore, the protocol's fixed timelines and modest emission reduction targets were criticized for not adequately aligning with the evolving understanding of the scale and urgency of climate change. The Kyoto Protocol demonstrated the complexities of achieving a truly global and equitable response to climate change, laying the groundwork for subsequent negotiations and agreements that sought to address these shortcomings.

#### THE PARIS AGREEMENT

The Paris Agreement, a groundbreaking accord adopted in 2015 under the United Nations Framework Convention on Climate Change (UNFCCC), stands as a landmark in the global response to climate change. Unlike its predecessor, the Kyoto Protocol, the Paris Agreement represents a paradigm shift with its emphasis on inclusivity and flexibility.

What sets the Paris Agreement apart is its inclusive nature, aiming to engage all nations in the collective effort to combat climate change8. Unlike the Kyoto Protocol, which primarily assigned emission reduction targets to developed countries, the Paris Agreement recognizes that climate change is a shared global challenge requiring a unified response. Each participating country, known as a Party, is invited to submit a nationally determined contribution (NDC), outlining its individual climate action plans, commitments, and contributions toward global climate goals.

The Agreement's flexibility lies in its recognition of diverse national circumstances and capabilities. It allows countries to set their own ambitious targets based on their unique contexts, acknowledging the principle of common but differentiated responsibilities. This approach accommodates the varying levels of development, historical emissions, and capacity to address climate change among nations.

Central to the Paris Agreement is the aspirational goal of limiting the global temperature increase to well below 2 degrees Celsius above pre-industrial levels, with efforts to pursue a more ambitious limit of 1.5 degrees Celsius9. The Agreement also places a strong emphasis on adaptation, recognizing the vulnerability of certain regions and communities to the impacts of climate change.

Furthermore, the Paris Agreement introduces a dynamic and iterative process, with countries regularly updating and enhancing their NDCs to reflect evolving circumstances and increased ambition over time10. The emphasis on transparency, accountability, and a global stocktaking process ensures that progress is monitored collectively20.

#### PAKISTAN'S COMMITMENT AND LEGISLATION

Pakistan, a nation contributing a mere 0.8% to global greenhouse gas emissions, finds itself ranked a shocking eighth among the countries most vulnerable to climate change. This stark reality, highlighted by the 2021 Global Climate Risk Index, underscores the critical need to understand how international frameworks like the UNFCCC, Kyoto Protocol, and Paris Agreement can address this grave injustice11.

Transitioning to Pakistan's response to climate change, the country has demonstrated a steadfast commitment to global efforts in tackling the challenges posed by climate change. Recognizing the urgency and interconnected nature of this global issue, Pakistan has actively engaged in international initiatives and agreements to contribute to the collective endeavor of mitigating and adapting to climate change. Amid this commitment, a pivotal step taken by Pakistan was the enactment of the Pakistan Climate Change Act in 2017. This legislation represents a crucial milestone in aligning national policies with the broader framework of international agreements, particularly those established under the United Nations Framework Convention on Climate Change (UNFCCC).

The Pakistan Climate Change Act 2017 reflects the country's dedication to fulfilling its responsibilities in the global fight against climate change. By institutionalizing mechanisms for climate action within its legal framework, Pakistan aims to address environmental challenges while harmonizing its efforts with the principles and goals outlined in international agreements12.

This Act serves as a comprehensive framework for coordinating and implementing climate-related policies and actions within the country. It not only underscores the importance of reducing greenhouse gas emissions but also emphasizes the need for adaptation strategies to cope with the impacts of climate change, aligning with the dual goals of the UNFCCC.

In essence, the Pakistan Climate Change Act 2017 is a testament to Pakistan's proactive stance in translating international commitments into actionable national policies. By enacting this legislation, the country aims to contribute effectively to global climate change mitigation and adaptation efforts while safeguarding its own environmental sustainability and resilience. The Act positions Pakistan as a responsible and engaged participant in the international community's broader endeavor to address the complex challenges of climate change15.

# MOST POPULAR CLIMATE POLICIES

Results from the world's largest opinion survey on climate change – the People's Climate Vote sponsored by the United Nations

Percentage of people who support each climate-based policy for the immediate future



# **STRENGTHS AND WEAKNESSES OF PAKISTAN CLIMATE CHANGE ACT- 2017**

#### **STRENGTHS**

**International Compliance:** The Act aligns with international agreements such as the United Nations Framework Convention on Climate Change (UNFCCC), the Kyoto Protocol, and the Paris Agreement, demonstrating Pakistan's commitment to global climate action.

**Comprehensive Approach:** The Act addresses various aspects of climate change, including adaptation, mitigation, funding mechanisms, and institutional frameworks, providing a comprehensive approach to tackling climate-related challenges.

**Establishment of Authorities:** The creation of the Pakistan Climate Change Council and the Pakistan Climate Change Authority provides a structured and organized framework for policy formulation, implementation, and monitoring.

**Funding Mechanism:** The establishment of the Pakistan Climate Change Fund (PCCF) allows for the mobilization of financial resources to support climate-related projects and initiatives.

#### WEAKNESSES

It seems that the act is only made for fulfilling reporting requirements under international commitments rather than an initiative to combat climate change.

**Lack of Specifics:** Some sections of the Act lack specificity, such as the absence of detailed criteria for evaluating the success of adaptation and mitigation policies (Section 4-1(d)).

The Act does not provide any specific timeframes in the preparation of policies and plans.

It does not specifically encompass a holistic climate adaptation and mitigating strategy.

**Implementation Challenges:** While the Act outlines responsibilities and functions, the actual implementation may face challenges, especially if there are resource constraints, capacity issues, or a lack of effective coordination.

#### Lack of Youth Representation:

The Pakistan Climate Change Act 2017 lacks youth

representation in its council, overlooking the vital perspective and active participation of the youth, a crucial stakeholder in climate action.

**Not Data-Driven Legislation:** The Act may lack a strong emphasis on utilizing data-driven approaches for decision-making and policy formulation. The absence of a clear framework for collecting, analyzing, and utilizing climate-related data could hinder the precision and effectiveness of climate change initiatives.

Monitoring and Evaluation: Under the Act, the Council, hardly has met twice a year, has the monitoring the implementation power of the policies, plans and provisions under this act which also covers the international commitments. While the Authority having a proper staff and offices only prepares reports, plans and rules, and does not have clear monitoring, evaluating and accountability powers.

**Limited Public Participation:** The Act does not explicitly mention mechanisms for public participation in climate change decision-making processes, limiting the inclusivity of climaterelated initiatives.

Accountability and Penalties: The Act may lack explicit details on penalties or legal actions against individuals, entities, or organizations that violate its provisions, or policies under it. A welldefined enforcement mechanism with clear consequences for non-compliance is essential to ensure the effectiveness of any legislative framework.

**Gaps in Funding Allocation:** While the PCCF is established, the Act does not provide explicit criteria for the allocation of funds, potentially leading to challenges in prioritizing projects based on their climate impact.

**Indemnity Clause (Section 14):** The inclusion of an indemnity clause raises concerns as it may provide protection against legal actions for individuals, entities, or agencies involved in the implementation of the Act. While indemnity can be essential to foster innovation and decisionmaking, it might also be perceived as a loophole that could limit accountability and transparency.

# **GAP ANALYSIS - PAKISTAN CLIMATE CHANGE ACT -2017**

Specific Section	Gaps	Recommendations
Section 3(1): Establishment of the Pakistan Climate Change Council: The Prime Minister shall, by notification in the official Gazette, establish a Council to be known as the Pakistan Climate Change Council consisting of a Chairperson who shall be the Prime Minister or such other person as the Prime Minister may nominate in this behalf.	<b>Section 3(1)</b> is having the PM as the chairperson could signal the seriousness of the government's commitment to tackling climate change and encourage other stakeholders to contribute actively, Appointing the Prime Minister as Chairperson risks compromising the council's effectiveness due to limited time, potential politicization, and possible lack of specialized expertise, while alternative leadership structures could offer a more focused, objective, and technically proficient approach.	While having the Prime Minister chair the Climate Change Council may signal strong government commitment, potential limitations in time, expertise, and risk of politicization could hinder the council's effectiveness. Consider alternative leadership structures, like an independent chair with deep scientific expertise, supported by a high-level advisory council that includes the Prime Minister, to ensure dedicated focus, objective decision- making, and access to necessary political and administrative resources.
<ul> <li>Section 3(1) d: such other person not exceeding thirty as the Prime Minister may appoint, of which at least twenty shall be non-officials, including representatives of the Chambers of Commerce and Industry, nongovernmental organizations concerned with climate change, the environment and development and scientists, researchers, technical experts and educationists;</li> <li>(4) Members of the Council, other than exofficio members, shall be appointed in accordance with the prescribed procedure and shall hold office for a term of three years.</li> </ul>	The subsection (d) provides flexibility for the Prime Minister to nominate other members, but it doesn't explicitly mention the criteria or qualifications for these nominations. Section 3(4) only mentions a prescribed procedure, (similar to section 7(1) and 12(3) regarding utilization of funds), which means to have rules and regulation as per the 2(j) of the Act, but no timeframe is given when these rules and regulations will be made.	Include clear criteria for the nomination of additional members, ensuring they possess relevant expertise in climate change, environmental science, or related fields. Rules and procedures should be made, or if already made, should be uploaded on website as per Section 5 Proactive Disclosure, Federal Right of Access to Information Act 2017
<b>Section 3(5):</b> The Council shall hold meetings as and when necessary, but not less than two meetings shall be held in a year.	<b>Subsection (5)</b> Outlines the frequency of Council meetings, but it doesn't specify procedures for decision making or how consensus will be reached.	Establish clear procedures for decision-making within the Council, emphasizing the importance of consensus-building and the involvement of all members in the decision-making
Section3(d): Prime Minister may appoint, of which at least twenty shall be non-officials, including representatives of the Chambers of Commerce and Industry, nongovernmental organizations concerned with climate change the environment and development and scientists, researchers, technical experts and educationists.	<ul> <li>Section 3(d) The use of the term 'PM may appoint' instead of 'shall appoint' implies discretionary power, potentially allowing the council to function without the inclusion of technocrats.</li> <li>Section 3(d) lacks provisions for the representation of youth in the council, which may limit diverse perspectives and inputs.</li> </ul>	Revise the language in Section 3(d) to specify that the Prime Minister "shall appoint" 20 non-officials, ensuring a mandatory inclusion of technocrats with relevant expertise. This change helps ensure the council's effectiveness and expertise in decision-making. The council shall include representation for youth within the council for inclusivity.

Specific Section	Gaps	Recommendations
Section 4: Functions and powers of the Council 1(a): Coordinate and supervise enforcement of the provisions of this Act.	<b>Subsection (a)</b> Mentions coordinating and supervising enforcement of the provisions of the Act, but it lacks specifics on how coordination will be achieved and what measures will be used for supervision.	Clearly define the mechanisms for coordination and supervision, potentially through the establishment of sub-committees or task forces for specific tasks.
Section 4-1(b): Monitor implementation of international agreements relating to climate change specified in the Schedule.	<b>Subsection (b)</b> Outlines the monitoring of international agreements, but it doesn't specify the role of the Council in negotiating or revising these agreements.	Clearly define whether the Council has the authority to negotiate or revise international agreements or if its role is limited to monitoring and implementing existing agreements.
Section 4-1(c): Coordinate, supervise and guide mainstreaming of climate change concerns into decision making by Federal and Provincial Government's ministries, divisions, departments and agencies so as to create enabling conditions for integrated climate compatible and climate resilient development processes in various sectors of the economy;	<b>Subsection (c)</b> mentions coordinating climate change concerns into decision-making, but it lacks details on how this coordination and decisions will be implemented.	Mentions/Establish guidelines or protocols for integrating climate change concerns into decision-making processes across federal and provincial government entities.
Section 4-1(d): approve and monitor implementation of comprehensive adaptation and mitigation policies, strategies, plans, programmes, projects and other measures formulated by the Authority to meet Pakistan's obligations under international conventions and agreements relating to climate change including in particular the Sustainable Development Goals (SDGs).	<b>Subsection (d)</b> involves approving and monitoring comprehensive adaptation and mitigation policies, but it doesn't specify how the Council will assess the effectiveness of these policies.	Mention the criteria and performance indicators for evaluating the success of adaptation and mitigation policies, ensuring periodic reviews and updates based on the latest scientific knowledge.
<b>Section 4-1(e):</b> monitor implementation of the National Adaptation Plan and its constituent provincial and local adaptation action plans, the National Appropriate Mitigation Action Framework and National Communication submitted to the concerned Secretariat of the United Nations Framework Convention on Climate Change (UNFCCC)	<b>Subsection (e)</b> mentions monitoring the implementation of the National Adaptation Plan and its constituent plans, but it doesn't detail the feedback or correction mechanisms.	Specify mechanisms for feedback, assessment, and correction of the National Adaptation Plan and related plans, ensuring a dynamic and responsive approach to changing circumstances.
Section 5. Establishment of the Pakistan Climate Change Authority	The section establishes the Pakistan Climate Change Authority but doesn't provide specific details on the composition, expertise, and criteria for appointment of its members.	Define clear criteria for the appointment of members, ensuring diverse expertise in climate change- related fields. Specify the composition of the Authority to include relevant stakeholders such as scientists, academicians, professionals, government servants, industrialists, agriculturists, etc.

Specific Section	Gaps	Recommendations
Section 5. Establishment of the Pakistan Climate Change Authority	The section does not explicitly mention mechanisms for transparency, accountability, and public participation in the authority's activities.	Incorporate provisions for transparency, accountability, and public participation in the Authority's operations. This may include regular reporting, public consultations on key decisions, and mechanisms for feedback from stakeholders.
Section 5. Establishment of the Pakistan Climate Change Authority	The section lacks a provision for periodic reviews or evaluations of the Authority's performance.	Introduce a requirement for periodic reviews or evaluations of the Authority's performance, possibly conducted by an independent body, to ensure effectiveness and adaptability to evolving challenges.
Section 8: Functions of the Authority Preparation, coordination and formulation of plans, policies, database etc.	The authority does not have the power to implement, monitor and hold accountable. Most of these powers are rested on the Council which at least meets twice a year.	The Authority under the Council, other than formulating, preparing of policies, should be an implementing body which could hold accountable on violation of its policies.
<b>Section 8(1)(c):</b> Prepare suitable adaptation and mitigation projects for submission to international and local institutions for funding.	Ambiguity on the selection criteria for projects and the funding process.	Define clear criteria for project selection and establish a transparent funding process with international and local institutions.
<b>Section 8(1)(d):</b> Prepare the National Adaptation Plan, Mitigation Action Framework, Contributions, Nationally Determined Contributions and National Communication provincial and local adaptation action plans, and other international submissions.	Lack of specifics on the coordination mechanism and content of these plans. The act does not specify an appropriate timeframe for their completion and implementation.	Specify the specific time frame, coordination mechanism, and authority for plan preparation and outline the required components in alignment with international standards.
<b>Section 8(1)(i):</b> Formulate guidelines for the protection and conservation of renewable and non-renewable resources, species, habitats, and biodiversity.	Vague on the enforcement mechanisms for the guidelines. The authority does not have implementation or enforcement power.	Define clear enforcement mechanisms and ensure the guidelines align with existing environmental laws.
<b>Section 8(1)(l):</b> Design, establish, and maintain a national registry and database on greenhouse gas emissions.	Lack of details on the data collection, management, and accessibility. The law does not mention how soon the process of designing and establishing of national registry and database on greenhouse gas emission will start and complete.	Define a robust data collection methodology, secure management procedures, and ensure accessibility for relevant stakeholders.
<b>Section 8(2):</b> To assist the Authority, the Minister-in-Charge may establish Advisory Committees for various sectors and appoint eminent representatives from relevant institutions.	Lack of specifics on the composition, roles, and responsibilities of Advisory Committees.	Define clear guidelines for the composition, roles, and responsibilities of Advisory Committees, ensuring representation from diverse sectors and expertise.

# A COMPREHENSIVE CLIMATE DIAGNOSTIC SURVEY - 2023

**SECTION - II** 

# INTRODUCTION

Climate change is one of the most pressing global challenges of our time, affecting every country on every continent. It is disrupting national economies and affecting lives, costing people, communities, and countries dearly today and even more tomorrow. The urgency of addressing climate change cannot be overstated, as it poses an existential threat to the survival of species, including humans, and the health of the planet.

Globally, climate change is recognized as a 'global emergency' by a majority of people, as revealed by the UN Development Programme's "People's Climate Vote" poll.22 This survey, described as the biggest climate survey yet conducted, showed that people support more comprehensive climate policies to respond to the challenges posed by climate change. The Intergovernmental Panel on Climate Change (IPCC) has also highlighted the urgency of climate change impacts, warning that missing the Paris targets would harm human health and biodiversity worldwide, and risk irreversible losses sooner than previously thought19.

Pakistan like many other countries, is not immune to the impacts of climate change. In fact, it is one of the most vulnerable countries due to its geographical location and socio-economic conditions. The country is experiencing rising temperatures, changing precipitation patterns, and an increased frequency and intensity of extreme weather events. These changes have had a significant impact on Pakistan's economy, environment, and society19.

One of the most critical issues facing Pakistan is water scarcity. With an agriculture-based economy, Pakistan relies heavily on its water resources for irrigation. However, due to changing precipitation patterns and melting glaciers, the country's water resources are under threat. Severe droughts have already had devastating impacts on crops, livestock, and rural livelihoods3.





Extreme weather events, exacerbated by climate change, pose another significant risk. Pakistan is prone to natural disasters, including floods, landslides, and earthquakes. More frequent and severe floods and heatwaves can cause significant damage to infrastructure, homes, and livelihoods, with long-lasting impacts on communities.

The economic implications of climate change for Pakistan are profound. According to the Global Climate Risk Index, Pakistan has been placed fifth in the world in terms of countries affected by extreme weather caused by climate change. Between 1999 and 2018, Pakistan lost 91,089 lives, suffered an economic loss of \$81 billion, and observed 152 extreme weather events.

To mitigate the impacts of climate change and build a more resilient and sustainable future, Pakistan must take bold and decisive action. This includes investing in renewable energy, improving water management, enhancing disaster preparedness and response, and promoting sustainable agricultural practices. International cooperation and support are also crucial, as climate change is a global issue that requires a global response.

In conclusion, the urgency of climate change is clear, and its connection to Pakistan is undeniable. The country, along with the rest of the world, must act swiftly to address this crisis. The future of our planet and the well-being of generations to come depend on the actions we take today to combat climate change and its far-reaching effects.

#### PAKISTAN RANKING

Pakistan is ranked as one of the most vulnerable countries to the impacts of climate change. According to the Climate Change Knowledge Portal, Pakistan is ranked 37th out of 191 countries in terms of vulnerability5. This ranking is driven by the nation's high rates of multidimensional poverty and its exposure to natural disasters such as earthquakes, floods, and droughts. The Germanwatch Global Climate Risk Index also places Pakistan as the 8th most vulnerable country to the impacts of climate change6. These rankings magnify the significant challenges Pakistan faces due to climate change and highlight the need for urgent action to mitigate and adapt to its effects.21

It's important to note that Pakistan's vulnerability to climate change is not just a ranking but a reality that affects millions of lives. The country's agricultural sector, which employs a large portion of the population, is particularly at risk due to erratic weather patterns and water scarcity. The Indus River, a lifeline for Pakistan's agriculture, is fed by glaciers that are melting at an alarming rate, threatening the water supply for millions. Moreover, the coastal communities in Pakistan are facing the brunt of rising sea levels and increased cyclonic activity. The city of Karachi, a major economic hub, is especially at risk of flooding and other climate-related disasters.

Pakistan's government has taken steps to address these challenges, including the development of the National Climate Change Policy, which aims to mainstream climate change into the decisionmaking process and promote sustainable development. However, the implementation of these policies is crucial and requires both national commitment and international support. The economic cost of inaction is high. Climate change can reverse decades of development progress and exacerbate poverty and inequality. It's essential for Pakistan to invest in climateresilient infrastructure. adopt sustainable agricultural practices, and transition to renewable energy sources to mitigate the impacts of climate change.11

In short, Pakistan's ranking as one of the most vulnerable countries to climate change impacts is a call to action. It highlights the urgent need for comprehensive strategies to adapt to the changing climate and protect the future of the country and its people. The global community must also recognize its role in supporting vulnerable countries like Pakistan through technology transfer, capacity building, and climate finance.17

The fight against climate change is a collective one, and Pakistan's struggle is a stark reminder of the immediate actions needed to safeguard our planet for future generations.

#### PURPOSE OF THE REPORT

#### ANALYZING CLIMATE CHANGE CHALLENGES, VULNERABILITIES, AND COMMUNITY RESILIENCE IN PAKISTAN

In this section, we present a comprehensive analysis of a national survey conducted in Pakistan, exploring public perceptions, experiences, and priorities regarding climate change and its associated challenges. Drawing on data from all provinces, including KPK, Balochistan, Punjab, and Sindh, the report aims to:

# 1. Assess public awareness and understanding of climate change:

- The report examines the levels of climate change awareness across different communities and demographics.
- It identifies the primary information sources for climate change knowledge, highlighting the reliance on social media, community organizations, and traditional media like television and newspapers.
- By revealing gaps in knowledge and understanding, the report informs targeted education and outreach programs to equip communities with essential information and strengthen their ability to adapt to climate impacts.

# 2. Evaluate vulnerabilities and challenges faced by communities:

- The report identifies the most vulnerable groups within communities, such as the disabled, elderly, and women, who require special attention and support during and after climate-related disasters.
- It analyzes the key challenges faced in accessing relief assistance following floods, droughts, and other extreme weather events, highlighting issues like bureaucratic hurdles, limited resources, and physical barriers.
- By understanding these vulnerabilities, the report paves the way for developing appropriate disaster response strategies, improving resource allocation, and ensuring equitable access to support for all affected individuals.

# 3. Gauge the impact of environmental degradation and pollution:

- The report identifies the primary sources of pollution in different regions, including mismanagement of solid waste, deforestation, overuse of chemical fertilizers, and industrial emissions.
- It assesses the growing concern surrounding plastic pollution and its detrimental impact on ecosystems and human health.
- By highlighting these critical environmental issues, the report urges policymakers and stakeholders to prioritize pollution control measures, implement sustainable waste management practices, and promote responsible resource utilization.

# 4. Analyze public perceptions of government policies and initiatives:

- The report evaluates public satisfaction with the effectiveness of existing government policies and programs addressing climate change.
- It identifies concerns regarding transparency, accountability, and resource allocation in climate action efforts.
- By understanding public perceptions, the report encourages improved communication and engagement between government and communities, leading to more inclusive and effective climate action strategies.

# 5. Empower communities through resilience and adaptation:

- The report analyzes the willingness of communities to participate in local risk reduction programs and initiatives.
- It identifies areas where communities require support and capacity building to enhance their preparedness and resilience to climaterelated disasters.
- By highlighting the potential for communitydriven climate action, the report encourages stakeholders to empower local communities through capacity building, resource provision, and collaborative adaptation strategies.

# 6. Unveiling Climate Change Awareness and Knowledge Landscapes:

- Mapping the extent of climate change awareness across diverse communities and demographics.
- Identifying primary sources of climate information, navigating the interplay of social media, community networks, and traditional media.
- Unveiling knowledge gaps and misconceptions, informing targeted education and awareness campaigns.

# 7. Understanding Vulnerabilities and Fostering Equitable Disaster Response:

- Identifying the most vulnerable groups (disabled, elderly, women, children) requiring tailored support in climate disasters.
- Analyzing challenges in accessing relief assistance, addressing bureaucratic barriers, resource constraints, and physical obstacles.
- Guiding inclusive disaster response strategies, ensuring equitable access to support and resource allocation.

# 8. Tackling Environmental Degradation and Pollution:

- Pinpointing primary sources of pollution, including solid waste mismanagement, deforestation, chemical pollution, and industrial emissions.
- Assessing the burgeoning concern of plastic pollution, its impact on ecosystems and human health, and potential mitigation strategies.
- Urging the prioritization of pollution control measures, sustainable waste management practices, and responsible resource utilization.

# 9. Bridging the Information Gap with the Right to Information:

- Analyzing the underutilized Right to Information Act (RTI) for climate-related information access.
- Empowering citizens to demand transparency and accountability in climate governance.

# SURVEY METHODOLOGY

The research methodology was intricately designed to delve into the complexities of climate change in the context of Pakistan. The journey began with a thorough exploration of the overarching issue, followed by an extensive review of diverse literature to deepen the understanding of climate change's multifaceted implications. Clear and precise research objectives were then formulated, shaping the trajectory of the study. A meticulous sampling strategy was devised, selecting 16 districts across provinces to capture the diverse regional nuances of climate change. From each district, data was collected from 100 respondents from rural and urban (50% each) sides making the data more diverse. The survey instrument, developed after secondary research, was carefully crafted, and a rigorous pre-testing protocol ensured its effectiveness. Enumerators received comprehensive training, incorporating insights from research, guided by experienced field supervisors to maintain a standardized data collection process. Ethical considerations were emphasizing paramount. transparency, confidentiality, and fairness. The collected data underwent rigorous validation, and а sophisticated data analysis blueprint, integrating statistical methodologies, was applied. The research reflected a commitment to quality, evident through an iterative peer review process seeking expert validation and constructive feed-

#### back.

#### RESEARCH INSTRUEMENT

The meticulous development of the research instrument was a nuanced process marked by a commitment to precision and expertise. Initiated after an exhaustive secondary research phase, a total of 24 questions were initially formulated. To enhance the instrument's validity and relevance, consultations were sought from two climate experts, resulting in the refinement and finalization of 20 questions. This set of questions underwent thorough testing in the first pilot phase, leading to further refinement. Post-pilot testing, 19 questions were meticulously selected and finalized for implementation in the research study. This iterative process, marked by expert input and rigorous testing, underscores the dedication to crafting a research instrument that is not only comprehensive but also aligns seamlessly with the intricacies of the climaterelated phenomena under investigation.

> "a total of **24** questions were initially formulated. Then after consultations from two climate experts, **20** questions were finalized which were reduced to **19** after pilot test."

#### ENUMERATOR TRAINING AND SUPERVISION

The training of enumerators played a pivotal role in ensuring the effectiveness and accuracy of the data collection process. Enumerators, chosen for their local expertise, were not only well-versed in the intricacies of the local language and cultural norms but also possessed prior experience in conducting surveys. This local knowledge was instrumental in fostering rapport with respondents and facilitating a more nuanced understanding of the contextual factors at play. During the training sessions, enumerators were meticulously briefed about the research objectives, providing them with a clear understanding of the study's overarching goals.

Furthermore, each question and its corresponding options were explained in detail, equipping enumerators with the necessary insights to effectively convey the survey's purpose to respondents. The experienced enumerators were placed under the supervision of field supervisors, adding an additional layer of guidance and ensuring a standardized approach across diverse regions. This combination of local expertise, comprehensive training, and supervision contributed to a robust and culturally sensitive data collection process.

#### DATA CLEANING, PROCESSING, AND ANALYSIS

Upon completion of data collection, a meticulous process of cleaning and processing ensued to ensure the integrity and reliability of the gathered information.

Random checks were systematically performed on respondent entries, a crucial step to validate and enhance the data's accuracy. The dataset was then entered into SPSS V25 software by proficient staff, well-versed in handling complex statistical analyses. To uphold the highest standards, a second round of random checks was conducted after data entry to identify and rectify any discrepancies. With a pristine dataset in hand, the analysis commenced, employing robust statistical The results methods. were systematically presented, allowing for а comprehensive understanding of the research findings.

This stringent approach from data cleaning to analysis underscores the commitment to producing reliable and high-quality outcomes in the research process.



"A total of **1600** forms were distributed across 16 districts, and **1586** of these forms were successfully received and processed. Following the data cleaning process, **1548** forms were subjected to further analysis."



# DATA COLLECTION METHODLOGY

#### **1. GEOGRAPHICAL SCOPE**

- The data collection spanned 16 districts across four provinces in Pakistan.
- Selection criteria included the impact of flood, and disaster which are a significant climate change factor.

#### **2. SAMPLING METHODOLOGY**

- A representative sample was ensured by selecting 4 districts from each province.
- The focus on flood-affected areas aimed to capture the climate change implications.

#### **3. DATA COLLECTION TEAM**

- Experienced enumerators were employed for data collection.
- Enumerators received comprehensive briefings, including the survey's purpose and an overview of each question.

#### **4. SUPERVISION AND GUIDANCE**

- Field supervisors provided guidance to enumerators during the data collection process.
- The supervision aimed to maintain consistency and accuracy in data gathering.

#### **5. TRANSPARENCY MEASURES**

- Transparency was a priority throughout the data collection process.
- Enumerators and supervisors maintained openness, ensuring the integrity of the collected information.

#### **6. ETHICAL COMPLIANCE**

- Stringent ethical standards were adhered to during data collection.
- The goal was to uphold the ethical principles of fairness, confidentiality, and respect for respondents.

#### 7. PURPOSEFUL CONVENIENCE SAMPLING

- Data collection included purposeful convenient sampling.
- This approach allowed for targeted selection, ensuring the representation of key perspectives and experiences.

#### **8. PRE-DATA COLLECTION BRIEFING**

- Enumerators were briefed before data collection, ensuring a clear understanding of the survey's objectives.
- Preparatory steps aimed at minimizing biases and errors in data gathering.

#### **9. SCIENTIFIC APPROACH**

- The methodology employed follows a scientific approach to enhance the credibility of the findings.
- Rigorous measures were taken to ensure the reliability and validity of the collected data.





# **DATA COLLECTION**

The data was collected from November 15, 2023 to December 20, 2023 from the below mentioned districts:

#### **KHYBER PAKHTUNKHWA**

- District Peshawar
- District Swat
- District Nowshera
- District Lower Dir

#### SINDH

- District Dadu
- District Sanghar
- District Khairpur
- District Thatta

#### **PUNJAB**

- District Bahawalnagar
- District Kot Adu
- District Vehari
- District Rajanpur

#### **BALOCHISTAN**

- District Kalat
- District Surab
- District Khuzdar
- District Jaffrabad

# **DATA ANALYSIS**

We surveyed people across 16 districts in Pakistan to understand their experiences with climate change. We carefully cleaned and analyzed the data, and now we are sharing it with you through clear graphs. These graphs are not just numbers, they represent the voices of real people, their concerns and hopes for the future. As you explore the graphs, remember the stories behind them the farmer worried about his crops, the child dreaming of clean air, the community leader fighting for change. Their voices, combined with the data, create a powerful message about the need for action. Let's use this information to build a better future for everyone in Pakistan.

# IDENTIFYING TARGETED SUPPORT GROUPS POST-FLOOD DISASTER

1: Are there specific groups within your community that you believe require special attention and support following the flood disaster?

### AT NATIONAL LEVEL





### AT PROVINCIAL LEVEL



### **FINDINGS**

Flood events disproportionately impact vulnerable populations. Analysis across Pakistan reveals that 48% of those affected by floods identified as disabled, necessitating targeted support in recovery efforts. Women (16-19%) and children (14-21%) are also disproportionately affected across regions, underlining the need for gender- and age-sensitive interventions. Regional variations exist, with Balochistan exhibiting the highest percentage of women impacted (18.88%). Recognizing the diverse needs of vulnerable populations is crucial for developing effective adaptation and disaster response strategies in the face of climate change.

# **RESUCE EFFORTS DURING FLOOD**

2. Whose rescue or relief efforts during the last flood do you find satisfactory?



Armv

6.53

Punjab

Government

11.22

Balochistan

# FINDINGS

Khyber Pakhtunkhwa

10.66

Government

10.66

Sindh

Government

Local volunteers were the most appreciated rescue/relief effort across Pakistan (30.21%). This was followed by local NGOs (25.34%) and INGOs (24.56%). There was some variation in preferences across provinces. For example, in Sindh, INGOs were the most appreciated (35.31%), while in KP, local volunteers were the most preferred (43.15%). Government efforts received lower appreciation across all provinces, ranging from 10.39% to 11.22%.

These findings suggest that local organizations played a major role in the rescue and relief efforts during the last flood in Pakistan. This is likely due to their familiarity with the local context and their ability to quickly mobilize resources. The relatively low appreciation for government efforts may be due to a perception that they were slow to respond or that their efforts were not effective.

Overall, the survey suggests that there is a need for continued support for local organizations in Pakistan that are working to provide disaster relief.

# GOVERNMENT RESPONSE

3. Has the government assessed the losses and provided compensation to flood affected?

### AT NATIONAL LEVEL





### AT PROVINCIAL LEVEL



# **FINDINGS**

Pakistan's flood response presents a mixed picture, with stark disparities across provinces. While Punjab and Sindh report higher full compensation rates (15.34% and 15.82%), KP and Balochistan lag behind at 7.97% and 13.11%, respectively. This raises concerns about uneven aid distribution and potential gaps in reaching affected communities.

Further compounding the issue, a significant portion (33-38%) across all provinces received partial compensation, highlighting inconsistencies in government efforts. Addressing these disparities requires investigation into the reasons behind varying compensation rates, the types and levels of aid provided, and challenges faced by both the government and communities. Only through targeted interventions and improved response mechanisms can Pakistan ensure equitable support reaches all flood-affected citizens, regardless of their location.

# POST FLOOD CHALLENGES

4.What are the challenges you found after the last flood?



### **FINDINGS**

While Pakistan grapples with the aftermath of the floods, citizens across provinces face varying challenges. Repairing damaged homes tops the list (20.6% nationally), followed by clean water access (13.0%). Economic hardship (11.9%) looms large, exacerbated by food shortages (12.6%). Notably, displacement and homelessness (14.3%) plague Punjab (25.6%) and KP (10.4%) more than Sindh (6.5%). Education disruptions impact Sindh (13.3%) the most, while environmental damage and damaged roads remain relatively lower concerns. These disparities emphasize the need for targeted interventions based on each province's unique challenges.

**Global Stocktake** is a critical turning point when it comes to efforts to address climate change. It is like taking inventory. It means looking at everything related to where the world stands on climate action and support, identifying the gaps, and working together to agree on solutions pathways to 2030 and beyond.

# CLIMATE AWARENESS

5. How would you rate your awareness of climate change and its causes?

#### Decent 15.9% Nothing 23.4% AT NATIONAL LEVEL 60.7% Little 23.4% Nothing 15.9% Decent Little 60.7% AT PROVINCIAL LEVEL 0.00 40.00 0.00 40.00 0.00 40.00 0.00 40.00 69.02 61.34 61.67 Little Little Little Little 52.04 Nothing 26.55 Nothing 15.64 Decent 23.10 Nothing 35.20 Nothing 15.23 12.76 Decent 12.11 Decent 15.34 Decent Khyber Pakhtunkhwa Sindh Punjab Balochistan

# **FINDINGS**

The survey reveals a stark divide in Pakistan's awareness of climate change and its causes. While a significant portion of the population (15.9%) exhibits decent awareness, a larger group (60.7%) reports having little knowledge. This disparity highlights the need for targeted education and outreach efforts across the country.

Interestingly, Punjab shows the highest proportion of respondents with decent awareness (23.1%), suggesting targeted initiatives or pre-existing environmental concerns in the region. Conversely, Balochistan has the lowest percentage of highly aware individuals (12.8%), indicating a potential knowledge gap that needs to be addressed. Similar proportions for "Little" knowledge: Across all provinces, roughly 60% of respondents report having little knowledge about climate change, emphasizing the need for nationwide awareness campaigns.

While awareness is crucial, the survey only captures knowledge, not necessarily action or behavioral change. Further research is needed to understand how awareness translates into climate-conscious choices and actions among different segments of the population.

# EFFECTIVE CLIMATE CHANGE STRATEGIES

6. What do you think can be done to mitigate the effects of climate change and flooding in Pakistan?



**FINDINGS** 

The survey reveals Pakistanis' diverse perspectives on mitigating climate change and flood impacts, with distinct regional priorities. Nationally, "planting more trees and stopping illegal cutting" emerges as the top priority (27.8%), with strong echoes in KP (35.4%) and Punjab (32%). This highlights widespread recognition of deforestation's role. Improving early warning system about disaster also garners significant support (19.6%), particularly in KP and Sindh (25.6% and 25.1% respectively), emphasizing a desire for preparedness at the community level. Interestingly, regional priorities differ. Sindh prioritizes transparent funding for climate projects (18.9%), suggesting a desire for better resource allocation. Punjab focuses on transparent funding for climate projects (19%) and urban planning (13.6%) and strengthening embankments (15.9%), potentially reflecting specific concerns about urban flooding and river management. This survey highlights the need for tailored solutions that address not only national priorities but also specific regional concerns, paving the way for a more effective and inclusive approach to combatting climate change in Pakistan.

# COMMUNITY ENGAGEMENT

7. Would you be willing to participate in a community-based program to reduce the risk of Natural Disaster/Flood/Earthquake?



### AT PROVINCIAL LEVEL



### **FINDINGS**

Across Pakistan, the survey reveals a strong willingness to combat natural disasters through community action. Over 62% of respondents nationally (62.8%) expressed interest in participating in such programs, with enthusiasm particularly high in KP (81.2%). This suggests a significant desire for collective preparedness and risk reduction. However, regional disparities exist. Sindh exhibits lower participation intent (57.5%), while Balochistan shows the weakest response (40.9%). These variations highlight the need for targeted outreach and engagement strategies to address specific concerns and encourage broader participation in disaster preparedness efforts.

Not concerned at all 10.1%

# BIODIVERSITY

8. Are you concerned about the loss of biodiversity (different species of plants, animals) in your area due to factors like floods and habitat destruction?

### AT NATIONAL LEVEL



### AT PROVINCIAL LEVEL



### **FINDINGS**

Across Pakistan, a resounding wave of concern washes over biodiversity loss, driven by factors like floods and habitat destruction. Over half the nation (57%) expresses deep concern and urges immediate action, with KP leading the charge at a staggering 80%. Even in regions like Balochistan and Punjab, where anxieties about pressing issues exist, over 50% acknowledge the dire need for biodiversity protection. Sindh also voices concern, though to a lesser degree (42%). This widespread alarm underscores the urgency of addressing biodiversity loss as a national and regional priority. Tailored outreach and education programs, focusing on the crucial role of diverse ecosystems in flood resilience and overall environmental health, can further galvanize public support and inspire collective action towards its protection.

# USE OF RIGHT TO INFORMATION LAWS TO ASK CLIMATE RELATED INFORMATION

9. Have you ever used the Access to Information Act (RTI) to ask for any information related to climate change from an absolute government agency, particularly the Ministry of Environment or the Meteorological Department?

### AT NATIONAL LEVEL





### AT PROVINCIAL LEVEL



### **FINDINGS**

Across Pakistan, the Access to Information Act (RTI) remains underutilized for accessing climate change information from government agencies. Only 19.9% of respondents nationally reported using the RTI for this purpose, with similar levels across provinces (18.2% in KP, 21.8% in Sindh, 19.1% in Punjab, and 20.9% in Balochistan). This low engagement suggests a lack of awareness about the RTI mechanism, potentially hindering citizen participation in climate change governance. However, regional variations exist, with Sindh showing slightly higher usage compared to other provinces. To encourage broader utilization of the RTI for climate-related information, targeted awareness campaigns and capacity building initiatives, particularly in regions with lower usage, could empower citizens to actively engage in accessing and holding authorities accountable for climate action.

# **OBSTACLES HINDERING SUCCESSFUL CLIMATE CHANGE INITIATIVES**

10. What are the primary obstacles hindering successful climate change initiatives in Pakistan?



## **FINDINGS**

Across Pakistan, tackling climate change faces a tangled web of hurdles. The top obstacle? Widespread lack of citizen awareness (21.2%), especially in KP and Sindh. This highlights the need for targeted education and awareness campaigns to empower communities as active participants in climate solutions. Meanwhile, inadequate policy frameworks (18.3%) and corruption concerns (20.1%), particularly high in Balochistan (30.0%), highlight the need for robust governance and transparency in resource allocation. Perceptions of "lack of government willingness" (17.4%) vary, with Punjab (24.5%) and Sindh (22.5%) expressing trust gaps that require targeted communication and engagement. While technological limitations (11.1%) and mismanagement of climate funds (12.0%) are national concerns, Balochistan (22.9% for technology) and Punjab (17.7% for funds) have specific areas that need tailored support. Only by collaboratively dismantling these obstacles, from empowering citizens to strengthening governance and addressing regional needs, can Pakistan pave the way for a successful and inclusive fight against climate change.

# **11. COMMUNITY AWARENESS**

11. Do you believe your community is aware of the climate change issues?



### AT PROVINCIAL LEVEL



### **FINDINGS**

Flood events disproportionately impact vulnerable populations. Analysis across Pakistan reveals that 48% of those affected by floods identified as disabled, necessitating targeted support in recovery efforts. Women (16-19%) and children (14-21%) are also disproportionately affected across regions, underlining the need for gender- and age-sensitive interventions. Regional variations exist, with Balochistan exhibiting the highest percentage of women impacted (18.88%). Recognizing the diverse needs of vulnerable populations is crucial for developing effective adaptation and disaster response strategies in the face of climate change.

A WARMING TREND OF ABOUT 0.75°C HAS BEEN OBSERVED IN ANNUAL MEAN TEMPERATURES IN SOUTH ASIA OVER THE PAST CENTURY.

Source: ADB. 2014. Assessing the Costs of Climate Change and Adaptation in South Asia

# EFFECT OF CLIMATE CHANGE

12. What do you think is the most dangerous effect of climate change?



### AT PROVINCIAL LEVEL



### **FINDINGS**

Flood events disproportionately impact vulnerable populations. Analysis across Pakistan reveals that 48% of those affected by floods identified as disabled, necessitating targeted support in recovery efforts. Women (16-19%) and children (14-21%) are also disproportionately affected across regions, underlining the need for gender- and age-sensitive interventions. Regional variations exist, with Balochistan exhibiting the highest percentage of women impacted (18.88%). Recognizing the diverse needs of vulnerable populations is crucial for developing effective adaptation and disaster response strategies in the face of climate change.

# CLIMATE RESILIENCE EFFORTS

13. Are there any climate resilience (to increase the capacity to fight with climate change issues) initiatives in your community?



### AT PROVINCIAL LEVEL



### **FINDINGS**

Flood events disproportionately impact vulnerable populations. Analysis across Pakistan reveals that 48% of those affected by floods identified as disabled, necessitating targeted support in recovery efforts. Women (16-19%) and children (14-21%) are also disproportionately affected across regions, underlining the need for gender- and age-sensitive interventions. Regional variations exist, with Balochistan exhibiting the highest percentage of women impacted (18.88%). Recognizing the diverse needs of vulnerable populations is crucial for developing effective adaptation and disaster response strategies in the face of climate change.

# GOVERNMENT POLICIES

14. Are you satisfied that the government has effective policies in place to address climate change?

### AT NATIONAL LEVEL





### AT PROVINCIAL LEVEL



### **FINDINGS**

Across Pakistan, a resounding lack of confidence in the government's climate change policies prevails. Only 29.3% of respondents nationally expressed satisfaction, with significant regional variations. Balochistan stands out with the highest satisfaction rate at 43.9%, while Sindh exhibits the lowest at 21.4%. This widespread dissatisfaction underscores the urgent need for the government to address public concerns, strengthen its climate action efforts, and rebuild trust with communities. Tailored approaches that address regional priorities and concerns will be crucial to garnering broader support and paving the way for a more effective national response to climate change.

# CLIMATE EDUCATION

15. Have you received any formal education or information on climate change?

### AT NATIONAL LEVEL





### AT PROVINCIAL LEVEL



### **FINDINGS**

A stark knowledge divide separates Pakistanis from effective climate action. Nationally, only 32.1% report receiving formal education or information on climate change, leaving a vast majority with limited understanding of this critical issue. Regional disparities paint a complex picture: Balochistan stands out with the highest exposure at 46.9%, while Sindh lags behind at a mere 24.8%.

This uneven terrain demands immediate action. Comprehensive climate education programs tailored to regional needs are crucial. Balochistan's success offers a potential model, showcasing how context-specific education can empower communities. Punjab and Sindh require targeted outreach that addresses their unique concerns and knowledge gaps.

Investing in education isn't just about filling minds; it's about equipping citizens with the tools to navigate the challenges of climate change. By bridging the knowledge gap and fostering regional understanding, Pakistan can build a more informed and resilient future for all.

# EFFECTIVE INFORMATION SOURCES

16. What do you think is the most effective platform to provide information about climate change or any disaster related information?



### AT PROVINCIAL LEVEL



# **FINDINGS**

Nationally, social media dominates at 37.2%, particularly in Balochistan (38.2%) and Punjab (46.6%), highlighting the youth's active engagement and the potential of online outreach. However, regional variations are evident, with community organizations leading in Sindh (31.3%) emphasizing the value of local networks where internet access may be limited. Education institutes stand out in Sindh (19.4%). Traditional media, including TV and newspapers (14%) in KP and books and magazines (7.8%) across regions, also play a role. Government institutions receive modest attention (6.9%), signaling a need for enhanced communication strategies to build trust. The fight against climate change in Pakistan requires tailored approaches, combining the reach of social media, the strength of community organizations, and effective communication across diverse channels. By understanding and responding to these preferences, Pakistan can empower its citizens with the knowledge necessary to confront climate challenges effectively.

# RELIEF ASSISTANCE CHALLENGES

17. Are there any challenges you or your community face in accessing relief assistance following a disaster or climate-related event?



# FINDINGS

In the aftermath of climate-related events in Pakistan, accessing relief assistance presents formidable challenges. Nationally, 25% encounter physical barriers, notably in KP (34.5%) due to challenging terrain or damaged infrastructure. Language barriers compound difficulties, especially in Balochistan (11.7%).

Bureaucratic complexities affect 14.4%, notably in Punjab (15.9%) and Sindh (16.0%). Incomplete information hampers 20.7%, highest in Punjab (25.1%). Insufficient resources impact 16.7% nationally, with Balochistan bearing the highest burden (18.8%). Inadequate shelter adds hardship for 9.5%, particularly in KP (11.7%).

Social and cultural barriers, though at 5.7%, intersect with other challenges, exacerbating vulnerabilities. Tailored outreach and culturally sensitive communication are crucial. Pakistan's climate resilience relies on swift, equitable relief access. Addressing physical barriers, simplifying bureaucracy, raising awareness, and targeted resource allocation are critical.

# MAJOR SOURCES OF POLLUTION

18. In your opinion, what are the primary sources of pollution in your area?



\*\*Solid Waste Mismanagement

### **FINDINGS**

Across Pakistan, pollution paints a grim picture. Uncontrolled waste (29.4%, 46.8% in Balochistan) demands urgent waste management solutions. Heavy reliance on pesticides (22.9%, 32.5% in Punjab) threatens soil and water. Rapid deforestation (27.7%, 34.8% in Punjab) necessitates aggressive reforestation. While nationwide industrial impact is moderate (11.3%), specific areas like Sindh (13.6%) cry for stricter regulations and cleaner technology. Vehicle exhaust, though lower overall (8.8%), is particularly concerning in KP (11.4%), highlighting the need for public transport and emission control measures. Pakistan must weave a multi-pronged approach, tackling each thread in this complex tapestry to secure a clean and healthy future.

# INCREASING POLLUTION

19. In your opinion, which pollution is increasing rapidly in your area?



### AT PROVINCIAL LEVEL



### **FINDINGS**

The survey data on pollution perceptions in Pakistan underscores the diverse environmental concerns across regions. Nationally, 29.9% of respondents express worry about excessive use of plastic, with Balochistan (43.0%) and KP (41.7%) exhibiting the highest levels of concern. Air quality emerges as a significant worry at 21.97%, particularly in Punjab, where an alarming 37.47% highlight this as a growing concern. Regional priorities vary, with KP emphasizing plastic pollution and land pollution, Sindh expressing higher concern for water (19.8%) and noise pollution (16.3%), and Punjab facing a pronounced apprehension about air quality (37.5%). This regional divergence emphasizes the need for tailored environmental policies. Policymakers can leverage this data to design targeted strategies, addressing specific pollution concerns in each region effectively and fostering a nuanced approach to environmental management.

# **KEY FINDINGS**

HUQOOQ-UL-EBAD DEVELOPMENT FOUNDATION, PAKISTAN

# KHYBER PAKHTUNKHWA: KEY FINDINGS

#### **1. VULNERABILITY IN THE FLOODS:**

Over half (51.4%) believe disabled individuals require special attention and support following floods, highlighting their heightened vulnerability.

Women (17.4%) and elderly people (17.1%) also emerge as groups needing targeted support, indicating the need for inclusive disaster response strategies.

#### 2. LOCAL HEROES IN RELIEF:

Local volunteers (43.1%) are seen as the most satisfactory responders during the floods, showcasing their crucial role in immediate relief efforts.

Local NGOs (22.6%) follow closely, demonstrating the importance of community-based organizations in disaster response.

Formal institutions like the government (10.7%) receive lower ratings, suggesting potential areas for improvement in communication and effectiveness.

#### **3. COMPENSATION GAP AND UNCERTAINTY:**

Only 8% report receiving full compensation for flood losses, with over half (54%) facing no compensation. This paints a grim picture of inadequate government support. Nearly 38% received partial compensation, indicating some progress but also highlighting inconsistencies and potential gaps in the assessment and distribution process.

#### 4. LASTING CHALLENGES BEYOND THE FLOODWATERS:

Repairing and rebuilding damaged homes (21.4%) tops the list of post-flood challenges, underlining the significant impact on infrastructure and livelihoods.

Access to clean water (16.0%) and economic hardship (14.0%) pose additional hurdles, indicating the need for long-term recovery efforts beyond immediate rescue.

Displacement and homelessness (10.4%) remain pressing concerns, emphasizing the importance of providing stable housing solutions for flood-affected communities.

#### 5. LIMITED AWARENESS OF CLIMATE CHANGE:

Over 60% (61.3%) report having little or no awareness of climate change and its causes, highlighting a critical knowledge gap.

Only 12.1% possess very high awareness, indicating the need for targeted education and outreach programs to equip communities with the knowledge to understand and prepare for future climate events.

#### 6. PRIORITIZING ACTION ON CLIMATE CHANGE:

Planting trees and stopping illegal logging (35.4%) tops the list of desired actions, emphasizing the critical role of ecosystem restoration in mitigating climate impacts. Community education and awareness about disaster response (25.6%) comes in second, highlighting the importance of preparedness and building community resilience. Concerns about transparency in climate funding (5.9%) suggest a need for improved communication and accountability surrounding resource allocation.

#### 7. WILLINGNESS TO BUILD RESILIENCE:

Over 80% (81.2%) express willingness to participate in community-based disaster risk reduction programs, showcasing a strong commitment to collective action and preparedness.

Only 5.9% remain hesitant or unwilling, indicating a potential need for targeted outreach and addressing any reservations within specific communities.

#### 8. DEEP CONCERN FOR BIODIVERSITY LOSS:

A staggering 80.1% express deep concern about biodiversity loss due to floods and habitat destruction, revealing a strong understanding of the interconnectedness of environmental issues.

Only a small minority (2.6%) remain unconcerned, suggesting widespread recognition of the urgency to protect biodiversity.

# 9. LIMITED USE OF RIGHT TO INFORMATION ON CLIMATE CHANGE:

Only 18.2% report ever using the Access to Information Act to request climate change information from government agencies, indicating low awareness or utilization of this transparency tool.

Encouraging greater public engagement and knowledgeseeking on climate issues could be crucial for informed decision-making and accountability.

#### **10. OBSTACLES TO EFFECTIVE CLIMATE ACTION:**

Corruption (22.6%) and inadequate policies and regulations (20.5%) emerge as the top barriers to successful climate initiatives, highlighting the need for systemic reforms and improved governance.

#### **11. AWARENESS GAP ON CLIMATE CHANGE:**

Nearly half (46.1%) believe their community lacks awareness of climate change issues, highlighting a critical knowledge gap that needs to be addressed.

Only 11.3% feel confident in their community's awareness, indicating the need for targeted education and outreach programs.

42.7% perceive partial awareness, suggesting potential for building upon existing knowledge and tailoring communication strategies.

# 12. RISING TEMPERATURES TOP CLIMATE CHANGE CONCERNS:

Increased temperatures (42.2%) rank as the most concerning impact of climate change reflecting residents' direct experience with heatwaves and their potential consequences.

Increase in diseases (19.5%) and drought/inadequate rainfall (16.2%) follow closely, showcasing broader concerns about health and water security.

Threats to biodiversity (7.2%) and floods (7.7%) are also acknowledged, indicating an understanding of interconnected environmental issues.

#### **13. LIMITED CLIMATE RESILIENCE INITIATIVES:**

A resounding 72.8% express a lack of, or insufficient, climate resilience initiatives in their communities, revealing a significant gap in preparedness and adaptation measures.

Only 9.2% report having multiple initiatives, suggesting pockets of progress but highlighting the need for scaling up efforts. 17.2% mention having some initiatives, indicating potential starting points for expansion and collaboration.

#### 14. Low Confidence in Government's Climate Policies:

Over 70% (72.5%) express dissatisfaction with the government's climate change policies, reflecting a lack of trust in their effectiveness.

Only 27.5% express satisfaction, suggesting limited perceived progress or inadequate communication of existing measures.

#### **15. Need for Increased Climate Change Education:**

Over 70% (73.6%) report not receiving formal education or information on climate change, underscoring a significant knowledge gap within the community.

Only 26.4% have received such education, highlighting the need for integrating climate change into formal education systems and community outreach programs.

# 16. PREFERRED PLATFORMS FOR CLIMATE AND DISASTER INFORMATION:

Social media emerges as the most trusted platform for information (32.5%), highlighting its potential for reaching and engaging communities in real-time. Community organizations (27.4%) come in second, showcasing the importance of local networks and trusted voices in disseminating information.

TV and newspapers (14.0%) remain relevant channels, while traditional resources like books and magazines lag behind (8.4%).

Government institutions (8.6%) and education institutes (9.1%) face trust deficits, indicating a need for improved communication and transparency.

#### **17. CHALLENGES IN ACCESSING DISASTER RELIEF:**

Physical barriers like remote locations or damaged infrastructure top the list (34.5%), emphasizing the need for inclusive and accessible disaster response strategies.

Bureaucratic hurdles (12.2%) and limited awareness of available assistance (16.2%) pose additional challenges, suggesting a need for streamlined procedures and effective communication.

Insufficient resources (17.0%) and inadequate shelter options (11.7%) highlight the importance of adequate preparedness and resource allocation.

#### **18. MAJOR SOURCES OF POLLUTION:**

Mismanagement of solid waste (43.3%) emerges as the primary source of pollution, revealing a critical need for waste management infrastructure and awareness campaigns. Land pollution (27.0%) and deforestation (27.0%) follow closely, pointing to the interconnectedness of environmental issues and the need for holistic solutions.

Industrialization (8.9%) and vehicle exhaust (11.5%) contribute to the overall pollution burden, indicating the need for sustainable development practices and emissions control measures.

#### **19. Rapidly Increasing Pollution Concerns:**

Excessive use of plastic (41.7%) tops the list of concerns regarding rapidly increasing pollution, highlighting the urgency of plastic waste reduction and management strategies.

Land pollution (34.4%) remains a significant concern, indicating the need for land restoration and soil conservation efforts.

Poor air quality (12.0%) and other forms of pollution also warrant attention, showcasing the need for comprehensive environmental protection measures.

# SINDH: KEY FINDINGS

#### **1. VULNERABILITY IN THE FLOODS:**

Similar to Khyber Pakhtunkhwa, disabled individuals top the list (52.1%) for requiring special attention and support, highlighting their heightened vulnerability in post-flood situations.

Women (17.8%) and elderly people (17.8%) also emerge as groups needing targeted support, emphasizing the need for inclusive disaster response strategies.

#### 2. LOCAL HEROES IN RELIEF:

Unlike Khyber Pakhtunkhwa, INGOs (35.3%) are seen as the most satisfactory responders during the floods in Sindh, potentially reflecting their larger presence and impact in certain areas.

Local NGOs (25.5%) and local volunteers (22.3%) remain crucial players in relief efforts, showcasing the importance of community-based organizations.

Formal institutions like the government (10.4%) receive slightly lower ratings, suggesting potential areas for improvement in communication and effectiveness.

#### 3. COMPENSATION GAP AND UNCERTAINTY:

The situation in Sindh seems more dire regarding compensation, with only 15.3% reporting receiving full compensation, compared to 8% in Khyber Pakhtunkhwa. Nearly 70% face no compensation, revealing a significant gap in government support and a pressing need for improved assessment and distribution processes.

#### 4. LASTING CHALLENGES BEYOND THE FLOODWATERS:

Food shortage (18.0%), followed by repair and reconstruction of damaged homes (21.3%) and access to clean water (14.2%) emerge as the top challenges in Sindh, indicating urgent needs for food security, shelter and basic necessities.

Economic hardship (8.0%) and education disruption (13.3%) pose additional hurdles, highlighting the long-term impacts on livelihoods and children's well-being.

#### **5. LIMITED AWARENESS OF CLIMATE CHANGE:**

Similar to Khyber Pakhtunkhwa, over 69% (69.0%) report having little or no awareness of climate change and its causes, underscoring the need for targeted education and outreach programs.

Only 15.3% possess very high awareness, indicating a knowledge gap that hinders informed adaptation and mitigation strategies.

#### 6. PRIORITIZING ACTION ON CLIMATE CHANGE:

Community education and awareness about disaster response (25.1%) remains the top desired action in Sindh, mirroring the trend in Khyber Pakhtunkhwa.

More transparent funding for climate initiatives (18.9%) receives greater emphasis in Sindh, showcasing potential concerns about resource allocation and accountability.

### 7. Strong Willingness for Community-Based Disaster Risk Reduction:

Over 57% express willingness to participate in communitybased disaster risk reduction programs, showing a strong desire for collective action and preparedness.

Only 36.5% remain hesitant or unwilling, suggesting the need for targeted outreach and addressing potential concerns about program effectiveness or accessibility.

#### 8. Deep Concern for Biodiversity Loss:

41.8% express deep concern about biodiversity loss due to floods and habitat destruction, highlighting a strong understanding of environmental interconnectedness.

Only 15.4% remain unconcerned, indicating widespread recognition of the issue and potential for mobilizing support for conservation efforts.

#### 9. Limited Use of Right to Information on Climate Change:

Only 21.8% report ever using the Access to Information Act to request climate change information from government agencies, similar to Khyber Pakhtunkhwa, indicating low awareness or utilization of this transparency tool.

Encouraging greater public engagement and knowledgeseeking on climate issues could be crucial for informed decision-making and environmental governance.

#### **10. Obstacles to Effective Climate Action:**

Inadequate policy and regulatory frameworks (24.3%) and lack of government willingness (22.5%) top the list of barriers, emphasizing the need for systemic reforms and stronger political commitment to climate action.

Corruption (13.0%) and lack of citizen awareness (20.1%) also play significant roles, suggesting the need for improved accountability and public education.

#### 11. Awareness Gap on Climate Change:

Nearly 68% (67.5%) believe their community lacks awareness of climate change issues, similar to Khyber Pakhtunkhwa, highlighting a critical knowledge gap that needs to be addressed. Only 21.8% feel confident in their community's awareness, indicating the need for tailored communication strategies and community-based awareness campaigns.

#### **12. FLOODS SEEN AS PRIMARY CLIMATE CHANGE THREAT:**

Floods (34.4%) lead the way as the most concerning impact of climate change, reflecting the immediate and devastating reality for many in Sindh.

Drought/inadequate rainfall (19.0%) and increase in temperature (14.8%) follow closely, showcasing concerns about water security and long-term climate shifts.

#### **13. LOW CONFIDENCE IN GOVERNMENT CLIMATE POLICIES:**

A resounding 78.5% express dissatisfaction with the effectiveness of government policies on climate change, mirroring the sentiment in Khyber Pakhtunkhwa.

Only 21.5% remain satisfied, suggesting a lack of trust in existing measures or inadequate communication of their impact.

#### **14. LIMITED CLIMATE CHANGE EDUCATION:**

Over 75% report not receiving any formal education or information on climate change, similar to Khyber Pakhtunkhwa, highlighting a significant knowledge gap that hinders understanding and adaptation.

Only 24.8% have received such education, indicating the need for integrating climate change into formal education systems and community outreach programs.

## 15. PREFERRED PLATFORMS FOR CLIMATE AND DISASTER INFORMATION:

Community organizations top the list (31.3%) for preferred platforms to receive information, emphasizing the value of local networks and trusted voices in disseminating knowledge.

Social media follows closely (30.1%), showcasing its potential for real-time communication and reaching wider audiences.

Traditional channels like books and magazines (8.9%) and TV/newspapers (3.8%) play a smaller role, suggesting a shift towards digital and community-based information sources.

#### **16. CHALLENGES IN ACCESSING DISASTER RELIEF:**

Limited awareness of available assistance (22.2%) and bureaucratic hurdles (15.9%) emerge as top challenges in accessing relief, echoing concerns raised in Khyber Pakhtunkhwa. Physical barriers (24.3%) and insufficient resources (13.9%) also pose significant obstacles, highlighting the need for improved accessibility, communication, and resource allocation.

#### **17. MAJOR SOURCES OF POLLUTION:**

Pollution due to chemical fertilizers and pesticides (43.5%) tops the list in Sindh, indicating concerns about agricultural practices and their environmental impact.

Deforestation (21.6%) and mismanagement of solid waste (15.7%) remain crucial issues, requiring sustainable land management and waste management solutions.

Industrialization (13.6%) and vehicle exhaust (5.6%) contribute to the overall pollution burden, calling for cleaner technologies and emission control measures.

#### **18. Rapidly Increasing Pollution Concerns:**

Poor air quality (26.0%) tops the list of concerns regarding rapidly increasing pollution, highlighting the immediate health risks and need for air quality monitoring and improvement strategies.

Excessive use of plastic (23.1%) also raises environmental concerns, emphasizing the need for plastic waste reduction and management initiatives.

Noise pollution (16.3%) and water pollution (19.8%) further add to the environmental challenges faced in Sindh, requiring comprehensive pollution control measures.

# PUNJAB: KEY FINDINGS

#### **1. VULNERABILITY IN THE FLOODS:**

Similar to Sindh and Khyber Pakhtunkhwa, disabled individuals top the list (48.2%) for requiring special attention and support after the flood disaster, highlighting their increased vulnerability.

Elderly people (20.7%) and women (16.1%) come in close behind, suggesting the need for targeted support for these groups in post-flood situations.

#### 2. LOCAL HEROES IN RELIEF:

Unlike Sindh and Khyber Pakhtunkhwa, local NGOs (30.3%) receive the highest rating for satisfactory relief efforts, potentially reflecting their larger presence and impact in certain areas of Punjab.

Local volunteers (25%) and INGOs (27.9%) follow closely, showcasing the importance of diverse actors in disaster response.

Formal institutions like the government (8.7%) receive slightly lower ratings, suggesting potential areas for improvement in communication and effectiveness.

#### **3. COMPENSATION GAP AND UNCERTAINTY:**

The situation in Punjab appears more balanced regarding compensation compared to Sindh, with 15.8% reporting full compensation.

However, nearly 50% (50.4%) face no compensation, revealing a significant gap in government support and a pressing need for improved assessment and distribution processes.

A substantial 33.8% report receiving partial compensation, suggesting potential inconsistencies or delays in the recovery process.

#### 4. LASTING CHALLENGES BEYOND THE FLOODWATERS:

Displacement and homelessness (25.6%) emerge as the top challenge in Punjab, unlike Sindh and Khyber Pakhtunkhwa where basic necessities like clean water and food shortages were more prominent.

Repair and reconstruction of damaged homes (17.5%) and economic hardship (11.5%) follow closely, indicating longterm challenges in rebuilding lives and livelihoods.

Education disruption (3.8%) and environmental damage (5.3%) also remain concerns, highlighting the need for holistic recovery efforts.

#### **5. HIGHER CLIMATE CHANGE AWARENESS:**

Compared to Sindh and Khyber Pakhtunkhwa, Punjab shows a higher level of awareness, with 23.1% reporting "very high" awareness of climate change and its causes. Only 15.2% have "nothing" to no awareness, suggesting greater engagement with this issue and potential for informed adaptation measures.

#### 6. PRIORITIZING ACTION ON CLIMATE CHANGE:

Similar to Sindh and Khyber Pakhtunkhwa, planting more trees and stopping illegal cutting (32.0%) tops the list of desired actions to mitigate climate change and flooding. More transparent funding for climate initiatives (19.1%) receives greater emphasis in Punjab, showcasing potential concerns about resource allocation and accountability.

Community education and awareness about disaster response (10.0%) remains an important factor, but appears less prominent compared to other provinces.

## 7. STRONG COMMITMENT TO COMMUNITY-BASED DISASTER RISK REDUCTION:

An overwhelming 70.5% express willingness to participate in community-based disaster risk reduction programs, demonstrating a strong desire for collective action and preparedness.

Only a small minority (20.9%) remain hesitant or unwilling, suggesting the need for targeted outreach and addressing potential concerns about program effectiveness or accessibility.

#### 8. DEEP CONCERN FOR BIODIVERSITY LOSS:

Over 53% (53.6%) express deep concern about biodiversity loss due to floods and habitat destruction, similar to Sindh, highlighting awareness of environmental interconnectedness and strong support for conservation efforts.

Only a small fraction (6.8%) remain unconcerned, indicating widespread recognition of the issue and potential for mobilizing support for ecosystem protection.

# 9. LIMITED ACCESS TO INFORMATION ACT USAGE ON CLIMATE CHANGE:

Similar to Sindh and Khyber Pakhtunkhwa, only 19.1% report ever using the Access to Information Act to request climate change information from government agencies, indicating low awareness or utilization of this transparency tool.

Encouraging greater public engagement and knowledgeseeking on climate issues could be crucial for informed decision-making and environmental governance.

#### **10. OBSTACLES TO EFFECTIVE CLIMATE ACTION:**

Lack of government willingness (24.5%) and inadequate policy and regulatory frameworks (14.1%) top the list of barriers, echoing concerns raised in Sindh and Khyber Pakhtunkhwa. Corruption (14.1%) and lack of citizen awareness (23.3%) remain significant challenges,

highlighting the need for improved accountability and public education.

#### **11. COMMUNITY AWARENESS GAP ON CLIMATE CHANGE:**

A larger portion of respondents in Punjab (~37%) acknowledge some level of community awareness compared to Sindh and Khyber Pakhtunkhwa, but nearly 47% still express a lack of awareness, indicating a persistent knowledge gap.

Targeted communication strategies and communitybased awareness campaigns remain crucial to promote understanding and engagement on climate issues.

### 12. INCREASE IN TEMPERATURE SEEN AS PRIMARY THREAT:

Unlike Sindh, rising temperatures top the list of climate change concerns (46.4%) in Punjab, possibly reflecting regional differences in environmental impact.

Floods (13.9%) and drought/rainfall scarcity (14.9%) still cause concern, while other impacts like threats to biodiversity and diseases receive less emphasis.

#### **13. NEED FOR MORE CLIMATE RESILIENCE INITIATIVES:**

Similar to Sindh and Khyber Pakhtunkhwa, a significant 44.7% advocate for more climate resilience initiatives in their communities, revealing a lack of preparedness and adaptation measures.

While 33.9% report having some initiatives, there's room for expansion and strengthening local responses to climate challenges.

#### **14. LOW CONFIDENCE IN GOVERNMENT CLIMATE POLICIES:**

Similar to Sindh, almost 77% express dissatisfaction with the effectiveness of government climate policies in Punjab.

Building trust and public confidence through improved communication, transparency, and tangible results remains crucial for successful climate action.

#### **15. LIMITED CLIMATE CHANGE EDUCATION:**

Comparable to Sindh and Khyber Pakhtunkhwa, over 70% report a lack of formal education or information on climate change, highlighting a significant knowledge gap at the individual level.

Integrating climate change into formal education systems and community outreach programs is essential for promoting understanding and adaptation among all citizens.

### 16. SOCIAL MEDIA REIGNS SUPREME FOR INFORMATION DISSEMINATION:

Social media emerges as the dominant platform (46.6%) for receiving information about climate Change and disasters, highlighting its reach and immediacy in Punjab.

Community organizations (25.8%) follow closely, showcasing their importance in building trust and providing localized knowledge.

Traditional media like TV and newspapers (8.7%) and books/magazines (7.2%) play a smaller role, suggesting a shift towards digital and community-based information sources.

## 17. PERSISTENT CHALLENGES IN ACCESSING DISASTER RELIEF:

Limited awareness of available assistance (25.1%) and bureaucratic hurdles (14.6%) remain the top challenges in accessing disaster relief, similar to Sindh and Khyber Pakhtunkhwa.

Physical barriers (22.2%) and insufficient resources (16.7%) continue to pose obstacles, emphasizing the need for improved accessibility, communication, and resource allocation.

# **18. DEFORESTATION AND CHEMICAL POLLUTION TOP ENVIRONMENTAL CONCERNS:**

Deforestation (34.8%) emerges as the leading source of pollution in Punjab, potentially reflecting concerns about land degradation and its impact on ecosystems.

Pollution due to chemical fertilizers and pesticides (32.5%) follows closely, raising concerns about agricultural practices and their environmental consequences.

Industrialization (13.1%) and vehicle exhaust (8.6%) contribute to the overall pollution burden, suggesting the need for cleaner technologies and emission control measures.

## 19. AIR QUALITY WOES AND PLASTIC POLLUTION ON THE RISE:

Poor air quality (37.5%) takes the top spot for rapidly increasing pollution concerns, emphasizing the immediate health risks and need for air quality monitoring and improvement strategies.

Land pollution (25.1%) and excessive plastic use (12.2%) also raise concerns about environmental degradation and waste management challenges.

Compared to Sindh, noise pollution appears less of a concern (6.2%) in Punjab, highlighting potential regional variations in environmental issues.

# **BALOCHISTAN: KEY FINDINGS**

#### **1. VULNERABILITY IN THE FLOODS:**

Similar to other provinces, disabled individuals top the list (39.5%) for requiring special attention and support following the flood disaster, highlighting their increased vulnerability.

Elderly people (20.2%) and women (18.9%) follow closely, suggesting the need for targeted support for these groups in post-flood situations.

#### 2. LOCAL HEROES IN RELIEF:

Unlike Sindh and Khyber Pakhtunkhwa, local volunteers (29.6%) receive the highest rating for satisfactory relief efforts in Balochistan, showcasing their crucial role and strong presence in the province.

Local NGOs (22.7%) and INGOs (24.2%) follow closely, indicating the importance of diverse actors in disaster response.

Formal institutions like the government (11.2%) receive slightly lower ratings, suggesting potential areas for improvement in communication and effectiveness.

### 3. UNCLEAR COMPENSATION PICTURE AND INCONSISTENCIES:

The situation in Balochistan appears uncertain regarding compensation, with a nearly even split between "yes" (13.1%), "no" (43.4%), and "to some extent" (43.4%).

This suggests inconsistencies in assessment, distribution, or lack of transparency in the process, requiring urgent attention and communication from the government.

#### 4. REPAIR AND RECONSTRUCTION AS TOP CHALLENGE:

Unlike other provinces where basic necessities were a major concern, repair and reconstruction of damaged homes (22.6%) takes the top spot in Balochistan, reflecting the significant impact on infrastructure and long-term recovery needs.

Economic hardship (13.7%) and displacement/homelessness (12.7%) also pose considerable challenges, highlighting the need for livelihood support and rebuilding shelters.

#### **5. LIMITED CLIMATE CHANGE AWARENESS:**

Compared to other provinces, Balochistan shows lower levels of climate change awareness, with only 12.8% reporting "very high" awareness and a significant 35.2% having "nothing" to no awareness.

This knowledge gap indicates the need for targeted education and outreach programs to equip communities with information and understanding of climate change issues.

# 6. PRIORITIZING ENVIRONMENTAL ACTION AND COMMUNITY EDUCATION:

Similar to other provinces, planting more trees and stopping illegal cutting (29.5%) tops the list of desired actions to mitigate climate change and flooding, showcasing strong environmental consciousness.

Community education and awareness about disaster response (19.8%) receives significant emphasis, highlighting the importance of preparedness and collective action. More transparent funding for climate initiatives (11.7%) also appears as a concern, suggesting a desire for accountability and effective resource allocation.

## 7. UNCERTAIN WILLINGNESS FOR COMMUNITY-BASED DISASTER RISK REDUCTION:

A significant portion of respondents (40.9%) remain undecided about participating in community-based risk reduction programs, suggesting potential reservations or lack of information.

Reaching out to this undecided group through awareness campaigns and addressing their concerns could increase participation and strengthen community resilience.

#### 8. DEEP CONCERN FOR BIODIVERSITY LOSS:

Over 50% (50.3%) express deep concern about biodiversity loss due to floods and habitat destruction, similar to Sindh, highlighting environmental awareness and support for conservation efforts.

Only a small fraction (16.6%) remain unconcerned, indicating widespread recognition of the issue and potential for mobilizing support for ecosystem protection.

#### 9. LIMITED USE OF RTI FOR CLIMATE INFORMATION:

Similar to other provinces, only 20.9% in Balochistan report ever using the Access to Information Act to request climate change information from government agencies, indicating low uptake of this transparency tool.

Encouraging awareness and accessibility of the RTI could empower citizens to demand environmental data and hold authorities accountable.

### **10. CORRUPTION AND POLICY GAPS HINDER CLIMATE ACTION:**

Corruption stands out as the most significant obstacle (30.0%) to successful climate initiatives in Balochistan, exceeding concerns in other provinces.

Inadequate policy and regulatory frameworks (15.3%) and technological limitations (22.9%) also pose challenges, highlighting the need for robust governance, resource allocation, and capacity building.

#### **11. COMMUNITY AWARENESS GAP ON CLIMATE CHANGE:**

Similar to Punjab, \*\*a larger portion of Balochis respondents express some level of community awareness (33.7%) compared to Sindh and Khyber Pakhtunkhwa, but nearly 53% still acknowledge a lack of awareness.

Targeted outreach and communication campaigns tailored to local contexts remain crucial to bridge the knowledge gap and promote community engagement.

## 12. SHARED CONCERNS ABOUT WATER SCARCITY AND TEMPERATURE RISE:

Unlike Punjab where temperature increase tops the list, Balochistan residents express equal concern (21.7%) about both groundwater scarcity and rising temperatures, likely reflecting their specific vulnerabilities to water stress and arid conditions. Drought/inadequate rainfall (17.6%) and diseases (18.1%) also raise significant concerns, showcasing the multifaceted impact of climate change in the region.

#### **13. NEED FOR MORE CLIMATE RESILIENCE INITIATIVES:**

Similar to other provinces, almost 40% in Balochistan advocate for more climate resilience initiatives in their communities, revealing a widespread acknowledgement of the need for preparedness and adaptation measures. While 14.8% report having several initiatives, there's room for expansion and strengthening local response capacities.

#### 14. MIXED OPINIONS ON GOVERNMENT CLIMATE POLICIES:

Over 56% in Balochistan express dissatisfaction with the effectiveness of government climate policies, aligning with concerns in other provinces.

However, 44% still show some level of confidence, suggesting potential variation in experiences or awareness of specific initiatives.

Improved communication, transparency, and demonstrably effective policies are crucial to building public trust and support for climate action.

#### **15. ENCOURAGING PROGRESS IN CLIMATE EDUCATION:**

Compared to other provinces, Balochistan shows a slightly higher percentage (46.9%) of respondents having received formal education or information on climate change.

This trend is positive, but it's important to ensure comprehensive and accessible education on climate issues reaches all members of communities.

# 16. SOCIAL MEDIA REIGNS SUPREME, BUT COMMUNITY TRUSTED TOO:

Similar to Punjab, social media (38.2%) emerges as the preferred platform for climate change and disaster information in Balochistan, highlighting its reach and immediacy.

Interestingly, community organizations (22.1%) follow closely, showcasing their importance as trusted sources of localized knowledge and support.

Traditional media like TV/newspapers (12.7%) and educational institutions (10.7%) play smaller roles, suggesting a shift towards digital and community-driven information sources.

# 17. PERSISTENT CHALLENGES IN ACCESSING DISASTER RELIEF:

Limited awareness of available assistance (19.3%) and bureaucratic hurdles (15.0%) remain top challenges in accessing disaster relief, similar to other provinces.

Physical barriers (19.1%) and insufficient resources (18.8%) also pose significant obstacles, emphasizing the need for improved outreach, communication, and resource allocation.

# 18. MISMANAGEMENT OF SOLID WASTE TOPS POLLUTION CONCERNS:

Mismanagement of solid waste (46.8%) stands out as the primary source of pollution in Balochistan, potentially reflecting inadequate waste disposal systems and infrastructure.

Deforestation (25.9%) and pollution due to chemical fertilizers/pesticides (8.4%) also raise concerns about environmental degradation and its impact on ecosystems. Industrialization and vehicle exhaust appear less significant compared to other provinces, possibly reflecting the region's specific industrial profile.

## 19. PLASTIC POLLUTION ON THE RISE AND A MULTIFACETED POLLUTION PROBLEM:

Excessive plastic use (43.0%) tops the list of rapidly increasing pollution concerns in Balochistan, highlighting the need for effective waste management strategies and awareness campaigns.

Land pollution (22.9%) and poor air quality (11.9%) also show worrying trends, indicating the need for comprehensive environmental pollution control measures.

# NATIONAL LEVEL: KEY FINDINGS

#### **1. VULNERABILITY IN THE FLOODS:**

Disabled individuals top the list (47.7%) for requiring special attention and support following the flood disaster, highlighting their increased vulnerability. Elderly people (19.0%) and women (17.5%) follow closely, suggesting the need for targeted support for these groups in post-flood situations.

#### 2. LOCAL HEROES IN RELIEF:

Local volunteers take the lead (30.2%) in satisfactory relief efforts, showcasing their crucial role and strong presence across Pakistan. Local NGOs (25.3%) and INGOs (24.6%) follow closely, indicating the importance of diverse actors in disaster response. Formal institutions like the government (10.2%) receive slightly lower ratings, suggesting potential areas for improvement in communication and effectiveness.

### 3. UNCLEAR COMPENSATION PICTURE AND INCONSISTENCIES:

The situation regarding compensation remains uncertain nationwide, with a nearly even split between "yes" (13.0%), "no" (53.7%), and "to some extent" (33.3%). This suggests inconsistencies in assessment, distribution, or lack of transparency in the process, requiring urgent attention and communication from the government.

#### 4. REPAIR AND RECONSTRUCTION AS TOP CHALLENGE:

Repair and reconstruction of damaged homes takes the top spot (20.6%) in national concerns, reflecting the significant impact on infrastructure and long-term recovery needs. Economic hardship (11.9%) and displacement/homelessness (14.3%) also pose considerable challenges, highlighting the need for livelihood support and rebuilding shelters.

#### **5. LIMITED CLIMATE CHANGE AWARENESS:**

The survey reveals a stark divide in Pakistan's awareness of climate change and its causes. While a significant portion of the population (15.9%) exhibits decent awareness, a larger group (60.7%) reports having little knowledge. This disparity highlights the need for targeted education and outreach efforts across the country.

### 6. PRIORITIZING ENVIRONMENTAL ACTION AND COMMUNITY EDUCATION:

Planting more trees and stopping illegal cutting (27.8%) tops the list of desired actions to mitigate climate change and flooding, showcasing strong environmental consciousness.

Community education and awareness about disaster response (19.6%) receive substantial emphasis,

highlighting the importance of preparedness and collective action.

More transparent funding for climate initiatives (13.8%) also appears as a concern, suggesting a desire for accountability and effective resource allocation.

## 7. STRONG WILLINGNESS FOR COMMUNITY-BASED DISASTER RISK REDUCTION:

Encouragingly, over 62% express willingness to participate in community-based risk reduction programs, indicating a strong foundation for building resilience and collective action.

Reaching out to the remaining undecided group (17.6%) through awareness campaigns and addressing their concerns could further increase participation.

#### 8. DEEP CONCERN FOR BIODIVERSITY LOSS:

Over 57% express deep concern about biodiversity loss due to floods and habitat destruction, similar to Balochistan, highlighting widespread environmental awareness and support for conservation efforts.

Only a small fraction (10.1%) remain unconcerned, indicating strong recognition of the issue and potential for mobilizing support for ecosystem protection.

#### 9. LIMITED USE OF RTI FOR CLIMATE INFORMATION:

Similar to provincial trends, only 20% of respondents nationwide report ever using the Access to Information Act to request climate change information from government agencies, indicating low uptake of this transparency tool.

Encouraging awareness and accessibility of the RTI could empower citizens to demand environmental data and hold authorities accountable.

# **10. CORRUPTION AND POLICY GAPS HINDER CLIMATE ACTION:**

Lack of citizen awareness (21.2%) and Corruption (20.1%) emerge as the top two most obstacles to successful climate initiatives in Pakistan. Inadequate policy and regulatory frameworks (18.3%) highlighting the need for robust governance, public engagement, and clear climate action strategies.

#### **11. COMMUNITY AWARENESS GAP ON CLIMATE CHANGE:**

Consistent with provincial data, over 52% of respondents acknowledge a lack of awareness of climate change issues in their communities, despite some progress (15.5% reporting "yes").

Targeted outreach and communication campaigns tailored to local contexts remain crucial to bridge the knowledge gap and promote community engagement.

#### 12. Increasing Temperatures Top the List of Concerns:

Unlike Sindh and Balochistan where water scarcity was a major concern, nationwide data reveals "increase in temperature" as the most dangerous effect of climate change (32.1%), highlighting the diverse vulnerabilities across regions.

Drought/inadequate rainfall (16.8%) and floods (15.4%) also raise significant concerns, showcasing the multifaceted impact of climate change in Pakistan.

#### **13. NEED FOR MORE CLIMATE RESILIENCE INITIATIVES:**

Similar to provincial trends, over 52% advocate for more climate resilience initiatives in their communities, indicating a widespread acknowledgement of the need for preparedness and adaptation measures.

While 23.7% report having some initiatives, there's room for expansion and strengthening local response capacities.

### 14. PUBLIC DISSATISFACTION WITH GOVERNMENT CLIMATE POLICIES:

Over 70% express dissatisfaction with the effectiveness of government climate policies, a sentiment consistent across provinces.

This highlights the need for demonstrably effective policies, improved communication, and public engagement to build trust and support for climate action.

#### **15. ENCOURAGING PROGRESS IN CLIMATE EDUCATION:**

Compared to provincial data, the national survey shows slightly higher percentages (32.1%) of respondents having received formal education or information on climate change.

This trend is positive, but it's important to ensure comprehensive and accessible climate education reaches all members of communities.

### 16. SOCIAL MEDIA REIGNS SUPREME, BUT COMMUNITY TRUSTED TOO:

Social media (37.2%) emerges as the preferred platform for climate change and disaster information at the national level, highlighting its reach, immediacy, and user-driven nature.

Interestingly, community organizations follow closely (26.5%), showcasing their importance as trusted sources of localized knowledge and support, particularly in marginalized or remote areas.

Traditional media like TV/newspapers (10%) and educational institutions (11.4%) play smaller roles, suggesting a shift towards digital and community-driven information sources.

# 17. PERSISTENT CHALLENGES IN ACCESSING DISASTER RELIEF:

Physical barriers (25.0%) is the top challenge in accessing disaster relief nationwide. While Limited awareness of available assistance (20.7%), bureaucratic hurdles (14.4%) and insufficient resources (16.7%) also pose significant obstacles, emphasizing the need for improved outreach, communication, and resource allocation systems.

# 18. MISMANAGEMENT OF SOLID WASTE TOPS POLLUTION CONCERNS:

Mismanagement of solid waste (29.4%) stands out as the primary source of pollution in Pakistan, exceeding concerns in some provinces, and reflecting inadequate waste disposal and infrastructure systems.

Pollution due to chemical fertilizers/pesticides (22.9%) and deforestation (27.7%) also raise major concerns, highlighting environmental degradation and its impact on ecosystems and health.

Industrialization and vehicle exhaust appear less significant compared to some provinces, possibly reflecting regional variations in industrial profiles.

## 19. PLASTIC POLLUTION ON THE RISE AND A MULTIFACETED POLLUTION PROBLEM:

Excessive plastic use (29.9%) tops the list of rapidly increasing pollution concerns in Pakistan, similar to Balochistan, signifying the need for effective waste management, awareness campaigns, and plastic reduction initiatives.

Land pollution (24.6%) and poor air quality (22.0%) also show worrying trends, indicating the need for comprehensive pollution control measures across various sectors.

Noise pollution and water pollution appear as moderate concerns (9.3% and 14.1%) compared to other issues, but still require attention and targeted approaches.

# RECOMMENDATIONS/ACTION POINTS

In response to the comprehensive findings of a national survey on climate change and disasters, the following actionable recommendations have been crafted to guide government and civil society in fostering community resilience, environmental conservation, and informed decision-making.

#### 1. Strengthen Community-Based Disaster Risk Reduction:

Enhance community engagement and preparedness through targeted programs, building on the significant willingness (70.5%) expressed by the population to participate in CBDRR initiatives.

- Establish community training programs to enhance disaster response skills.
- Collaborate with local leaders and organizations to facilitate CBDRR initiatives.
- Develop and disseminate educational materials on disaster preparedness.

#### 2. Address Biodiversity Loss Concerns:

Mobilize support for ecosystem protection by leveraging the deep concern (53.6%) expressed about biodiversity loss, focusing on education and awareness campaigns to underscore the importance of conservation efforts.

- Launch public awareness campaigns emphasizing the importance of biodiversity.
- Support and collaborate with environmental NGOs for conservation efforts.
- Integrate biodiversity education into school curricula.

#### 3. Promote Access to Climate Information:

Increase awareness and utilization of the Access to Information Act, emphasizing the importance of transparent communication on climate change issues to empower citizens in seeking environmental data from government agencies.

- Conduct workshops to educate citizens on using the Access to Information Act.
- Establish online platforms for easy access to climate data and information.
- Encourage government agencies to proactively share climate-related information.

#### **Combat Corruption and Strengthen Policy Frameworks:**

Tackle corruption as a top obstacle (30.0%) hindering climate initiatives, while concurrently addressing policy and regulatory gaps (14.1%) to create a robust governance structure for effective climate action.

- Establish an anti-corruption task force specifically for climate initiatives.
- Conduct regular audits of climate-related projects to ensure transparency.
- Work with legal experts to strengthen and update climate-related policies.

#### Bridge Community Awareness Gaps:

Develop tailored outreach and communication strategies to bridge the community awareness gap (47% acknowledging lack of awareness), focusing on local contexts to ensure effective understanding and engagement.

- Develop targeted communication campaigns using local languages and media.
- Conduct town hall meetings and community workshops on climate issues.
- Engage community influencers to amplify awareness messages.

#### **Prioritize Climate Resilience Initiatives:**

Respond to the call for more climate resilience initiatives (44.7%) by allocating resources and support for preparedness and adaptation measures, strengthening local responses to climate challenges.

- Allocate funds for local climate resilience projects based on community needs.
- Establish community-based committees to oversee and implement initiatives.
- Provide training on sustainable practices and adaptation strategies.

#### **Enhance Effectiveness of Government Climate Policies:**

Address the widespread dissatisfaction (77%) with government climate policies by improving communication, transparency, and demonstrating tangible results, fostering public trust and confidence.

- Establish a dedicated communication team to disseminate policy updates.
- Conduct regular public consultations to gather feedback on climate policies.
- Implement a performance tracking system to measure policy effectiveness.

#### Integrate Climate Change Education:

Integrate climate change education into formal education systems and community outreach programs, recognizing the substantial knowledge gap (over 70% reporting a lack of formal education or information on climate change).

- Work with the Ministry of Education to integrate climate change into the curriculum.
- Organize teacher training programs on delivering climate change education.
- Develop educational campaigns targeting schools and communities.

#### Utilize social media for Information Dissemination:

Leverage the dominance of social media (46.6%) as an information dissemination platform to reach a broader audience, emphasizing its role in conveying climate change and disaster-related information.

- Establish official social media channels for climate-related announcements.
- Collaborate with influencers and online personalities to amplify messages.
- Create engaging content, including videos and infographics, for wider reach.

#### Improve Disaster Relief Accessibility:

Address persistent challenges in accessing disaster relief (25.1% citing limited awareness and 14.6% bureaucratic hurdles) by improving outreach, communication, and resource allocation systems for enhanced accessibility.

- Develop a comprehensive disaster relief awareness campaign.
- Create a centralized information hub for available assistance.
- Establish mobile-friendly platforms for disaster relief applications.

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