

Pakistan's Perspective on Climate Action and Role of Women

A Study on the Contributions and Challenges in Combating Climate Change



The study is undertaken by:
DEMOCRACY AND EMPOWERED WOMEN
JAMHOORIAT AUR BAIKHTIAR AURAT (JAZBA)



Pakistan's Perspective on Climate Action and Role of Women

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Under the auspices of:

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Acknowledgements

This report is published by the Aurat Foundation (AF) and South Asia Partnership Pakistan (SAP-PK) under the auspicious of “JAZBA – Democracy and Empowered Women or Jamhooriat aur Baaikhtiar Aurat” Programme with the support of Global Affairs Canada (GAC).

We would like to express our gratitude and appreciation for the contributions made by every member of the Aurat Foundation and SAP-PK teams. In particular, we would like to extend our heartfelt thanks to Nowsheen Khurram for initiating the process for conducting this study. Alyina Rizwan provided valuable research assistance, while Sana Ahmed and Malka Khan were instrumental in the development of the case studies. Shahzad Ashraf's formatting and design skills brought the report to fruition. The dedication, professionalism, and unwavering commitment to excellence displayed by each of these individuals are reflected in the high-quality work presented in this report.

This report is dedicated to all the women's empowerment activists, feminists and women's rights advocates working tirelessly towards promoting women's rights and empowerment, and have now turned their attention towards the pressing environmental challenges facing our planet. Their efforts and commitment towards creating a more sustainable and equitable world are truly inspiring.

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Published by:	Aurat Publication and Information Service Foundation
Layout design by:	Shahzad Ashraf
Printing by:	GS Enterprises
Date of publication:	March, 2023

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About the Author

Simi Kamal is a geographer, water expert, climate change & environment professional, women's rights campaigner and poverty alleviation specialist. She has founded several private sector and social sector organizations, networks and platforms. She has served on numerous international and national boards, committees and think tanks. She is the founder of Hisaar Foundation and the co-founder of Panjwani-Hisaar Water Institute and Every Woman Treaty.



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Abbreviations and Acronyms

AF	Aurat Foundation
CO2	Carbon Dioxide
COP	Conference of the Parties
CSO	Civil Society Organization
DRR	Disaster Risk Reduction
GAC	Global Affairs Canada
GDP	Gross Domestic Product
ICT	Islamabad Capital Territory
IPCC	Intergovernmental Panel on Climate Change
NDC	Nationally Determined Contributions
NDMA	National Disaster Management Authority
NGOs	Non-Government Organization/s
PDMA	Provincial Disaster Management Authority
SAP-PK	South Asia Partnership-Pakistan
SDGs	Sustainable Development Goals
UN	United Nations
UNFCC	United Nations Framework Convention on Climate Change
UNFPA	United Nations Population Fund
WAPDA	Water and Power Development Authority

MESSAGE FROM:

Senator Sherry Rehman

Federal Minister of Climate Change

Government of Pakistan



Without a doubt, the accelerating climate crisis is our gravest historical challenge; one created through decades of wanton environmental abuse and exploitation, and whose life-threatening consequences were ignored until they brought ashore natural disasters of the kind never experienced before. The magnitude, ferocity and now frequency of extreme weather events is something no country can safeguard itself against.

Pakistan has experienced more than its share of climate calamities, particularly the 2022 monster monsoon, that cause immeasurable damage in their wake.

Other than global warming, which has triggered extreme events, it has also been wilful negligence at home about environmental degradation and indifference to people's vulnerability that has taken a toll on lives, livelihoods and infrastructure. The calamities we have experienced need not have been as debilitating had we been attentive to national deficits in climate governance, and recognizing communities in danger.

Thankfully, Pakistan has evolved a climate adaptation framework based on the experiences of recent natural disasters, including the 2022 megaflood. Climate governance too has undergone steady improvement between federal and provincial institutions, with the support of development partners and civil society organizations. There is still a long way ahead, as vulnerabilities on ground become worse season after season, and policy responses are inhibited by existing governance mechanisms.

Pakistan led the debates at COP-27 in Sharm el-Sheikh as chair of the G77, and represented the anger and frustration of highly vulnerable countries towards major carbon emitters. I was extremely pleased that after days of hard negotiation and bargaining, a Loss and Damage facility was created as a mechanism to address financial strain among vulnerable countries, and assist the process of recovery and adaptation. Pakistan too stands to benefit from this mechanism in years to come.

I commend this research report produced by Aurat Foundation, and the critically important theme it touches upon. The gendered aspects of climate stress have been documented over several years, yet the evidence to bolster policy recommendations has been slower to come in. This report makes a useful contribution in this respect, and provides an intelligent advocacy tool for enhancing women's inclusion and agency in climate action, as well as other disadvantaged groups.

We may not be able to prevent the disastrous global 1.5°C scenario that forecasts have warned us about, but how we get there is entirely in our own hands. We can and must take the requisite steps to protect our communities through overhauling systems, applying resources where necessary, and overturning stress and vulnerability through meaningful adaptation.

Foreword by

Naeem Ahmed Mirza

Executive Director

Aurat Foundation



According to some estimates, climate change could destroy all forms of life, including human life, from Earth within the next 100 to 150 years if quick measures to drastically reduce global warming are not undertaken by the international community. The main responsibility for mitigating the climate catastrophe lies on the shoulders of those who have created and exacerbated the crisis by polluting the planet's atmosphere with harmful greenhouse gases, including carbon emissions.

Pakistan is no stranger to the devastation caused by climate change even though it is not a significant carbon emitter. During the past decade, we have witnessed several extreme weather events, including regular heatwaves, massive floods and severe droughts. Yet, it seems we need to do more in terms of improving our understanding of the complex issue and protecting our local communities, especially women and marginalised groups. With these objectives in mind, this report presents and discusses the dangers and challenges posed by climate change as well as possible solutions to its much-feared negative effects, both globally and in the local context.

Authored by renowned environment expert and coordinator of the Women's Water Network Ms. Simi Kamal, the report elaborates on the basic concept of climate change, the global discourse around it and women's key role in organising grassroots movements for climate justice around the world. This will make us aware of the fundamentals of the problem.

The report further discusses efforts made by Pakistan's Ministry of Climate Change under the dynamic leadership of Senator Sherry

Rehman, the National Climate Change Policy and the effects of climate disaster on women and marginalised groups. The devastation caused in Pakistan by the 2022 floods is also examined as an eye-opening example of adverse climate impact for all concerned.

In conclusion, the report highlights long-term, mid-term and short-term recommendations and also provides a macro-economic framework to drastically reducing global warming and eventually shifting to renewable energy resources to save life on Earth. All this requires action by governments around the world under the forum of the United Nations Framework Convention on Climate Change and its annual climate conference – the Conference of Parties or COP, the latest being COP 27 held from 6 to 18 November 2022 – to implement joint decisions, fulfill global commitments and think about human survival and welfare instead of the greed for wealth accumulation and profits.

This research was undertaken under the JAZBA project, which is being implemented jointly by South Asia Partnership-Pakistan and funded by Global Affairs Canada. I am grateful to Mr. Irfan Mufti, the Team Leader of JAZBA, the author of the report Ms. Simi Kamal, the Programme Director AF, Ms. Mumtaz Mughal and National Programme Manager of JAZBA, AF, and the entire team of Aurat Foundation, who contributed in the making of this report.

1. Introduction and Context

In 2018, the **Friends of the Earth** (considered to be the largest global grassroots environmental network) and C40 Cities (a network of the world's greatest cities), brought out a very significant collection of essays in the form of a book. It is entitled **'Why Women will Save the Planet'**. The book brings together the voices of environmentalists, climate change thinkers, feminists and academics to show both the need for women's empowerment for climate action and the powerful changes it can bring¹.

In the past decade some women's empowerment activists, feminists and women's right advocates have turned their attention to the planet and its challenges of **degrading environment, climate change, water challenges, the loss of biodiversity and dwindling food resources**.

1.1 Slim Window for Climate Action

Many people and organizations are calling for a different kind of political, social and environmental leadership to take action in the slim window of next ten years to halt the most dangerous impacts of climate change and begin thinking about how to restore earth and its environment. The children of the world are out in force on the streets of their countries, asking for a livable future, but it has made no difference to the current global leadership. **The time has come for women to take over the task of rebuilding earth and its resources for a safer climate, equitable living conditions and environmental justice, because the men in power, as it seems today, will never do it.** Women need to rise again, as they have done in the past for other causes, and take leadership for climate action.

In order to develop effective leadership in climate change, environment and water sectors women activists must become fluent in the political and economic context, relevant concepts and prevalent terminology.

1. Why Women will Save the Planet, Friends of the Earth and C40 Cities, Zed Books, 2018, Second Edition

1.2 The Climate Emergency – A Corollary of Global Capitalism

The climate emergency and the COVID Pandemic have both exposed the underlying dysfunctions in global, national and local economies and shown how these economies are failing to produce economic, environmental and social justice for people and planet Earth. It is clear that the entire growth model of the global economy is out of sync with the biophysical limits of our planet. In this scenario, terms like green growth, green jobs and the greening of industry become mere 'green washing'.

The political, economic and social activities of people have pushed atmospheric carbon dioxide to higher levels today than they have been in the last 23 million years, potentially posing unprecedented disruptions in ecosystems across the planet. While the last two centuries were about putting carbon into the atmosphere, this century is about its direct impact on the world's water: boiling oceans, melting ice, rising sealevels, unprecedented downpours, major and more frequent storms, pluvial and fluvial floods.

The current mantra of 'build back better' will never deliver until we challenge the current capitalist and development paradigms of perpetual growth in a finite world. Global growth of three percent per year is not compatible with reductions in global resource consumption (including fossil fuels) and reductions in CO₂ emissions rapid enough to stay within the carbon budget for 1.5°C temperature rise this century. **If we do not stay within this limit, human beings will likely not be able to survive on earth.** Moving to a global economy based on Zero Growth and eventual De-Growth seems essential to severely curtail and then end fossil fuel emissions.

Zero Growth is a theory where all economic activities and policies are oriented towards achieving a state of equilibrium. The theory asserts that the continuous growth model is inherently unstable resulting in a boom/bust cycle and cannot support current levels of prosperity indefinitely. Proponents of this theory explicitly challenge the popular equation of economic growth with progress and posit that sustainability has inherent value.

De-Growth goes far ahead of Zero Growth and directly blames the capitalist system for causing human exploitation and environmental destruction. The de-growth economists, activists and researchers advocate for societies that prioritize social and ecological well-being instead of corporate profits, over-production and excess consumption. This requires radical redistribution, reduction in the material size of the global economy, and a shift in common values towards care, solidarity and autonomy. De-Growth calls for transforming societies to slow down and manage climate change, ensure environmental justice and dignified lives.

Currently we target GDP growth² and then we hope that the market mechanism will accomplish 'social and environmental goals. This is an irrational way of approaching economies in the era of climate change. We should instead be targeting directly what we actually want to achieve and make that the goal of governments. New Zealand has recently abandoned GDP growth as an objective and replaced it with human well-being. Scotland and Iceland are following suit. Please note that these countries are led by women.

2. Gross Domestic Product (GDP) is the total monetary or market value of all the finished goods and services produced within a country's borders in a specific time period. As a broad measure of overall domestic production, it functions as a comprehensive scorecard of a given country's economic health. Calculated on an annual basis

2. Basic Concepts of Climate Change

Climate change refers to significant changes in global temperature, precipitation, wind patterns and other measures of climate that occur over several decades or longer. Climate change has long been a natural process on Earth, but the dramatic rise in carbon emissions, starting from the Industrial Revolution, has accelerated the process of global warming. The heavy use of fossil fuels in transport and travel, the military industrial complex, commercial farming, unchecked emissions from industries and the unsustainable luxury lifestyles of the rich have all contributed to the entrapment of greenhouse gases in the atmosphere, leading to permanent rise in global temperature. **This means that human activities have directly led to the warming of the climate, which, if not controlled, will make life unsustainable on the planet.**

2.1 Planetary Boundaries and Tipping Points

Given that the earth is a closed 'finite' system, there are **planetary boundaries** in nine key processes that threaten the stability of earth. These are climate change, loss of biodiversity integrity (functional and genetic), ocean acidification, depletion of the ozone layer, atmospheric aerosol pollution, biogeochemical flows of nitrogen and phosphorus, freshwater use, land-system change, and release of novel chemicals. It is now said that several of these have reached their **Tipping Points** - critical thresholds in a system that, when exceeded, can lead to a significant, often irreversible change in the state of the system.

2.2 Carbon Emissions and Greenhouse Gases

The **Carbon Cycle** describes the process by which living things absorb carbon from the atmosphere, sediments and soil, or food. To complete the cycle, carbon returns to the atmosphere in the form of carbon dioxide or methane by respiration, combustion or decay.

Carbon Footprint is the total amount of greenhouse gases that are emitted into the atmosphere each year by a person, family, building, organization, or company. Greenhouse Gases are those gases that absorb infrared radiation in the atmosphere³, of which carbon dioxide (CO₂) is the main culprit. **The more Carbon Dioxide (CO₂)** there is in the atmosphere, the more the atmosphere warms. A warmer atmosphere holds more water vapor, which affects global warming further and alters the water cycle. **Emissions** are the release of substances (usually gases) into the atmosphere.

Fossil Fuels are organic materials formed from decayed plants and animals that have been converted to crude oil, coal, natural gas, or heavy oils by exposure to heat and pressure in the earth's crust over hundreds of millions of years.

2.3 Net Zero

Net Zero refers to a state in which the greenhouse gases going into the atmosphere are balanced by equal removal out of the atmosphere. The term net zero is important because – for Carbon Dioxide (CO₂) at least – this is the state at which global warming is supposed to become stable. The Paris Agreement (2015) requires states to achieve, by the second half of this century, a balance between anthropogenic emissions by sources and removals by sinks of greenhouse gases.

2.4 Hydrological Cycle

The Hydrosphere is the component of the climate system comprising liquid surface and subterranean water including oceans, seas, rivers, fresh water lakes, underground water.

The **Hydrologic Cycle** is the process of evaporation, vertical and horizontal transport of vapor, condensation, precipitation, and the flow of water from continents to oceans. It is a major factor in determining climate through its influence on surface vegetation, the clouds, snow

3. Greenhouse gases include carbon dioxide, methane, nitrous oxide, ozone, chlorofluorocarbons, hydrochlorofluorocarbons, hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride.

and ice, and soil moisture. The hydrologic cycle is responsible for about a third of the heat transfer from equatorial to polar regions.

2.5 Climate Vulnerability and Resilience

Climate Vulnerability is the degree to which a system is susceptible to, or unable to cope with, adverse effects of climate change, including climate variability and extremes. It is a function of the character, magnitude, and rate of climate variation. **Climate Resilience** is the ability to anticipate, prepare for, and respond to hazardous events, trends, or disturbances related to climate. Improving climate resilience involves assessing how climate change will create new, or alter current, climate-related risks, and taking steps to better cope with these risks. It is also the capacity of a community, business, or natural environment to prevent, withstand, respond to, and recover from a social or ecosystem disruption.

2.6 Climate Change Mitigation and Adaptation

Climate Change Mitigation refers to efforts to reduce or prevent emission of greenhouse gases. Mitigation can mean using new technologies and renewable energies, making older equipment more energy efficient, or changing management practices or consumer behavior at different levels. It can be as complex as a plan for a new city, or as simple as improvements to a cooking stove design. However, many climate change experts believe that the time for mitigation is now gone, and the humanity has only the option of adaptation left.

Climate Change Adaptation refers to adjustments in ecological, social or economic systems in response to actual or expected climatic change and its impacts. It refers to changes in processes, practices and structures to moderate potential damage associated with climate change. Adaptation actions depend on the unique context of a community, business, organization, country or region and can range from building flood resilience, setting up early warning systems for cyclones, switching to drought-resistant crops, redesigning business operations and government policies. We can say this is the ability of a system to adjust to climate change (including climate variability

and extremes) to moderate potential damages, to take advantage of opportunities, or to cope with the consequences.

Preparedness refers to activities and measures taken in advance to ensure effective response to the impact of hazards, including the issuance of timely and effective **Early Warnings** and the temporary evacuation of people and property from threatened locations.

2.7 Disaster Risk Assessment and Reduction

Disaster Risk Assessment refers to qualitative or quantitative approach to determine the nature and extent of disaster risk by analyzing potential hazards and evaluating existing conditions of exposure and vulnerability that together could harm people, property, services, livelihoods and the environment on which they depend. **Early Warning System** refers to the provision of timely and effective information, through identified institutions that allows individuals, groups and local institutions exposed to a climate hazard to take action to avoid or reduce their risk and prepare for effective response. **Disaster Risk Reduction** means taking measures that will reduce the impacts of climate change events or emergencies.

3. Current Global Institutional Architecture for Climate Change

It is important to understand the institutions, policies, goals and trends that inform global and national climate strategies and actions.

3.1 Sustainable Development Goals (SDGs)

It is increasingly clear that infinite growth on a finite planet is not possible⁴. As the proceeds of growth continue to propel greater wealth and resource extraction, we can see poverty and inequality also on the increase. It is evident that on both ecological and economic grounds, the pursuit of growth can and should no longer be the guiding principle of the global economy.

Therefore, the idea of ‘sustainable growth’ and ‘sustainable development’ within the exploitative system of capitalism is not tenable. Yet these ideas have dominated the theoretical and philosophical underpinnings of multilateral lending agencies, international organizations and aid pipelines to third world and poor countries. **Sustainable Development** is what Third World and poor countries are told to do if they are to continue receiving conditional aid. They also have to accept tough trading terms, but the developed countries imposing these terms can ‘feel good’ about contributing to sustainable development.

In the light of these realities, we can see where the Sustainable Development Goals (SDGs) contradict each other. One set of these goals (Goals 6, 12, 13, 14 & 15) call for protection of the planet from degradation, while Goal 8 calls for continued global economic growth equivalent to three percent per year as a method for achieving human development objectives. Any approach which continues to rely on a

4. European Environmental Bureau (2019). Decoupling debunked: Evidence and arguments against green growth as a sole strategy for sustainability

conventional pursuit of economic growth is inevitably going to accelerate, rather than contain, climate emergency.

3.2 Intergovernmental Panel on Climate Change (IPCC)

The Intergovernmental Panel on Climate Change (IPCC) is a group of about 2,000 climate scientists assembled by the United Nations to monitor and assess all global science related to climate change. Every IPCC report focuses on different aspects of climate change. **IPCC reports are seen as the most authentic thinking and the most up to date reference on climate change**, although there are challenges to its conclusions from the global industrialized North.

The latest IPCC reports show that greenhouse gas emissions continue to rise, and current plans to address climate change are not ambitious enough to limit warming to 1.5°C above pre-industrial levels. What is particularly troubling is that these emissions are not evenly distributed—the wealthiest countries are responsible for disproportionately more emissions than developing countries, even though developing countries are experiencing more severe climate impacts.

The IPCC's 6th Assessment and Synthesis Report ⁵ outlines that climate changes will increase in all regions of the globe over the coming decades and that with increase of 1.5°C of global warming, there will be increasing heat waves, longer warm seasons, and shorter cold seasons. All of these trends will become more intense at increase of 2°C of warming – when most parts of the planet will become unlivable.

This latest IPCC document is the third part of the IPCC's 6th Assessment report (AR6 WGIII). It compiles the latest knowledge on what we can do to limit further temperature rises. The second part (WGII), focused on climate impacts, adaptation and vulnerability.

5. IPCC Synthesis Report, Climate Change 2023, released on 20th March 2023

3.3 The Process of UN COPs

The UN climate change conferences are the official meetings of the Conference of the Parties (COPs). Starting in 1995, the COP is the supreme decision-making body of the **United Nations Framework Convention on Climate Change (UNFCCC)**, the international treaty to address climate change. The treaty effectively includes 198 countries. Every year since 1995 (except 2020 due to the coronavirus pandemic), leaders from all over the world have come together to discuss and agree international climate policy. Many of the most significant international climate commitments, agreements and laws have emerged from these summits over the years. Many representatives from civil society, business and academia also attend COP every year to observe and participate in proceedings and host side events to engage and influence policymakers.

The **Kyoto Protocol**, adopted in December 1997, was the first major international climate agreement to call for country-level reductions in greenhouse gas emissions in industrialized nations. COP21 in 2015 produced the **Paris Agreement**. It is a legally binding international treaty to limit increase in global temperatures to below 2°C, **and preferably below 1.5°C** this century. It was adopted by 196 Parties (countries) on 12 December 2015 and entered into force on 4 November 2016. It requires all countries to identify and implement their best efforts on climate change and to communicate them to the UNFCCC through **Nationally Determined Contributions** (NDCs) or 'country pledges'.

COP26 took place in 2021 in Glasgow, Scotland. One of its main outcomes was the **Glasgow Climate Pact**. The COP26 Presidency also established the **Glasgow Financial Alliance for Net Zero**, a global coalition of currently 500-plus financial institutions, to coordinate efforts across the financial system to accelerate the transition to a net zero economy. COP26 also had a large focus on nature, with countries committing to halt and reverse forest loss and land degradation by 2030.

COP27 was held in Sharm al Sheikh (Egypt) in November 2022 and it made strides in addressing a just transition into renewable energy by recognizing the important role of indigenous peoples, local

communities, cities and civil society, including youth and children, in addressing and responding to climate change. The resolution also placed an emphasis on common but differentiated responsibilities and acknowledged the significance of both the cryosphere and oceans when combating the climate crisis. One of the most important elements of the Implementation Plan is the fact that it includes the highly contested loss and damage fund. The resolution ensures that the Global North will establish a **Loss and Damage Fund** for those particularly vulnerable to the adverse effects of climate change.

3.4 Policy Environment in Countries

Most countries of the world have climate change policies, environment policies and water policies to different degrees of sophistication, scope and ambit. Some see the link between women empowerment and these areas, while many have separate policies on women's empowerment. All countries that have signed up to the COP process also produce NDC reports, including Pakistan.

3.5 Global Trends in Climate Change and Women

The nexus between women and the environment emerged in the late 20th century, when research and studies on women's roles, responsibilities and interaction with the environment and natural resources made it evident that women were managers of the natural resources, and that environmental degradation has a direct impact on them. Women's position in water management, forests, and conservation led to a growing body of knowledge of the importance of women's interaction with the environment ⁶.

Climate Change is a persisting global challenge and the inextricable connection between Gender and Climate Change has now been acknowledged and recognized at local, national, and international levels. Although climate change affects everyone, its impacts are greatest on poor countries and poor people and since most of the poor in the world

6. Gender and Climate Change: An Introduction, Edited by Irene Dank Elman, Earth scan 2010, <https://gender.cgiar.org/publications-data/gender-and-climate-change-introduction>.

are women, the impact of climate change is more severe for women than men ⁷. As global climatic conditions change, the ways in which people adapt and cope have specific gender dimensions, which are being increasingly understood. **Women are being seen as powerful agents of change whose participation in planning processes is necessary if the impact of climate change is to be addressed.**⁸ Moreover, women's issues and problems at the local level are being considered in the wider context of women's empowerment, their social status, access to resources and opportunities, control over assets, and their social vulnerability, to understand the relationship between gender and climate change.

Existing studies⁹ on the nexus between gender and climate change are becoming more influential as international commitments and gender responsive policy has led to greater gender mainstreaming and Gender Action Plans for implementation. Policy makers at global and national level have recognized that gender equality is essential to achieving climate change goals, and since 2008, several references to gender have entered the UNFCCC negotiation text. It has also been established that *"when we engage women in climate adaptation, we see progress in reducing poverty and improving food security."*¹⁰

The Green Climate Fund Policy recognizes the linkages between gender and environment and emphasizes the impact of climate change on women. The related Gender Policy *"acknowledges that climate change initiatives are more sustainable, equitable and more likely to achieve their objectives when gender equality and women's empowerment considerations are integrated into the design and implementation of projects. Further, it recognizes that women and vulnerable communities*

7. Report of High-level Roundtable: How a Changing Climate Impacts Women, Council of Women World Leader Women Environment and Development Organization (WEDO) 21 September 2007, <https://wedo.org/wp-content/uploads/2007/12/roundtable-final-report-6-nov.pdf>.

8. Training Manual on Gender and Climate Change. IUCN, UNDP, GGCA, 2009, <https://portals.iucn.org/library/sites/library/files/documents/2009-012.pdf>.

9. Gender and Climate Change: An Introduction, Edited by Irene Dank Elman, Earthscan 2010.

10. *ibid*

are also part of the solution to climate change and should, therefore, be effectively engaged in discussions and decisions that affect them.”¹¹

3.6 Citizen Movements

There are several citizen movements, collectives and action groups that operate in different spaces to articulate their anger at governments and fossil fuel industry, offer solutions, carry out structured activism, lobby and influence and/or put out crucial information on climate. These include Fridays for Future, Extinction Rebellion, Friends of the Earth, Blue Planet and many others. **Women and girls are leaders and front runners in almost all these movements and protests.**

11. Green Climate Fund: Gender Policy and Gender Action Plan 2020-2023, GCF/B.24/15

4. The Impact of Climate Change in Pakistan and the Policy Response

Pakistan has successfully made its case that it is a very small producer of global greenhouse gases, but carries the brunt of the pollution caused by the developed world. The impact of the global climate emergency in Pakistan has been to disrupt its crucial water cycle.

The geographic, atmospheric and hydrological changes in the Himalayan region, along with changes in the water cycle associated with the monsoons, are projected to have catastrophic effects on Pakistan's air and water regimes and its water balance in the coming years. Pakistan's rain-fed, coastal, metropolitan and drought-prone areas have their own huge water, soil and food challenges. Groundwater continues to be overused and mined and its interface with surface water is not much understood.

The floods of 2022, caused by unprecedented rainfall, affected 30 million people and its impact is likely to last over decades.

BOX 1:

Pakistan Floods of 2022

(Based on NDMA report 2022)

The rainfall and floods of July and August 2022 were described as 'a monsoon on steroids' by UN Secretary General, Antonio Guterres. The usually arid and semi-arid Sindh and Balochistan provinces were subject to unprecedented rainfall, surpassing average monthly totals by six and seven times, respectively. The climate event was a combination of cloudbursts after intense heating, cyclones originating in the sea, monsoonal winds sweeping down from the North, cyclonic rain coming in from the West, and fluvial

floods originating in the North of the country. The NDMA report further said that **the five-day maximum rainfall of these two provinces was around 75% more intense than it would have been, had the climate not warmed by 1.2°C. This is an extremely disturbing statement as it foretells the much bigger climate events we can expect when global temperatures rise moves to 1.5 C and then 2 C this century.**

According to the same report, around 33 million people were affected by the floods, including nearly 8 million displaced people. More than 1,700 people lost their lives, one-third of whom were children. More than half (94) of all the districts of the country were declared as calamity hit, the majority in the provinces of Balochistan, Sindh, and Khyber Pakhtunkhwa (KP).

Out of the 25 poorest districts in the country, 19 were among the worst affected. The poverty gap is much bigger, with the number of extremely poor people living below the poverty line increasing to 25 million.

The floods have had a substantial negative impact on Pakistan's economy with damages estimated at PKR 3.2 trillion (US\$14.9 billion). Recovery and reconstruction needs are projected to be 1.6 times the budgeted national development expenditure for fiscal year 2023. Inflation could increase further as food prices rise in response to crop damage, loss of livestock, and the disruption of transport infrastructure critical for supplying agriculture output to markets.

Women have suffered notable losses to their livelihoods, particularly in agriculture and livestock. The floods have increased women's vulnerability to gender-based violence (GBV) due to aggravated household tensions, harassment, and abuse related to displacement and lack of secure infrastructure. Rates of early and forced marriages often increase in the wake of crises and economic

security. The NDMA report quotes UNFPA to state that 640,000 adolescent girls are vulnerable and at increased risk of coercions, GBV, and child marriage. The 2022 floods have severely impacted livelihoods for socially excluded and marginalized groups, primarily comprising of women, landless farmers, on- and off-farm agricultural and livestock/dairy workers, and home-based workers. Women and girls are facing manifold increases in both unpaid domestic and care work.

Source: PAKISTAN FLOODS 2022
Post-Disaster Needs Assessment, Main Report, NDMA, 2022

A new challenge this century is the direct impact of climate change on water. There are new emerging realities as the water regime of Pakistan is affected – the shifting of seasons, natural regions, ecosystems and agro-ecological zones. **These old and new challenges often get swept aside in the national obsession with irrigation-based agriculture and more infrastructure development – leading to under emphasis on the climate emergency and environmental degradation within the country and financial allocations to these sectors.**

Currently there are only two national initiatives relating to climate change and water: Living Indus and Recharge Pakistan, both housed in the Ministry of Climate Change. In the absence of meaningful debate on the full range of climate-induced challenges and solutions, there is disproportionate emphasis on politics, elite entitlement and allocations. National institutions coexist with, and sometimes overlap with, provincial institutions, and the legal framework for each province includes its own laws and regulations overlain by relevant national provisions. The plethora of ministries, institutions and organizations means little action on the ground and unrest among the federating units, within provinces, among districts and local administrative areas, between cities and rural areas.

4.1 National and Provincial Climate Change Policies

Pakistan's **National Climate Change Policy 2012 (updated in 2021)** is certainly the most progressive national policy in relation to advancing women's empowerment in this sector. The policy that has a specific focus on gender and states that climate change is likely to affect poor and underprivileged regions, communities, and people disproportionately as they are marginalized, vulnerable and have the least resources to adapt. Much progress has been made in setting ambitious targets for adaptation and mitigation, and there is reappraisal of women's vulnerability and gender-sensitive objectives to address women's differentiated burdens in climate stress.

Pakistan has ratified the Paris Agreement (2015) which mandates gender equity and justice in climate action by member states. The current **Nationally Determined Contribution report (2021)** pays due attention to women in climate emergencies, and how to help them. **The policy environment in Pakistan appears feasible for positive reinforcement of gender mainstreaming in ecosystem, environment and resilience-based programming in Pakistan.** Pakistan's provinces have developed their own **provincial climate change policies** after some stakeholder consultations, supported by UN system and other donor organizations.

4.2 Women's Status in Pakistan

However, **much of the gains in the climate change policy sector is negated by the poor status of women's rights in Pakistan**, as has been brought out by several recent reports.

The World Economic Forum Global Gender Gap Report of 2022 ¹² ranks Pakistan the second worst country in the world in terms of gender parity. Women lack exposure, confidence, knowledge, skills, information about opportunities, and limited role in politics, and in policies and

12. World Economic Forum, Insight Report: Global Gender Gap Report 2022, World Economic Forum.

programs regarding their aspirations and lives. Formal institutions fall short of facilitating women's access to human, financial and physical capital (education, skills, health facilities, loans and physical assets). Informal institutions (family, community, religion, segregation, marriage) define and affirm norms that give precedence to marriage/child marriage over education and employment, prescribe gendered roles, and condone domestic violence and gender-based violence.

Pakistan is among the countries that are most vulnerable to the risks associated with climate change and ranks 8th on the Global Climate Risk Index 2021¹³. Women continue to face serious challenges amid threats to climate degradation, particularly in occupations that are dependent on natural environments or geographic locations and where climate stress may cause natural hazards. Agriculture, water, and forestry are among the sectors most impacted by climate change and women are heavily engaged in these sectors as full-time labor or secondary workers in addition to their dependence on natural environments for sustenance. Declining crop yields, disrupted water availability, rural out-migration, and frequent natural disasters triggered by climate stress produce a precarious survival scenario for women.

Pakistan's women are further disadvantaged because 9.1 million women agricultural workers play a substantial role in food production and food security, but they are largely unpaid and are vulnerable to exploitation. Women's ownership of land, and control over physical assets is minimal: only 2 percent of women report owning a house or agricultural land as compared to 72 percent of men.¹⁴ Climate change is expected to increase the work related to agriculture production and other subsistence activities such as collecting fuel wood and water, putting extra pressure on women.

Numerous laws have been promulgated ensuring women rights and protection, but their implementation and lack of political will renders them largely ineffective. Very little attention is given to the

13. Federal Ministry of Economic Cooperation and Development & BROT fur die Welt (Bread for the World), Global Climate Risk Index, 2021, Germany.

14. Climate Equity - Women as Agents of Change, NCSW Pakistan, UNDP, March 2022

crucial nexus of culture, religion and the making and implementation of laws. The interconnected jungle of laws, norms and practices have become concrete in Pakistan's patriarchal society in a way that they consistently favor men and place women at disadvantage ¹⁵.

4.3 The Nexus of Climate Change and Gender Inequalities

The challenges of climate change impacts, building resilience and gender inequalities are inextricably linked. By exacerbating inequality, climate change slows progress toward gender equality and thus impedes efforts to achieve wider goals like poverty reduction and sustainable development. Conversely, gender inequality can worsen the impacts of climate change and further propel the 'feminization' of violence, poverty, marginalization and exclusion. Therefore, taking steps to narrow the gender gap and empower women can help counter the impacts of climate change.

The experiences of the 2005 earthquake, and the floods of 2010, 2011 and 2022 have shown that **the patriarchal norms that shield men from their crimes against women, and victimize the women instead, become even stronger in emergency situations.** Gender Based Violence (GBV) is also connected with pressures on the environment and its natural resources and become stark in communities coping with resource scarcity. GBV encompasses certain complexities as a means of control to maintain power structures, traditional norms, customary laws, and access to resources, all resulting in the oppression of women and gender inequalities.

Climate change has already negatively affected the equation and balance between people and nature in Pakistan. The rapid changes are visible and the feared migrations, poverty and loss of livelihoods are a reality to different degrees throughout the country. Adaptation to these climate changes and interventions for addressing these changes need to be designed with the direct participation of women.

15. Kamal S et al, The Effects of the Interplay of Formal and Customary Laws on the Lives of Men and Women, RDC/NRE, 1998

The tendency of local landowning elites to commandeer resources and their ability to manipulate government functionaries in difficult times means that meager environmental and ecosystem resources will continue to be denied to the landless and the poor, especially women. The focus should not only be on building gender parity between community women and men, but in providing interventions that also protect communities from unilateral action by elites and well-intentioned but poorly resourced government institutions. Extra care is needed to ensure that women's environmental entitlements remain and they continue to access environmental resources for their water and food security in these times of climate change.

Nexus thinking around climate change and women has shown that while in theory the nexus is very attractive and logical at global and national levels, where it is actually seen to operate is at the grassroots. This is because the cross connections can be actualized in a smaller ecosystem, wetland, area or village. This level is where effort should be put in to evolve women's leadership first.

5. Developing the Platforms for Climate Action Led by Women

Women have proved that they can respond better, more efficiently and in non-traditional ways when it comes to dealing with crises of climate, environment and water. Women have traditionally interacted with shared and communal environmental entitlements. These environmental entitlements (fruit, herbs, legumes, grains, fuel, and water) are understood and adhered to in an equitable manner because women ensure that there is enough for everyone and they take only what they need.

Women are primarily responsible for finding, providing, storing and managing drinking water and water for sanitation. They are already equipped with skills of efficiency as they know how to obtain maximum usage out of the limited supplies of water that they can access.

In terms of social equity, women share and value the bounties of nature as a social good rather than compete for 'economic goods'. Women are almost often the first ones to cut back on their consumption to make sure that their children and families have enough. Finally, the responsibility of managing water, local pastures, common goods and areas, and environmental entitlements falls on women, whether it is in domestic uses of water, irrigation, agriculture or livestock sectors. All these factors contribute towards **making women natural leaders in climate, environment and water related actions.**

To mitigate the risks and make communities more resilient, **Pakistan needs to put women right at the center of policy, strategy, decision-making platforms** and on local adaptation, preparedness and resilience initiatives and interventions.

The sections below outline the long, medium and short term measures and actions required to fulfil the intent of gender mainstreaming and women empowerment in climate action.

5.1 Long Term Measures: Developing the Enabling Environment

To take advantage of the supportive policy environment in climate change, Pakistan must prepare the enabling environment within which women's leadership can prosper for climate action.

5.1.1 Demonstration of Political Will by Federal and Provincial Governments

The low priority afforded to climate change and water issues in the government and in the country as a whole, means that the hard decisions are yet to be taken. The unprecedented rainfall and storms of 2020 and 2022 and the floods of 2022 have shown us that Pakistan cannot wait to take urgent decisions to control emissions, pollution by agriculture, industry and cities and consumption by the elites, while supporting the poor and vulnerable to cope with climate change impacts. Women will need to be placed on the key platforms that will take these key decisions: standing committees in Senate, National and Provincial Assemblies, Council of Common Interest, key ministries.

Decades of stalling over key national and provincial policies, low levels of debate and discussion, the politicization of critical discourse, keeping the experts and specialists out of decision-making in critical climate change, environment and water sectors **has got to change**. However, the same people in the same position will change neither the discourse nor their style of bureaucratic work.

The women in government departments, assemblies and political parties will have to come forward and demand change. A women's caucus for climate change, environment and water in each assembly would be a key step in this endeavor. They will have to be prepared for this through orientation and knowledge in global climate change scenario and the situation in Pakistan. They already see the examples of what global and national women leaders in other countries have achieved and how Pakistani women have shown global, regional and national leadership at critical times in climate-related recent initiatives and in other sectors.

5.1.2 Building on Recent Progress in Climate Change Policy

Much progress has happened over recent years in revising Pakistan's climate policy framework, setting ambitious targets for adaptation, calling for a reappraisal of women's vulnerability and gender-sensitive objectives to address women's differentiated burdens in climate stress. The recently introduced Climate Change Policy (2021) and submission of the updated Nationally Determined Contribution (2021) pay due attention to women. **The next step here should be detailed framework of action and measures for inculcating women's leadership in climate change.**

However, much more needs to be done to mainstream women's empowerment in the national and provincial water policies, food and agriculture policies, and environment policies.

For example, women account for 48.76 percent of the population of the country, but they are referred to only once in the Water Policy of 2018, in the context of stakeholder participation in section 18.3 where 'women population will be promoted in domestic water supply and water hygiene.' This meager mention shows that in spite of Pakistan's agriculture-based economy – an economy heavily dependent on the work of women – the current Water Policy only takes into account women's participation as domestic users of water.

5.1.3 Reinstatement of Functioning Local Government

Experience in Pakistan has shown that gender interventions (and indeed other forms of development interventions) in both urban areas and rural communities are ineffective unless backed up with services and support available through a functioning local government at the doorstep. A UNDP Pakistan national study of 2012¹⁶ made the point that **grassroots local government and services need to be put back on track and that the very dynamic role of women in this context should be recognized and promoted.** Elected local government with 33 percent women had started to transform the lived environment, local economy and access and control profiles. This good practice has to be reinstated.

16. Khalid Y, Kamal S et al, Pakistan National Report - Social Audit of Local Governance and Delivery of Public Services, UNDP 2012

Pakistan cannot hope to institute the many good policy clauses and mechanisms in the Climate Change Policy documents without empowered and effective local government structures. Preparedness and resilience measures will remain useless without local area arrangements for adaptation, evacuation, recovery and rehabilitation. By its very definition, climate adaptation has to be actualized from the bottom up and that is where building women's leadership is so crucial.

5.1.4 Strategic Thinking by National and Provincial Commissions

It is not necessary that it must be the climate change, environment and water ministries that should take on the gender agenda. It can be the other way around as well. The National and Provincial Commissions on the Status of Women, the Human Rights Ministry, National Commission on Human Rights and the Provincial Human Rights Commissions can take on the climate change agenda as part of their own work, and strengthen gender leadership in the climate-related sectors from that powerful route.

This will require long-term engagement with these institutions to apprise them of the climate challenges and how women's empowerment and human rights are inextricably linked to climate justice. The pluvial and fluvial floods of 2020 and 2022 have been alarming enough and these institutions seem ready to listen.

5.1.5 Development of Climate Change Institutional Architecture at Provincial Level

There is a huge jump from federal level policy to grassroots level action. Given that there are already provincial Climate Change Policies and some kind of action plans available, an institutional architecture requires to be developed that clearly lays out responsibilities for climate adaptation and resilience, including emergency action when needed. This should include the Provincial Disaster Management Authorities (PDMAs), Local government at Divisional, District and UC levels, armed forces, police and rangers. Rural Support Programs (RSPs) can line up in tandem with various levels of local government whenever there is a crises or emergency triggered by a climate event.

5.1.6 Setting up Pakistan's Own Panel of Experts on Climate Change

The bottom line is that we all have to learn to live with climate change and its impact on land, water and the environment. Advances in climate and water sciences and technology will tell us how this can be done. All citizens need to understand what they have to do to conserve and better use water, keep the air clean and control pollution.

The link of academia with government, business sector and civil society to reflect on climate change adaptation is needed, with each group playing its rightful role. Cutting edge specialized research from primary sources is essential, as is re-packaging academic research, science and knowledge for general public, particular affected groups and media.

It is therefore essential to develop a group of Pakistani scientists, academics, experts and researchers, both women and men that can form the basis of Pakistan's own high-level climate change panel to advise the government and all sections of Pakistani society on adaptation and resilience. Part of the stated mandate of this group will be gender mainstreaming in climate adaptation.

5.2 Medium Term Measures: Ecosystem Approaches as the Basis of Redirecting Existing Climate Change Platforms

There are several institutions, platforms and initiatives that can be pressed into service for developing ecosystem based approaches, or whose objectives could be aligned better with the requirements of climate change mitigation and adaptation. Within these institutions space will have to be created for women.

5.2.1 Making the NDMA and PDMA Deliver on their Mandates

The National Disaster Management Authority (NDMA) and the Provincial Disaster Management Authorities (PDMA) were originally set up to actually manage climate disasters and emergencies and not function as just regular government departments with the same structures and processes. Over the years they have become more and more

bureaucratic and cumbersome and are now seen as implementers of foreign funded projects. They seem to have lost their ability to be agile and provide quick responses and actions. Their role in the floods of 2022 was dismal – their functionaries arrived on the scene very late and long after NGOs were the first to provide rescue and relief. They are now seen more as compilers of information on the work of other organizations.

There is an opportunity to change the objectives and make these organizations into rapid response outfits, whose first job is to have on hand climate emergency plans at all times and the ability to coordinate all other rapid response institutions, so it actually manages the immediate impacts of climate disasters.

Part of the revamping of NDMA and PDMA's would be to include practical gender sensitive measures in the emergency response plans, and to have women appointed to all its levels of decision-making.

5.2.2 Making the Water Ministry and the Flood Commission more Effective

It is very clear that the major impact of climate change globally, and especially in Pakistan, is on water resources, water regime and water systems. This means that the water Ministry, the Flood Commission and the Water and Power Development Authority (WAPDA) cannot work on business as usual. There is opportunity to change the objectives of these institutions and their rules of business to make them responsive to the merging climate challenges in the water sectors, not just theoretically but in practical ways, shifting their focus away from constructing large infrastructure and towards nature based solutions. Here, too, the role of women would have to be explicitly stated to change the way they operate.

5.2.3 Changing the Narrative around Women and Climate Change

Pakistan's sensibilities about women's leadership and involvement in climate, environment and water sectors is archaic. Fetching, carrying and managing domestic water, community-based sanitation work, hygiene practices and local environmental entitlements continue to be seen as

women's domain, while national discussions, debates, decisions, infrastructure and initiatives on climate change and water are still seen as men's domain.

Women continue to face many gender-based discriminatory practices which often determine their access to climate change adaptation measures and compensation.

Except for Pakistan's current Climate Change Minister, Senator Sherry Rehman and one Advisor (former), women remain largely invisible in the climate change ministry and provincial departments. There are very few women in the water institutions of the country, water-related ministries and department, water industry and water businesses. But there are several women working on climate change, environment and water in NGO and academic sectors.

Women are seen mostly as 'affectees' of the climate and water crises and are therefore, bracketed as part of the problem. Now they have to become part of the solution. That is the change in the narrative that must happen in the medium term.

By several estimates, women provide at least half the agricultural workforce, even if not remunerated or accurately counted. Women in Pakistan are not only careful users of water but also the custodians of water and environment knowledge and practice that is key to managing the impacts of climate change. This is another message to be embedded in the new narrative.

As Pakistan faces a bleak future in terms of climate change, too much and too little water, high population growth rates and the depletion and pollution of its atmosphere, wetlands and ecosystems, it is essential to **accept women as a legitimate group for high-level engagement.** They must now be recognized as a party to the debate in the country on climate change, dams, water infrastructure, water distribution, irrigation, agriculture, food security and environmental degradation.

Very few women are encouraged to pursue education in the field of climate change and water and there are few who have become prominent in this area as visionaries, scientists, planners, managers, technicians, researchers and professionals. The few women engineers

and professionals often have challenges at the workplace and social biases due to which their careers and professional advancement opportunities are limited. Dejected young women have to be prepared and mentored to move forward and future employers mentored to give these bright and skilled women a chance.

The right narrative and practical measures to induct and keep women can break down traditional gender divisions of labor. Interventions can be designed that explicitly target women and get the 'buy-in' of men in these interventions, so these men do not block the advancement of women. There is a need to promote women's orientation to income, rather than subsistence-only initiatives – that is, move from kitchen gardening to productive agriculture. Protecting women's control over their incomes would be crucial in helping women to come into and stay in climate change related sectors.

5.2.4 Paradigm Shift towards Ecosystem Based Approaches Managed by Women

It has been argued elsewhere in this document that ecosystems embody a functioning relationship between climate, land, water, biodiversity and occupations/livelihoods of people. A change in the climate triggers changes in all the others. Ecosystems can be seen as smaller units within much larger natural regions and can, therefore, be approached and managed more practically.

It is therefore, recommended that the theoretical basis of such interventions based on ecosystems be developed in the medium term. What this implies is that all, or almost all, development interventions in Pakistan will eventually use the ecosystem approach. Given that women are much more engaged with ecosystem services, this approach would mean extensive gender mainstreaming and leadership of local women.

5.2.5 Identifying Climate Vulnerabilities and Developing Mitigation and Adaptation Plans

Figuring out possible climate vulnerabilities, which are likely to be quite different for women and men, would be a fairly new area of approach

and research in Pakistan, especially in the context of ecosystems. A blueprint of how to do this would be a good contribution to climate change programming, in the form of mitigation and adaptation plans. These would become part of the program design.

In each site specific solutions will be needed to enhance the resilience of vulnerable women to live with and manage the shortage of water, reclaim unproductive land, develop nature-based solutions, revive old methods of foraging and collection of environmental goods and eco-system services.

5.2.6 Developing a Toolbox for Supporting Local Action

A Toolbox for local action can be produced with policy, management, and capacity building tools for ecosystem based programming - including specific gender mainstreaming tools - from which relevant ones can be selected for each project site or area. It would also be useful to increase the understanding of women towards ecosystem based adaptation. The Toolbox would contain the new approaches and methods described in these sections.

5.2.7 Developing Extensive Training Program on Ecosystem-based Adaptation

Capacity building of government functionaries, especially at district level, NGO planning and field staff, local development organizations and women's groups would be needed. All of these would require separate packaging of the basic content. These would then have to be tested and translated into local languages and a cadre of trainers developed.

5.2.8 Inducting Young Women into Climate Change, Environment and Water Sectors

It is time to mainstream the strength and resilience of women to ward off further crisis, tackle the impacts of climate change, develop rational use of water, improve land and water management and achieve water and food security. It is time to break the glass ceiling in these sectors and bring on Pakistan's talented women and girls.

Pakistan must invest in women as drivers of climate adaptation and climate resilient measures, water management and conservation, environmental stability, agricultural management and food security. We have seen Pakistani girls and women bloom in the digital and economic sectors. They can bloom in these sectors too.

5.3 Short Term Actions: Streamlining Processes, Removing Barriers and Facilitating Advancement of Women

The recent rains and floods have shown us that we cannot wait and short-term plans and actions are needed immediately.

5.3.1 Knowing Global but Acting Local

In the case of climate change and its impact, streamlining the global-local linkage is really important. The rapid pace of change means that we must forever be learning from other parts of the world and acting quickly. We have also seen how adaptation in the context of the nexus of women and climate change must be local to be effective.

Women's knowledge of local environment and water systems is essential, and their leadership inevitable, if local communities are to manage the expected cycles of floods and droughts and other manifestations of climate change. This knowledge includes reclaiming unproductive land, reviving old methods of irrigation, foraging and collection of environmental goods, water conservation and management, and enhancing eco-system services.

Progress on enhancing resilience can be monitored by documenting the increase in the number of women who adopt diversified and improved management of water, land and rangeland resources; percentage of women managing water, farms and rangelands in any capacity or size; percentage of women, homestead or other, adopting water efficient, climate resilient and improved agricultural practices and the number of women moving to sustainable and climate smart growing practices, including conservation agriculture, agro-ecological approaches, smart irrigation practices, kitchen gardening etc.

Identification of alternative livelihoods for vulnerable communities,

which are likely to face diminishing returns from activities such as fishing and agriculture, is also a key to building resilience.

5.3.2 Putting Women on Key Committees

While Pakistan pursues Loss and Damage funding globally, its official women and human rights platforms and NGOs should be lobbying for putting women on decision-making bodies and committees inside Pakistan. The barriers against induction of women to key bodies and platforms should be challenged and removed.

As a first step the Water Commission and the Climate Commission, chaired by the Prime Minister, should be fully activated and appoint the requisite independent experts, including women experts, to enable rational discourse.

5.3.3 Lobbying for Local Government

Women empowerment advocates should be actively lobbying for putting functional local government with elected representatives in place, at least one-third of whom should be women. The political parties will resist, but this lobbying is essential for removing the hurdles in its institution.

5.3.4 Facilitating Pakistani NGOs to Address the Nexus of Climate Change and Women

Pakistan already has a cascade of NGOs, from grassroots to national level. Reducing legal and structural hindrances for them would facilitate more extensive climate change resilience, preparedness and adaptation. Impact can also be maximized by strengthening inter-NGO networks and coordination.

NGOs are already widely functioning in rural areas and can play a prime role in changing the gender narrative as espoused by men and women. Devising content challenging gender norms and then using this content to disseminate can result in driving rural communities towards a positive spin on gender transformation for climate resilience and adaptation.

NGOs are also best equipped to engage with women and conduct gender and environmental awareness trainings to increase the understanding of gender concepts at the community and institutional levels. A critical mass of women, once mentored and mobilized for participation and transformative leadership can drive preparedness and resilience.

Box 2:

Women's Organizations Coming Together in Swat (Khyber Pakhtunkhwa)

When the rains and floods came in August 2022, very few NGOs could respond immediately in Swat, especially since the return of insurgents to the area. It was very difficult to execute relief activities, particularly in the Matta, which was facing considerable flood damage. The onus was now on the Pakistani armed forces and related agencies to maintain secure conditions during this time of disaster. Despite the looming threat of terrorism, Aurat Foundation developed a partnership with Feminist Fridays to distribute warm clothes including quilts, shawls, socks and woolen capes among 70 marooned and flood affected families in Sakhara, Matta, Swat. This demonstrates the tremendous inroads that local NGOs are able to make, even in areas where accessibility is limited by political conditions and security factors.

Source: Aurat Foundation, January 2023

NGOs are well equipped to direct gender group interventions for formation of women's groups around natural resources, water, climate change and environment.

NGOs can also help obtain direct support from provincial establishment through MOUs with Provincial Climate Change Departments, Wildlife and Fisheries Departments, Public Health Engineering and other relevant departments. Establishing regular liaison with Government Departments at District level and interacting with the currently depleted Local Government Department and extension services in local areas can yield a positive effect on the percentage of women beneficiaries.

5.3.5 Doing the Homework for Climate Funding

In the meanwhile, provincial government departments, Rural Support programs, women's NGOs and academics should already have plans in place to build local preparedness, climate adaptation and resilience in the most climate-vulnerable and climate-affected areas, including the areas affected by the 2022 floods.

When funds come in from Loss and Damage mechanisms, the Green Climate Fund, UN system and other funding initiatives, several local and regional gender-mainstreamed interventions should already be prepared and ready.

5.3.6 Redirecting the Energies of Women Who Served in Elected Local Government

While the local government system has been replaced by a largely moribund administrative local government, some of those dynamic women have migrated into NGOs and poverty alleviation initiatives. **The energy and training of these women should be harnessed for building resilience to climate change and ecosystem-based models and initiatives.** NGOs and local organizations should hire them or induct them as volunteers.

5.3.7 Inserting Ecosystem Based Adaptation into Integrated Floods and Droughts Risk Management

It is now recognized, and we have seen in Pakistan, that too much water and too little water is perhaps the largest climate change impact. Adaptation to this impact is a major challenge faced by Pakistan. There is an opportunity in the short term, to insert this component in existing climate change programming on floods and droughts across Pakistan as an experiment to see if prior planning for local ecosystem management, regeneration and security can ward off the worst impacts. The Toolbox, as described above, would contain the tools to use in these circumstances.

5.3.8 Direct Gender Interventions in Relief Operations

In case of existing projects or programs in any sector where climate change can have impacts (food production, livestock, livelihoods, water management, fisheries), direct gender interventions can be made in the short-term. These interventions can include relief, recovery and rehabilitation. More complex and coordinated interventions can be designed and implemented through women's groups around natural resources, water, climate change and environment.

BOX 3:

Flood Recovery and Rehabilitation Program in District Dadu (Sindh)

When the rains and floods came in August 2022, almost the entire Taluka Johi in District Dadu went under water and remained thus for several months. People were huddled on narrow strips of land barely inches above the water. These people could only be reached by boat. For weeks after the rains it took 8-12 hours to get to Sehwan town, from which an hour's journey had to be taken by foot to get to a place from where boats could be launched.

The relief operation was immediately designed and run by a partnership of Hisaar Foundation (that raised the funds and relief goods) and Sujag Development Organization (a local NGO). For drinking water Hisaar Foundation quickly organized the design, development and manufacture of low cost hand-operated ultrafiltration units that could convert flood water into drinking water, without any energy requirement. These systems were moved by boat and installed in standing water. Food supplies, cooking supplies, mosquito protection was provided at the same time. This relief operation was the first to reach 1000 households in this area, two weeks before anyone else got there – not even the military or NDMA was able to come for weeks after the disaster.

After the relief phase Hisaar Foundation designed longer-term recovery and rehabilitation phase with the same 1000 families, to

provide support till the end of 2024 - for two years. This phase includes shelters, water purification and storage facilities, livelihood recovery interventions (seeds, implements and small ruminants), mother and child nutrition, complete mosquito protection, warm bedding, blankets and clothes, sanitation. All these interventions are focused directly on women, to help them and their families to get back on their feet.

This case is an example of the power and effectiveness of NGOs and citizens when they work together. The rapid response that was provided against heavy odds, is indeed remarkable.

Source: Hisaar Foundation, January 2023

5.3.9 Addressing Gender Based Violence (GBV)

It is clear that women should be seen as powerful agents of change whose participation in planning and implementation processes is necessary if the impact of climate change is to be addressed and successful adaptation initiated.

However, women's issues and problems at the local level must be considered in the wider context of their relationships to ecosystems and the living environment, social status, access to resources and opportunities, control over assets, their social vulnerability, and propensity to be victims and survivors of violence.

Women who suffer GBV inside and outside the home are unlikely to be able to use their potential for managing climate adaptation or remaining resilient. The prevalence and pervasiveness of GBV indicated by available secondary data calls for action. It is, therefore recommended that a model be developed for identifying GBV victims and survivors, supporting them and providing services to GBV survivors as part of ecosystem-based interventions.

5.3.10 Developing Programs for Selected Climate Vulnerable Areas in Different Geographical Zones

Aurat Foundation has incomparable experience in **building political leadership of women in local government, developing women's groups, local leadership and strategic planning and execution**. It also has collaborative relations with several other like-minded NGOs. Given the additional experience of **Gender Equity Program, Awaaz program and working with BISP**, Aurat Foundation should design a program of ecosystem-based intervention in consultation with the Ministry of Climate Change for building climate resilience. This program should be led by women, initially for selected flood affected areas, especially vulnerable wetlands.

This will provide experimental approaches and testing ground for ecosystem-based, women-led climate adaptation interventions.

Annex 1

Key Definitions

A. Definitions Related to Climate Change Terminology

Adaptive Capacity is the ability of a system to adjust to climate change (including climate variability and extremes) to moderate potential damages, to take advantage of opportunities, or to cope with the consequences.

Carbon Cycle describes the process by which living things absorb carbon from the atmosphere, sediments and soil, or food. To complete the cycle, carbon returns to the atmosphere in the form of carbon dioxide or methane by respiration, combustion or decay.

Carbon Footprint is the total amount of greenhouse gases that are emitted into the atmosphere each year by a person, family, building, organization, or company.

Carbon Sequestration is the terrestrial or biologic process by which trees and plants absorb carbon dioxide, release the oxygen, and store the carbon.

Climate Change Adaptation refers to adjustments in ecological, social or economic systems in response to actual or expected climatic stimuli and their effects. Adaptation actions can take many forms, depending on the unique context of a community, business, organization, country or region.

Climate Change Mitigation refers to efforts to reduce or prevent emission of greenhouse gases. It can be as complex as a plan for a new city, or as simple as improvements to a cooking stove design.

De-Growth is a theory that calls for the demise of the global capitalist system, which pursues growth at all costs, causing human exploitation and environmental destruction. It calls for the prioritization of social and ecological well-being instead of corporate profits, over-production and excess consumption. It

also calls for radical redistribution, reduction in the material size of the global economy, and a shift in common values towards care, solidarity and autonomy. De-growth means transforming societies to ensure environmental justice and a good life on earth.

Ecosystem Services are the benefits that humans receive from natural resources.

Emissions is the release of a substance, usually a gas, into the atmosphere.

Fossil Fuels are organic materials formed from decayed plants and animals that have been converted to crude oil, coal, natural gas, or heavy oils, by exposure to heat and pressure in the earth's crust over hundreds of millions of years.

Geologic Sequestration is a process that involves injecting carbon dioxide deep underground where it stays permanently.

Global Average Temperature is an estimate of the Earth's mean surface air temperature averaged over the entire planet.

Global Warming is the recent and ongoing global average increase in temperature near the Earth's surface.

Global Warming Potential is a measure of the total energy that a gas absorbs over a particular period of time (usually 100 years), compared to carbon dioxide.

Greenhouse Gases are those gases that absorb infrared radiation in the atmosphere. These include carbon dioxide, methane, nitrous oxide, ozone, chlorofluorocarbons, hydrochlorofluorocarbons, hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride.

Heat Island is an urban area characterized by temperatures higher than its surroundings. Buildings, roads, and other infrastructure have surfaces that absorb more solar energy, which create higher temperatures.

Hydrosphere refers to liquid surface and subterranean water such as oceans, seas, rivers, fresh water lakes, underground water etc. Hydrologic cycle is the process of evaporation, vertical

and horizontal transport of vapor, condensation, precipitation, and the flow of water from continents to oceans. It is a major factor in determining climate through its influence on surface vegetation, the clouds, snow and ice, and soil moisture. The hydrologic cycle is responsible for 25 to 30 percent of the heat transport from the equatorial to polar regions.

Planetary Boundaries are the nine key processes influenced by humanity, that threaten the stability of Earth. These are: climate change, biodiversity integrity (functional and genetic), ocean acidification, depletion of the ozone layer, atmospheric aerosol pollution, biogeochemical flows of nitrogen and phosphorus, freshwater use, land-system change, and release of novel chemicals.

Reforestation is the planting of forests on lands that have previously contained forests but that have been converted to some other use.

Resilience is the capacity of a community, business, or natural environment to prevent, withstand, respond to, and recover from a (climate) disruption.

Tipping Point is the critical thresholds in a system that, when exceeded, can lead to a significant change in the state of the system, such that the change is irreversible.

Vulnerability is the degree to which a system is susceptible to, or unable to cope with, adverse effects of climate change, including climate variability and extremes.

Zero Growth is a theory where a steady state economy is maintained, through which all economic activities and policies are oriented towards achieving a state of equilibrium. The theory asserts that the continuous growth model is inherently unstable resulting in a "boom/bust" cycle, and that continuous growth in the context of finite resources is unlikely to support current levels of prosperity indefinitely. Proponents of this theory also explicitly challenge the popular equation of economic growth with progress and posit that sustainability has inherent value.

B. Definitions Related to Disaster Risk Reduction (DRR)

Vulnerability is the degree to which a system is susceptible to, or unable to cope with, adverse effects of climate change, including climate variability and extremes.

DRR is aimed at preventing new and reducing existing disaster risk and managing residual risk, all of which contribute to strengthening resilience and, therefore, to the achievement of sustainable development.

Acceptable Risk is the level of loss a society or community considers acceptable given existing social, economic, political, cultural, technical and environmental conditions.

Biological Hazards are the processes of organic origin or those conveyed by biological vectors. They include exposure to pathogenic micro-organisms, toxins and bioactive substances, which may cause the loss of life or injury, property damage, social and economic disruption or environmental degradation.

Build Back Better is the use of the recovery, rehabilitation and reconstruction phases after a disaster to increase the resilience of nations and communities through integrating disaster risk reduction measures. It includes the restoration of physical infrastructure and societal systems, and the revitalization of livelihoods, economies and the environment.

Capacity Building refers to efforts aimed at developing human skills or societal infrastructures within a community or organization that is needed to reduce the level of risk.

Contingency Planning is a management process that analyses disaster risks and establishes arrangements in advance to enable timely, effective and appropriate responses.

Coping Capacity refers to the means by which people or organizations use available resources and abilities to face adverse consequences that could lead to a disaster.

Critical Infrastructure includes the physical structures, facilities, networks and other assets which provide services that

are essential to the social and economic functioning of a community or society.

Disaster Risk Information is comprehensive information on all dimensions of disaster risk, including hazards, exposure, vulnerability and capacity, related to persons, communities, organizations and countries and their assets.

Disaster Risk Assessment is a qualitative or quantitative approach to determine the nature and extent of disaster risk by analyzing potential hazards and evaluating existing conditions that could harm people, property, services, livelihoods and the environment on which they depend.

Disaster Loss Database is a set of systematically collected records about disaster occurrence, damages, losses and impacts, compliant with the Sendai Framework for Disaster Risk Reduction 2015-2030.

Early Warning System is the provision of timely and effective information through identified institutions, that allows individuals exposed to a hazard to take action to avoid or reduce their risk and prepare for effective response.

Hazardous Event is a potentially damaging physical event, phenomenon or human activity that may cause the loss of life or injury, property damage, social and economic disruption or environmental degradation.

Hazard Analysis refers to identification, studies and monitoring of any hazard to determine its potential, origin, characteristics and behavior.

Land Use Planning involves studies and mapping, analysis of environmental and hazard data, formulation of alternative land-use decisions and design of a long-range plan for different geographical and administrative scales.

Preparedness refers to activities and measures taken in advance to ensure effective response to the impact of hazards, including the issuance of timely and effective early warnings and the temporary evacuation of people and property from threatened locations.

Prevention refers to activities to for avoidance of the adverse impact of hazards and means to minimize related environmental, technological and biological disasters.

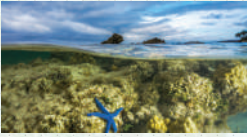
Retrofitting is the reinforcement of structures to become more resistant and resilient to the forces of natural hazards.

Residual Risk is what remains after effective disaster risk reduction measures are in place, and for which emergency response and recovery capacities must be maintained.

Risk Transfer is the process of shifting the financial consequences of particular risks from one party to another, whereby a household, community, enterprise or State authority will obtain resources from the other party after a disaster occurs, in exchange for ongoing or compensatory social or financial benefits provided to that other party.

Rehabilitation is the restoration of basic services and facilities for the functioning of a community or a society affected by a disaster.

Five Key Takeaways from COP27



Establishing a dedicated fund for loss and damage

COP27 closed with a breakthrough agreement to provide loss and damage funding for vulnerable countries hit hard by floods, droughts and other climate disasters.



Maintaining a clear intention to keep 1.5°C within reach

The world is in a critical decade for climate action. This is not hyperbole – the UN's Intergovernmental Panel on Climate Change says limiting warming to around 1.5°C requires global greenhouse gas emissions to peak before 2025 at the latest, and be reduced by 43% by 2030. That's seven short years from now.



Holding businesses and institutions to account

This new phase of implementation also means a new focus on accountability when it comes to the commitments made by sectors, businesses and institutions.



Mobilizing more financial support for developing countries

Finance is at the heart of all that the world is doing to combat climate change. Mitigation, adaptation, loss and damage, climate technology – all of it requires sufficient funds to function properly and to yield the desired results.



Making the pivot toward implementation

Of course, climate pledges aren't worth the paper they're written on if they aren't taken off the page and turned into concrete action. That's why COP27 was expected to be one of "implementation."



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