ADVANCING GENDER-RESPONSIVE CLIMATE ACTION IN INDIA

COMPARISONS WITH GLOBAL SOUTH & POLICY RECOMMENDATIONS

A Dissertation submitted to the Panjab University, Chandigarh for the award of degree of Master of Arts (Public Administration and Public Policy), in partial fulfilment of the requirement for the Advanced Professional Programme in Public Administration (2024-25)

under the guidance and supervision of

Dr. Shyamli Singh

Submitted by

Captain Bijayanand Padhi

50th ADVANCED PROFESSIONAL PROGRAMME IN PUBLIC ADMINISTRATION

(2024-25)

INDIAN INSTITUTE OF PUBLIC ADMINISTRATION

NEW DELHI

CERTIFICATE

It is hereby declared that this dissertation is my original piece of work and to the best of my knowledge and belief, it contains no material previously published or written by any other person. I am aware of the University's norms and regulations regarding plagiarism including the disciplinary action that it may invite. Any use of the works by any other author, in any form, is adequately acknowledged at their point of use or in the Bibliography.

Date: Mar 2025

(Bijayanand Padhi)

Captain

Place: New Delhi

Roll No : 5012

CERTIFICATE

I have the pleasure to certify that Captain Bijayanand Padhi, has pursued his research work and prepared the present dissertation titled '*Advancing Gender-Responsive Climate Action In India Comparisons With Global South & Policy Recommendations'*, under my guidance and supervision. The same is the result of research done by him/her and to the best of my knowledge; no part of the same has been part of any monograph, dissertation or book earlier. This is being submitted to the Panjab University, Chandigarh, for the purpose of Master of Arts in Public Administration and Public Policy in partial fulfilment of the requirement for the Advanced Professional Programme in Public Administration (APPPA) of Indian Institute of Public Administration (IIPA), New Delhi.

I recommend that the dissertation of Captain Bijayanand Padhi is worthy of consideration for the award of Master of Arts degree of the Panjab University, Chandigarh.

Date: March 2025

Place: New Delhi

(Shyamli Singh)

Indian Institute of Public Administration,

New Delhi-110002

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Date: Mar 2025

Place: New Delhi

(Bijayanand Padhi)

Captain

Roll - 5012

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ABBREVIATIONS

GoI	Government of India
ccGAP	Climate Change Gender Action Plan
CSO	Civil society organization
COP	Conference of the Parties
GAP	Gender Action Plan (of the enhanced LWPG)
GII	Gender Inequality Index
GGPI	Global Gender Gap Index
GCI	Gender & Climate Index
IPCC	Inter-Governmental Panel on Climate Change
LIC	Low-income country
LMIC	Lower middle-income country
LWPG	Lima Work Program on Gender (under the UNFCCC)
NAP	National Adaptation Plan
NDC	Nationally Determined Contribution
SBI	Subsidiary Body of Implementation (under the UNFCCC)
SIDS	Small islands developing states

UMIC	Upper middle-income country
UNDP	United Nations Development Program
UNFCCC	United Nations Framework Convention on Climate Change
UNICEF	United Nations Children's Fund
DRR	Disaster Risk Reduction

EXECUTIVE SUMMARY

Climate Change is not a gender-neutral phenomenon. Women and marginalized gender groups, particularly in developing nations, experience disproportionate impacts due to socio-economic vulnerabilities, limited access to resources, and exclusion from decision-making processes. Despite global commitments under the United Nations Framework Convention on Climate Change (UNFCCC), including the Enhanced Lima Work Programme on Gender (LWPG) and the Gender Action Plan (GAP), gender mainstreaming in climate action remains fragmented. India, as a leader in the Global South, has articulated strong climate commitments through its Nationally Determined Contributions (NDCs), National Action Plan on Climate Change (NAPCC), and State Action Plans on Climate Change (SAPCCs). However, these policies exhibit varying degrees of gender responsiveness, necessitating a systematic evaluation. This research benchmarks India's climate policies against global best practices, assesses compliance with UNFCCC gender mandates, and proposes actionable policy recommendations to enhance gender equity in climate governance.

This study is structured around five core objectives: assessing Global South compliance with gender mandates under the UNFCCC framework (LWPG 2014, Enhanced LWPG 2019); developing a Gender & Climate Index (GCI) to evaluate the integration of gender-responsive policies across selected countries; examining the correlation between gender inequality and the effectiveness of climate policies; identifying gaps in India's climate commitments vis-à-vis gender inclusion compared to countries such as Brazil, Peru, South Africa, Kenya, Nepal, Bangladesh, Indonesia, and the Philippines; and formulating policy recommendations for gender-equitable climate action in India, aligned with COP30 requirements and Sustainable Development Goals (SDGs).

The study employs a mixed-methods approach, combining quantitative and qualitative analyses. A Gender & Climate Index (GCI) is developed to benchmark policy performance across five dimensions: capacity building, gender balance in governance, policy coherence, implementation, and monitoring. Qualitative assessment includes policy document analysis, expert interviews, and case studies to identify institutional enablers and barriers, while comparative benchmarking evaluates the degree of gender responsiveness in climate policies across selected Global South nations.

Findings reveal that women's disproportionate exposure to climate risks, including water scarcity, food insecurity, and livelihood loss, is compounded by structural barriers such as land tenure discrimination and financial exclusion. While 90% of NDCs submitted between 2021 and 2022 included references to gender, only 2% explicitly addressed the specific needs of women and girls, underscoring a significant implementation gap. Countries such as Bangladesh and Kenya have advanced gender-responsive adaptation strategies by integrating women into climate resilience initiatives and embedding gender considerations in national climate budgets. In contrast, India's policies, while progressive in their overarching climate commitments, exhibit weak institutional mechanisms for ensuring gender equity in policy formulation and execution. The SAPCCs, despite their intent, lack standardized gender-disaggregated impact assessments, and women's participation in climate governance remains limited at national and subnational levels.

A key contribution of this study is the development of the Gender & Climate Index (GCI), which offers a standardized framework for assessing country performance across five thematic areas: gender capacity (knowledge management and training, weighted at 20%), gender balance (participation in decision-making, weighted at 30%), gender coherence (integration into national climate strategies, weighted at 10%), gender implementation (on-

ground inclusivity in adaptation and mitigation, weighted at 30%), and gender monitoring (tracking policy effectiveness, weighted at 10%). Preliminary findings indicate that while some Global South nations have established clear institutional pathways for gender-responsive climate action, India must strengthen policy coherence and enhance participatory mechanisms to ensure more equitable climate governance.

To address these gaps, this research proposes a set of policy recommendations for India. Gender mainstreaming in climate policies should be reinforced through mandated gender impact assessments in all climate-related national and state action plans, with an emphasis on gender-disaggregated data collection to inform evidence-based policymaking. Women's participation in climate governance should be increased through quota-based representation in decision-making bodies and the establishment of dedicated funding streams for women-led climate adaptation projects. Access to climate finance for women should be enhanced by expanding microfinance mechanisms for female entrepreneurs in sustainable agriculture and renewable energy sectors and integrating gender-responsive budgeting into climate finance frameworks. Disaster risk reduction strategies should incorporate gender-specific planning by ensuring women's leadership in community-based disaster management initiatives and integrating social protection mechanisms tailored to post-disaster recovery for women and marginalized communities. Additionally, the recognition of indigenous women's knowledge in ecosystem conservation should be institutionalized through participatory environmental governance models that value traditional climate resilience practices.

A gender-responsive approach to climate action is not only an ethical imperative but a strategic necessity for enhancing policy effectiveness and resilience. As India prepares for COP30, it has an opportunity to champion gender equity within global climate negotiations while strengthening its domestic policy framework. By integrating the proposed

recommendations, India can lead in shaping an inclusive and just climate transition, ensuring that gender considerations are embedded within all facets of national and international climate action.

CHAPTER – 1

INTRODUCTION

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

Native American Proverb

Just as gender equality is a fundamental question of the inalienability of human dignity, women's rights are human rights. However, their realization is further endangered by climate change, which is a "threat multiplier that amplifies and multiplies existing vulnerabilities":[1] According to UN Women, by 2050, climate change may push up to 158 million more women and girls into poverty, and 236 million more may face food insecurity.[2] While the particular vulnerability of women and girls before, during and after climate-related extreme events is generally recognized, far too few concrete consequences follow from this. This applies in particular to girls, whose already disproportionate disadvantage in many places is further increased by climate change: "Where climate risks are high, girls are more likely to drop out of school, more likely to experience violence, more likely to be subjected to human trafficking and more likely to experience child marriage. Climate impacts such as extreme heat, drought or floods also disproportionately affect girls' health, nutrition and livelihoods."[3] Although these circumstances are known, this leads far too rarely to an adaptation of climate policy: just two

[1] Jaramilo, Grace M. (2024, 11 April). Advancing the rights of girls and women promotes justice and is also effective climate action. *The Conversation*. https://theconversation.com/advancing-the-rights-of-girls-and-women-promotes-justice-and-is-also-effective-climate-action-225766

[2] UN Women. (2023, November). Feminist climate justice: A framework for action. *UN Women*. https://www.unwomen.org/en/digital-library/publications/2023/11/feminist-climate-justice-a-framework-for-action

[3] Jaramilo, Grace M. (2024, 11 April). Advancing the rights of girls and women promotes justice and is also effective climate action. *The Conversation*. https://theconversation.com/advancing-the-rights-of-girls-and-women-promotes-justice-and-is-also-effective-climate-action-225766

percent of all Nationally Determined Contributions (NDCs, the climate pledges of State members of the Paris Agreement) refer specifically to girls, as UNICEF found in a study.[4] Women suffer disproportionally from adverse climate impacts, especially due to their lack of control over resources, because of cultural norms, and a lack of decision-making power. Yet it would be wrong to portray women only as victims, rather than recognizing differences between women and the potential for women to use their agency and informal networks to negotiate their situations, as the Intergovernmental Panel on Climate Change (IPCC), the most authoritative scientific voice on climate change stresses in its 6th Assessment Report.[5]

According to the IPCC, addressing inequities in access to resources, assets and services as well as participation in decision- making is essential to achieving gender equality and climate justice: Women are underrepresented in climate negotiations and, at the same time, are often the once with the least formal protection against climate and other risks.[6] To address these inequities is a matter of procedural and distributive justice. Gender-responsive social protection measures, early warning and disaster risk reduction are required, as well as explicit attention to procedural justice, e.g. through balanced participation of women in decision-making.

Issues of unequal power and agency need to be addressed. Experience shows that ensuring a gender-responsive focus in climate adaptation and mitigation planning and implementation can lead to positive equity outcomes especially for the most vulnerable and marginalized. Climate change affects men and women differently due to existing social, economic, and cultural inequalities. Women often bear the brunt of climate impacts, particularly in developing

[4] UNICEF. (2023). Bring in the girls! *UNICEF*. https://www.unicef.org/media/118691/file/Bring%20In%20the%20Girls!.pdf
[5] Intergovernmental Panel on Climate Change (IPCC). (2022). *Climate change 2022: Impacts, adaptation, and vulnerability*. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change. Cambridge University Press. Retrieved from https://www.ipcc.ch/report/ar6/wg2/
[6] Ibid

countries where they are more reliant on natural resources for their livelihoods and have less access to resources like land, credit, and technology. Gender-responsive strategies take these differences into account and thus, can contribute to ensure that all members of a community contribute to and benefit from climate adaptation and mitigation efforts. Thus, gender responsiveness is essential for effective climate action.

Considering the unique needs and perspectives of all genders leads not only to more effective but also to more equitable climate solutions. Women's knowledge and experience, especially in managing natural resources, can contribute significantly to sustainable practices and resilience building.

Addressing gender in climate action, at the same time, empowers women, which, ultimately, not only benefits them but also strengthens communities and entire societies, as gender equality is linked to improved social and economic outcomes.

Finally, promoting and ensuring a better-balanced participation of women in climate decision-making processes leads to more comprehensive and inclusive policies, as diverse leadership results in better governance and more innovative solutions to climate challenges. Overall, integrating gender considerations in climate action is essential for achieving more equity, inclusiveness, sustainability, and effectiveness in climate action.

Statement of Problem

It is therefore widely accepted that women, particularly in the developing countries of the Global south are disproportionally affected by the effects of Climate Change.

In December 2019, at COP25 in Madrid, the Enhanced Lima Wok Program on Gender and its Gender Action Plan (GAP) was adopted acknowledging the need for gender mainstreaming in climate policies and actions, given the fact that climate change impacts differ largely due to huge gender inequalities. Therefore, addressing inequalities in and by climate action as well as due participation in decision-making is essential to achieving gender equality *and* climate justice. The Lima Work Program on Gender (LWPG) was originally established in 2014 to advance gender balance and to better integrate gender considerations in climate actions and policies.[7] In December 2019, at COP25 in Madrid, the Enhanced Lima Wok Program on Gender and its Gender Action Plan (GAP) were adopted in Decision 3/CP.25,[8] acknowledging the need for gender mainstreaming through all relevant targets in activities under the Convention in recognition of the fact that climate change impacts on women and men can differ due to gender inequalities. Special emphasis is put on developing countries, especially local communities and indigenous peoples.[9] The enhanced LWPG also emphasizes, as important context factor of gender responsiveness, the *"*imperatives of a just transition of the workforce and the creation of decent work and quality jobs in accordance with nationally defined development priorities,"[10] a nexus that was taken up four years later at COP28 in Dubai and led to the establishment of the "COP 28 Gender-Responsive Just Transitions and Climate Action Partnership[11].

[7] UNFCCC. (n.d.). *Lima work programme on gender*. United Nations Framework Convention on Climate Change. Retrieved from https://www4.unfccc.int/sites/NWPStaging/Pages/Lima-Work-Programme-on-Gender.aspx

[8] **UNFCCC.** (2019). *Enhanced Lima work programme on gender and its gender action plan*. United Nations Framework Convention on Climate Change. Retrieved from https://unfccc.int/documents/210472

[9] Ibid

[10] Ibid

[11] UNFCCC. (n.d.). *COP 27*. United Nations Framework Convention on Climate Change. Retrieved from https://unfccc.int/event/cop-27?item=14

However, the compliance by member countries has been assessed to be 'poor' as 2% of all Nationally Determined Contributions (NDCs, the climate pledges of State members of the Paris Agreement) refer specifically to girls/ women.

It is therefore an accepted fact that gender responsiveness of climate policies is the need of the hour and is also mandated by the accepted resolutions of UNFCCC. Integrating gender considerations in climate action is therefore essential for achieving more equity, inclusiveness, sustainability, and effectiveness in climate action.

India is seen as a leader of the global south and has set ambitious climate goals and targets through its National Action Plan for Climate Change and NDCs. The Conference of Parties (COP) 30 which is due to be held in Brazil (first to be held in the Amazon, a vital biome in the fight against Climate Change) in Nov 2025 is a seminal COP as it requires all countries to submit their updated NDCs alongwith progress made on various climate goals till date. This COP therefore offers India a unique opportunity to achieve gender equity in its climate goals/ policies and at the same time enable the country to achieve the Sustainable Development Goals (SDGs).

Research Objectives

The study , first of its kind aims to assess the gender responsiveness of various climate policies and action plans in India vis-à-vis other developing countries in South America, Africa & Asia and finalise suitable policy recommendations for strengthening aspects of gender equity in our climate policies drawing from best practices of other countries. The envisaged objectives can be outlined as under: -

(a) Assess Performance of countries of Global South vis-à-vis UNFCCC Lima Work Programme on Gender (2014) & Extended LWP adopted in COP 25, Madrid (2019).

(b) Measure the comparative performance of countries in the domestic implementation of the UNFCCC Gender Action Framework Plan (GAP) & develop a Gender & Climate Index.

(c) Study the correlation, if any between Gender Inequality & Gender responsiveness of climate policies.

(d) Analyse India's commitments made vide NAPCC, NDCs, SAPCCs and other policy initiatives and compare them with other countries of Global South to identify policy gaps.

(e) Finalise key policy recommendations for GoI/ MOEFCC and suggest actionable policy inputs for updated NDCs prior COP 30 – Brazil (2025).

Research Strategy/ Design

The criteria for selection of countries besides India for the comparative study were developing, Global South, emerging voices in Global policy, areas highly vulnerable to Climate Change induced Disasters and high gender inequality. The UNDP Gender Inequality Index (GII)[12] measures the Gender Inequality of countries based on three pillars viz reproductive health, empowerment and economic activity. Further, the World Bank Global Gender Gap Index (GGPI) [13] measures gender parity across four pillars: economic participation and

[12] **United Nations Development Programme. (2024).** ***Gender Inequality Index (GII)*****. Human Development Reports.** **https://hdr.undp.org/data-center/thematic-composite-indices/gender-inequality-index**

[13]World Economic Forum. (2024). *Global Gender Gap Report 2024: Benchmarking gender gaps*. https://www.weforum.org/publications/global-gender-gap-report-2024/in-full/benchmarking-gender-gaps-2024-2e5f5cd886/

opportunity, educational attainment, health and survival, and political empowerment. These two widely accepted indices for measuring gender parity amongst countries are therefore considered to be a vital start point in the identification of countries for the study.

Accordingly, the following countries have been selected for the study: -

(a) South America (02) – Peru & Brazil.

(b) Africa (02) – South Africa & Kenya

(c) Asia (05) – India, Nepal, Bangladesh, Indonesia and Philippines.

Rationale/ Justification

The rationale for selection of the above countries has been indicated at Table 1below:-

Table 1 – Selection of Countries for the Gender & Climate Study

Ser	Continent	Country	Rationale
1	Asia (05)	India (GII – 108)	
2		Bangladesh	Severely prone to Climate Hazards, (GGPI – 99, GII – 133)
3		Nepal	Severely prone to Climate Hazards, (GGPI – 117, GII – 116)
4		Indonesia	Severely prone to Climate induced Hazards – Tsunami, Earthquakes, Volcanoes, rising sea levels; (GGPI – 100, GII – 109)
5		Philippines	Highly climate hazard hazard prone; (GGPI – 25, GII – 92)
6	Africa (02)	South Africa	BRICS member; Historical discrimination - colour and gender; GGPI - 18, GII – 99
7		Kenya	Major African voice, Patriarchal society (GGPI – 75, GII – 139)
8	South America (02)	Peru	COP 20 Host – Lima Work Program on Gender adopted, Global Gender Gap Index (GGPI) – 40, Gender Inequality Index (GII) - 85
9		Brazil	BRICS member; COP 30 Host; GGPI – 70, GII - 94

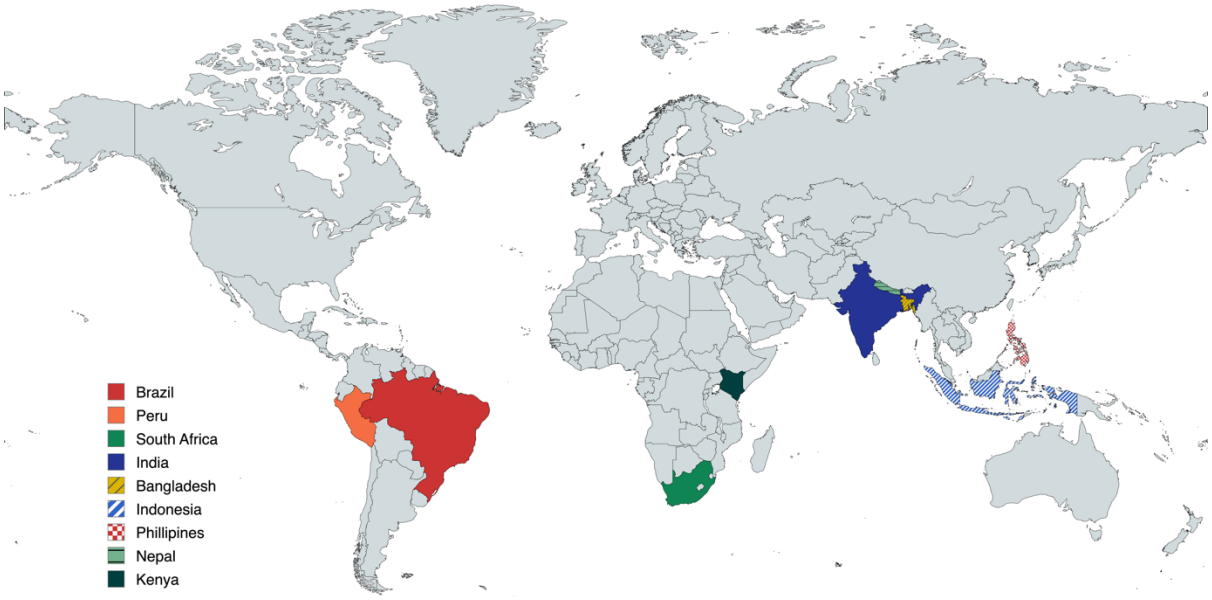

Figure 1.1 Pictorial representation of Countries selected for Gender & Climate Study

The assessment aims to develop a unique first-in-kind Gender & Climate Index (GCI) based on the UNFCCC extended LWP (2019) and develop a inter se ranking amongst the countries in the study highlighted at Para 16 . The proposed GCI could after that be applied to any UNFCCC member country based on the standardized assessment areas. The areas of assessment are proposed to be drawn from objectives and activities listed in Extended LWP adopted 2019.

Research Methods and Data Sources

This study will adopt a mixed-methods research approach, combining both qualitative and quantitative methods. Qualitative methods can provide in-depth insights into culture, policy impacts, and collaboration dynamics, while quantitative methods can help develop a Gender Climate Index (GCI) with correlations in gender, climate and associated policy making.

The study would rely on both primary and secondary sources. The study is proposed in two stages: -

(a) Detailed Assessment Form/ Questionnaire for evaluation of each of the five areas of UNFCCC LWP 2019 by using Secondary Data from Open Source Literature/ World wide Web & development of a proposed Gender Climate Index (GCI).

(b) *India*-specific Policy Recommendations to be finalized through a Questionnaire for Climate Change Policy Experts by way of Primary Data collection from Govt, Non-Profit, Academia, Think Tanks, Startups & Pvt Sector.

Research Questions

The study aims to answer the following Research Questions: -

(a) What is the progress made by member countries including India on UNFCCC LWP?

(b) Are NDCs, NAPs, NAPAs of countries Gender Inclusive? If so, to what extent?

(c) Examine & Assess the extent of Women's participation and responsiveness to Climate Policies of India?.

(d) What are the good practices in other countries which India can learn from?.

(e) What are the gaps, if any that need to be plugged for holistic Climate response?.

(f) What are the key policy inputs/ shifts required for Gender responsive Climate Action?.

Scope/ Limitations/ Delimitations

The study aims to compare the progress made by member countries on the UNFCCC extended LWP of 2019, draw best practices from these countries for India and recommend policy inputs for gendered climate action for India. The scope encompasses both qualitative and quantitative analysis, ensuring a holistic understanding of the subject matter. Additionally, the proposal draws from secondary data of other countries available as books, research papers, journals and world wide web.

Therefore, for drawing up of the comparative matrix of the GAP performance of member countries (GCI) is entirely reliant on the available information on the world wide web and cannot be reverified independently. The study is limited in scope to only those aspects which are available as open-source information. Further, primary data collection aims to draw from the experience of subject matter experts from all sectors including government, NGOs, academia and think-tanks etc. However, given the nuanced understanding of the issue amongst such a varied group of people and gender, it is likely that the policy recommendations would be varied (based on individual expertise). However, the research outcome aims to summarise these varied recommendations into standardised actionable policy inputs for GoI.

Research Methods to be Applied and Data Sources

Primary and secondary data was collected. Primary data shall was collected through questionnaire/ interviews of the stake holders and finalisation of policy inputs for GoI. Secondary data was collected through literature review of articles in referenced academic journals, reports and policy documents by credible sources.

The study involved an in-depth study and analysis of Research Papers and articles on the issue which have been published in various renowned journals as well as available through desktop survey. An international scan on the subject was carried for capturing the present status and best practices. Interviews were conducted from subject matter experts amongst GoI, NGOs, academia, think tanks, private sector and climate start-ups.

Chapterisation Scheme

The broad chapterisation scheme will be as enumerated: -

Chapter 1: Introduction

This chapter introduces the research topic, outlining the significance of gender-responsive climate action and its relevance in India. It presents the problem statement, research objectives, scope, and research questions while contextualizing India's climate commitments within global frameworks.

Chapter 2: Literature Review

This chapter provides a critical review of existing literature on gender and climate change, analyzing key theoretical frameworks, empirical studies, and global policy developments. It examines gender disparities in climate vulnerability, the role of women in adaptation and mitigation, and best practices from international climate governance.

Chapter 3: Research Methodology

This chapter details the research design, data collection methods, and analytical frameworks used in the study. It describes the development of the Gender & Climate Index (GCI), the selection criteria for comparative case studies, and the mixed-methods approach adopted for policy assessment.

Chapter 4: Comparative Analysis of Gender-Responsive Climate Policies in the Global South

This chapter evaluates the gender responsiveness of climate policies in selected Global South nations, including Bangladesh, Kenya, Brazil, and Peru. It identifies best practices, policy innovations, and institutional frameworks that have successfully integrated gender considerations into climate action.

Chapter 5: Assessment of India's Climate Policies Through a Gender Lens

This chapter critically examines India's climate policies, including the NAPCC, SAPCCs, and NDCs, assessing their gender responsiveness. It identifies policy gaps, challenges in implementation, and areas where gender considerations are insufficiently integrated.

Chapter 6: Findings and Discussion

This chapter synthesizes key findings from the comparative analysis and India-specific policy assessment. It discusses the results of the Gender & Climate Index (GCI), highlighting India's strengths and weaknesses relative to other nations and the broader implications for gender-equitable climate governance.

Chapter 7: Policy Recommendations for Strengthening Gender-Responsive Climate Action in India

This chapter proposes evidence-based policy recommendations to enhance gender inclusion in India's climate policies. It focuses on institutional reforms, financial mechanisms, governance structures, and participatory frameworks to improve gender-responsive adaptation and mitigation strategies.

Chapter 8: Conclusion and Way Forward

This chapter summarizes the study's key conclusions, emphasizing the necessity of integrating gender equity into climate action. It outlines a strategic roadmap for India's policymakers, emphasizing the need for a just, inclusive, and sustainable climate transition ahead of COP30 and beyond.

CHAPTER – 2

LITERATURE SURVEY

Introduction

Climate Change, a phenomenon driven by human activities such as industrialization, deforestation, and fossil fuel consumption, is reshaping ecosystems, economies, and communities worldwide. The rising global temperatures, increasing frequency of extreme weather events, and disruption of natural systems are urgent reminders of the challenges that climate change poses [14]. However, climate change does not affect all individuals and communities equally. This literature review aims to explore the intersection of climate change and gender, revealing how gender disparities can exacerbate vulnerabilities and how equitable responses can lead to more effective climate solutions. Understanding this intersection is crucial for policy-making, as it brings to light the need for inclusive and gender-sensitive approaches to climate adaptation and mitigation.

The Science of Climate Change

Climate change refers to long-term shifts and alterations in temperature, precipitation patterns, and other atmospheric phenomena on a global scale. These changes are primarily driven by human activities, particularly the burning of fossil fuels, deforestation, industrial processes, and agricultural practices. This section outlines the mechanisms of climate change, key drivers, observed impacts, and future projections.

[14]Intergovernmental Panel on Climate Change. (2021). Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report. Cambridge University Press.

Mechanisms of Climate Change

At the core of climate change is the enhanced greenhouse effect, a process where greenhouse gases (GHGs) trap heat within the Earth's atmosphere, leading to a rise in global temperatures. The major GHGs contributing to this effect include carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), and fluorinated gases. Human activities have significantly increased the concentration of these gases:

- **Carbon Dioxide (CO_2)**: Primarily released from burning fossil fuels (oil, coal, and natural gas) and deforestation. Since the pre-industrial era, CO_2 levels have surged from 280 parts per million (ppm) to over 410 ppm in 2021 [15].
- **Methane (CH_4)**: Released during agricultural activities (e.g., rice paddies and livestock digestion), fossil fuel extraction, and waste management. Although methane is less abundant than CO_2, it is over 25 times more effective at trapping heat over a 100-year period (Global Carbon Project, 2023) [16].
- **Nitrous Oxide (N_2O)**: Emitted from agricultural soil management, industrial processes, and combustion of fossil fuels. It has 298 times the global warming potential of CO_2 over a 100-year period [17].

The **Intergovernmental Panel on Climate Change (IPCC)** has noted that human influence on the climate system is unequivocal, with observed warming trends directly linked to

[15]ibid

[16]Global Carbon Project. (2023). Annual Global Carbon Budget Report 2023. Global Carbon Project. https://www.globalcarbonproject.org/carbonbudget/.

[17]Intergovernmental Panel on Climate Change. (2021). Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report. Cambridge University Press.

increased GHG emissions. The Earth's average temperature has risen by approximately 1.1°C since the late 19th century, with the past decade (2010-2019) being the warmest on record [18].

Key Drivers of Climate Change

The main anthropogenic (human-caused) drivers of climate change can be grouped into four broad categories:

1. **Energy Production**: The burning of fossil fuels for electricity, heat, and transportation remains the largest contributor to GHG emissions. As of 2020, energy production accounted for approximately 73% of global GHG emissions, with coal and natural gas being the most significant sources [19].
2. **Deforestation and Land Use Changes**: The conversion of forests to agricultural land or urban areas releases significant amounts of CO_2 stored in trees and soil. The Amazon rainforest, often referred to as the "lungs of the Earth," has faced unprecedented levels of deforestation, losing over 17% of its original area due to logging, mining, and farming (FAO, 2022). Deforestation accounts for roughly 10-15% of global GHG emissions [20].
3. **Agriculture**: Agriculture is a major driver of climate change due to methane emissions from livestock, rice cultivation, and the use of synthetic fertilizers that increase nitrous oxide levels. In addition, agricultural expansion often leads to deforestation, further exacerbating GHG emissions [21].

[18]World Meteorological Organization. (2023). State of the Global Climate 2023. World Meteorological Organization. https://public.wmo.int/en/our-mandate/climate/wmo-statement-state-of-global-climate.
[19]International Energy Agency. (2022). Global Energy Review 2022. International Energy Agency. https://www.iea.org/reports/global-energy-review-2022
[20]Ibid 17.
[21]Ibid 16..

4. **Industrial Processes**: The production of cement, chemicals, and metals releases CO_2 and other GHGs. These sectors also contribute to air pollution through emissions of aerosols and particulate matter, which can have both warming and cooling effects on the climate [22].

Observed Impacts of Climate Change

The impacts of climate change are already evident across the globe, affecting ecosystems, human health, infrastructure, and economies. Below are some of the major observed impacts:

- **Rising Temperatures**: The global average temperature has increased by approximately 1.1°C above pre-industrial levels. This warming has resulted in more frequent and intense heatwaves, with Europe experiencing record-breaking temperatures in 2019 and 2022 [23]. The frequency of heatwaves has tripled since the 1980s, posing significant health risks, particularly for vulnerable populations such as the elderly, children, and those with pre-existing health conditions [24].
- **Melting Ice and Sea Level Rise**: The warming atmosphere and oceans have accelerated the melting of glaciers and ice sheets in the Arctic and Antarctica. The Greenland ice sheet, for example, has been losing an average of 279 billion tons of ice per year from 2006 to 2015 [25]. As a result, global sea levels have risen by about 20 cm

[22]Intergovernmental Panel on Climate Change. (2019). Climate Change and Land: An IPCC Special Report on Climate Change, Desertification, Land Degradation, Sustainable Land Management, Food Security, and Greenhouse Gas Fluxes in Terrestrial Ecosystems. IPCC. https://www.ipcc.ch/srccl/

[23] ibid 18.

[24]United Nations Environment Programme. (2021). Global Climate Disasters and Their Economic Impact. UNEP. https://www.unep.org/resources/report.

[25]National Aeronautics and Space Administration. (2021). Greenland Ice Loss: Annual Report. NASA. https://climate.nasa.gov/news/3120/greenland-ice-loss-annual-report/

since 1900, with projections indicating an additional rise of 0.3 to 1 meter by 2100, depending on emission scenarios [26].

- **More Intense Storms and Extreme Weather**: Warmer temperatures have led to an increase in the intensity and frequency of extreme weather events, such as hurricanes, cyclones, and heavy rainfall. The Atlantic hurricane season in 2020 was the most active on record, with 30 named storms, 13 hurricanes, and six major hurricanes, causing over $60 billion in damages [27].
- **Ocean Acidification**: Increased CO_2 concentrations are not only warming the atmosphere but also being absorbed by oceans, leading to ocean acidification. The pH of ocean surface waters has decreased by 0.1 units since the industrial revolution, representing a 30% increase in acidity. This change negatively affects marine ecosystems, including coral reefs, shellfish, and fish populations[28].

Future Projections and Climate Scenarios

The future trajectory of climate change largely depends on the level of GHG emissions and the effectiveness of mitigation efforts. The IPCC's Special Report on Global Warming of 1.5°C [29] outlines several emission scenarios, known as Representative Concentration Pathways (RCPs):

- **RCP 2.6**: Assumes aggressive mitigation and a peak in GHG emissions by 2020, with a likely temperature increase of 1.5°C by the end of the century.

[26]ibid 17.
[27]National Oceanic and Atmospheric Administration. (2021). Hurricane Season 2020 Report. NOAA. https://www.noaa.gov/news/record-breaking-2020-atlantic-hurricane-season-officially-comes-to-end.
[28] ibid 22.
[29]Intergovernmental Panel on Climate Change. (2018). Global Warming of 1.5°C. An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty. IPCC. https://www.ipcc.ch/sr15/.

- **RCP 4.5**: Assumes stabilization of emissions by mid-century, leading to a temperature increase of approximately 2.4°C.
- **RCP 8.5**: Represents a business-as-usual scenario with high GHG emissions, resulting in a likely temperature increase of 4.3°C by 2100.

If current trends continue, global temperatures are expected to exceed the 1.5°C threshold by the early 2030s, with severe consequences for ecosystems and human well-being [30]. Among the projected impacts are increased food insecurity due to reduced crop yields, heightened water scarcity in arid regions, and greater health risks from heat stress and vector-borne diseases [31].

Regional Differences in Climate Change Impacts

The effects of climate change are not uniform; different regions experience varying levels of vulnerability due to geographic, socio-economic, and cultural factors. For example:

- **Small Island Developing States (SIDS)** face existential threats due to rising sea levels, increased storm intensity, and coastal erosion. Countries like the Maldives and Kiribati are at risk of losing significant portions of their land, which could displace entire populations [32].
- **Arctic Regions** are warming nearly twice as fast as the global average, a phenomenon known as Arctic amplification. This rapid warming is leading to the thawing of permafrost, which releases trapped methane and further accelerates global warming [33].

[30]ibid 17.
[31]World Health Organization. (2021). Health and Climate Change: The Vulnerability of Women and Children. WHO. https://www.who.int/publications/i/item/9789240036727.
[32]ibid 24.
[33]ibid 22.

- **Sub-Saharan Africa** is particularly vulnerable to climate impacts due to its dependence on rain-fed agriculture. Changes in precipitation patterns and increased drought frequency threaten food security and water availability, exacerbating poverty and inequality [34].

Disproportionate Impact of Climate Change on Vulnerable Populations

Climate change has far-reaching effects on populations across the globe, but its impacts are not equally distributed. Vulnerable populations, including those living in poverty, women, indigenous communities, and residents of small island developing states (SIDS), disproportionately bear the brunt of climate-related changes. This section examines how socio-economic status, geographic location, and existing inequalities exacerbate the vulnerabilities of different populations, illustrating the unequal burden of climate change on the world's most disadvantaged.

Socio-Economic Vulnerabilities to Climate Change

Poverty is one of the most significant factors determining vulnerability to climate change. Low-income populations are more likely to live in areas exposed to environmental hazards, such as floodplains or drought-prone regions, and have fewer resources to adapt or recover from climate-related shocks. According to the **World Bank** [35], over 700 million people live in extreme poverty, with a substantial portion residing in regions highly susceptible to climate impacts, such as Sub-Saharan Africa and South Asia.

[34]World Bank. (2022). Economic Losses from Climate Disasters 2010-2019: World Bank Data and Statistics. World Bank. https://databank.worldbank.org/reports.aspx?source=climate-change.
[35] ibid 34.

Sub-Saharan Africa is particularly vulnerable due to its heavy reliance on rain-fed agriculture, low adaptive capacity, and socio-economic challenges. A significant portion of the population depends on small-scale farming for subsistence, making them highly vulnerable to erratic weather patterns and prolonged droughts. In countries like **Niger**, where over 80% of the population relies on agriculture, recurrent droughts have contributed to widespread food insecurity, exacerbated poverty, and increased migration to urban areas [36].

In **Bangladesh**, one of the most densely populated countries in the world, rising sea levels and increased flooding due to climate change are threatening both rural and urban communities. About **40% of the population** depends on agriculture, and repeated flooding has made crop cultivation increasingly difficult, leading to higher food prices and forced migration to urban slums [37]. In these urban environments, climate migrants often face inadequate housing, lack of sanitation, and limited access to clean water, compounding their vulnerability to climate impacts.

Geographic Vulnerability: Small Island Developing States (SIDS) and Coastal Regions

Geographic location is another key determinant of vulnerability to climate change. Small island developing states (SIDS) and coastal regions are particularly at risk due to their proximity to rising sea levels and their dependency on coastal ecosystems for livelihoods and tourism.

Small Island Developing States (SIDS) are among the most threatened regions. Countries such as the **Maldives, Tuvalu,** and **Kiribati** are facing existential threats from rising sea levels, which are projected to submerge large parts of their territories by the end of the century.

[36] Food and Agriculture Organization. (2022). Gender and Climate Change: Key Facts. FAO. https://www.fao.org/3/cb7733en/cb7733en.pdf.
[37] United Nations High Commissioner for Refugees. (2022). Global Trends: Forced Displacement in 2022. UNHCR. https://www.unhcr.org/globaltrends.

According to the **Intergovernmental Panel on Climate Change** [38], global sea levels have risen by approximately **20 cm since 1900**, and current projections indicate that they could rise by an additional **0.3 to 1 meter** by 2100, depending on future emission scenarios. For many SIDS, even small increases in sea level can lead to severe coastal erosion, saltwater intrusion into freshwater supplies, and the destruction of critical infrastructure (United Nations Environment Programme [39].

In **Tuvalu**, a country consisting of nine low-lying atolls in the Pacific Ocean, rising sea levels have already caused significant coastal erosion, forcing entire communities to relocate. The government of Tuvalu has advocated for international climate action to address these issues, calling for stronger commitments to reducing greenhouse gas emissions and financial assistance for adaptation measures [40].

Coastal Regions in South and Southeast Asia are also experiencing increased vulnerability due to rising sea levels, tropical storms, and changing precipitation patterns. In **Vietnam**, the **Mekong Delta**, home to over 17 million people, is highly vulnerable to flooding and saltwater intrusion. The delta produces over half of the country's rice and 90% of its agricultural exports, making it crucial to both local livelihoods and national food security [41]. However, rising sea levels, combined with the construction of upstream dams, are reducing the freshwater flow into the delta, which has resulted in saltwater intrusion affecting nearly **50%** of the region's arable land [42].

[38] ibid 17.

[39] ibid 24.
[40] ibid 24.
[41] World Bank. (2023). World Development Report 2023: Migrants, Refugees, and Societies. World Bank. https://www.worldbank.org/en/publication/wdr2023.
[42] Ibid 36.

Gendered Vulnerabilities in Climate Change

Climate change impacts men and women differently due to existing gender inequalities in access to resources, decision-making power, and economic opportunities. Women, especially in rural and low-income settings, are disproportionately affected by climate-related disruptions.

Women in Agriculture: In many developing countries, women are responsible for a significant portion of agricultural production but often lack secure access to land, credit, and extension services. In **Sub-Saharan Africa**, women comprise nearly **50% of the agricultural labour force** but own less than **20% of the land** [43]. Without secure land tenure, women have less control over decision-making related to land use, and they are less likely to adopt long-term climate adaptation strategies, such as agroforestry or soil conservation practices. In **India**, where women play a central role in agricultural production, climate change has led to increased migration by men seeking employment in urban areas, leaving women with the additional burden of managing both agricultural and household responsibilities [44].

Health Impacts: Women are also more vulnerable to the health impacts of climate change. Extreme weather events, such as floods and heatwaves, increase women's caregiving responsibilities, as they are often responsible for caring for children, the elderly, and the sick. According to the **World Health Organization** [45], pregnant women are particularly vulnerable to climate-related health risks, including heat stress, vector-borne diseases, and malnutrition.

[43] Ibid 36.
[44] UN Women. (2021). Gender Equality: Women's Empowerment and Climate Resilience. UN Women. https://www.unwomen.org/en/digital-library/publications/2021/03/gender-equality-womens-empowerment-and-climate-resilience.

[45] World Health Statistics 2022: Monitoring Health for the SDGs. WHO. https://www.who.int/data/gho/publications/world-health-statistics.

In regions affected by droughts or floods, waterborne diseases such as cholera become more prevalent, further compounding women's vulnerability due to their role in managing household water supply and sanitation.

Gender-Based Violence: Climate-induced displacement and resource scarcity can exacerbate gender-based violence (GBV). In areas where climate change leads to the displacement of populations, women and girls are at higher risk of trafficking, sexual violence, and child marriage. For example, in **Pakistan**, after the 2010 floods, cases of child marriage and domestic violence increased, as families struggled to cope with economic instability [46]. Similarly, in the drought-prone **Turkana region of Kenya**, relief organizations reported a rise in cases of sexual exploitation, as women and girls were forced to engage in transactional sex to access food and water [47].

Gendered Dimensions of Climate Change

Climate change has unique impacts on men, women, and marginalized gender groups, driven by social, economic, and cultural inequalities. Women, especially those in rural and low-income settings, are disproportionately affected by climate-related challenges. This section explores how gender roles shape climate vulnerability, the intersectional challenges faced by diverse groups of women, and the critical role of women in climate action. These gendered vulnerabilities underscore the need for gender-sensitive approaches in addressing climate change.

[46] Ibid 37.
[47] World Health Statistics 2022: Monitoring Health for the SDGs. WHO. https://www.who.int/data/gho/publications/world-health-statistics.

Differentiated Impacts of Climate Change on Women

Women face unique challenges in adapting to and mitigating the effects of climate change. Their vulnerabilities are rooted in socio-economic constraints, traditional roles, and the lack of representation in decision-making processes. These impacts are evident across various areas, including livelihood challenges, health risks, and increased exposure to gender-based violence.

Livelihood Impacts

Women, particularly in rural areas, are disproportionately represented in climate-sensitive sectors, such as agriculture, water collection, and forestry. According to the **Food and Agriculture Organization** [48], women make up nearly **43% of the agricultural labour force** in developing countries but often have limited access to land, technology, credit, and extension services.

In **Sub-Saharan Africa**, women smallholder farmers produce a significant portion of the food supply but own less than **20% of the land**. This disparity in land ownership reduces their capacity to adopt climate-resilient agricultural practices. Women often rely on traditional knowledge and low-input farming methods, which can be undermined by increasing climate variability and extreme weather events. For instance, in **Malawi**, women farmers reported a **50% decline in crop yields** due to erratic rainfall and prolonged droughts, leading to food insecurity and increased poverty [49].

[48] Food and Agriculture Organization. (2022). Gender and Climate Change: Key Facts. FAO Report on Gender Inequality in Agriculture.

[49] World Bank. (2022). Economic Losses from Climate Disasters and Gender Impacts. World Bank Data and Statistics.

In **India**, climate change has led to increased male outmigration from rural areas, as men leave in search of work in urban centers. This leaves women responsible for both agricultural labor and household duties, significantly increasing their workload. Despite their central role in food production, women farmers in India face challenges in accessing formal agricultural extension services, which limits their ability to adopt climate-smart agricultural practices [50].

Health Risks

Climate change exacerbates health risks for women, particularly in regions with limited access to healthcare and nutrition. Rising temperatures and shifting rainfall patterns increase the spread of vector-borne diseases, such as malaria and dengue fever, which disproportionately affect women and children. According to the **World Health Organization** [51], pregnant women are particularly vulnerable to heat stress, preterm birth, and other pregnancy-related complications in the context of rising temperatures.

Water Scarcity: Women are often responsible for collecting water in many developing regions, which puts them at risk of health issues when climate change affects water availability. In **Ethiopia**, prolonged droughts have forced women and girls to travel longer distances to collect water, exposing them to greater physical strain and health risks, such as musculoskeletal disorders and exposure to waterborne diseases. The increased burden of water collection also reduces their time for education and income-generating activities, perpetuating poverty cycles [52].

[50] UN Women. (2021). Women and Climate Resilience in South Asia. UN Women Policy Paper.
[51] World Health Organization. (2022). Health and Climate Change: The Vulnerability of Women and Children. WHO Report.
[52] UNICEF. (2023). The Impact of Climate Change on Children and Women. UNICEF Annual Report.

Maternal and Child Health: During natural disasters, such as floods or cyclones, women's access to healthcare services is often disrupted. In **Bangladesh**, the increased frequency of flooding has limited women's access to antenatal and postnatal care, leading to higher maternal mortality rates [53]. Women and children are also at greater risk of malnutrition, as climate change affects agricultural productivity, food prices, and food availability.

Gender-Based Violence

The social and economic stressors induced by climate change can lead to an increase in gender-based violence (GBV), particularly in the context of displacement and resource scarcity. During and after extreme weather events, women and girls are more vulnerable to violence due to the breakdown of social protection mechanisms and increased competition for resources.

In **Pakistan**, the 2010 floods led to a sharp rise in domestic violence and child marriage, as families struggled to cope with economic instability [54]. In drought-prone regions of **Kenya**, such as Turkana, reports of transactional sex to access basic resources such as food and water have increased, leading to heightened risks of GBV and sexually transmitted infections [55].

Intersectionality in Climate Change and Gender

The concept of intersectionality, introduced by **Kimberlé Crenshaw** in 1989, highlights how various social identities—such as race, class, ethnicity, and age—intersect to create unique experiences of oppression and privilege. In the context of climate change, intersectionality is

[53] United Nations Development Programme. (2020). Gender and Climate Change: Risks, Vulnerabilities, and Adaptive Capacity. UNDP Policy Brief.

[54] United Nations High Commissioner for Refugees. (2022). Climate-Induced Displacement in Bangladesh and Beyond. UNHCR Report.

[55] Oxfam International. (2022). Climate Inequality Report: A Human Rights Approach. Oxfam Report.

crucial for understanding the differentiated impacts on women from diverse backgrounds and how multiple layers of marginalization exacerbate their vulnerabilities.

Diverse Experiences of Vulnerability

Women's experiences of climate change are not uniform; they vary based on socio-economic status, ethnicity, geography, and disability. Understanding these diverse experiences is key to developing inclusive climate policies.

Indigenous Women: Indigenous women have a deep connection to the environment, as their livelihoods and cultural practices are intricately tied to their natural surroundings. In **Brazil's Amazon**, indigenous women have faced challenges due to deforestation and climate variability, which threaten their food security and traditional medicinal knowledge. Despite these challenges, indigenous women have played a critical role in advocating for land rights and sustainable practices. In **Ecuador**, the **Kichwa women** of Sarayaku have led efforts to resist oil extraction in their territory, thereby protecting the Amazon's biodiversity and preserving their cultural heritage [56].

Urban vs. Rural Women: Women in urban areas face different challenges compared to those in rural areas. In **Lagos, Nigeria**, women living in informal settlements are highly vulnerable to climate-related flooding, which can damage their homes, disrupt livelihoods, and increase health risks. These women often lack secure housing and access to basic services, such as clean water and sanitation, exacerbating their vulnerability to climate impacts [57]. In contrast, rural women, such as those in **Uganda**, rely heavily on natural resources for their livelihoods.

[56] Shiva, V. (2015). Ecofeminism: A New Perspective on Gender, Nature, and Sustainability. Zed Books.

[57] United Nations Development Programme. (2020). Gender and Climate Change: Risks, Vulnerabilities, and Adaptive Capacity. UNDP Policy Brief.

Prolonged droughts and erratic rainfall have made it increasingly difficult for these women to produce food and collect water, affecting their food security and overall well-being [58].

Women with Disabilities: Women with disabilities face unique challenges in the context of climate change, as they are often excluded from community planning and emergency response measures. During **Hurricane Katrina** in the United States, women with disabilities were disproportionately affected due to inaccessible shelters, lack of tailored evacuation plans, and insufficient support services [59]. In **Bangladesh**, disaster risk reduction programs have increasingly focused on including people with disabilities in climate adaptation planning, resulting in more inclusive evacuation procedures and improved community resilience [60].

Policy Implications of Gender and Intersectionality in Climate Change

Addressing the intersectional dimensions of gender and climate change is essential for developing effective and inclusive policies. Policymakers must acknowledge the diverse experiences of women and marginalized gender groups to ensure that climate interventions are equitable and effective.

Tailored Solutions for Diverse Populations

Climate adaptation strategies must be tailored to address the specific needs of different populations. For instance, indigenous knowledge and practices play a crucial role in climate adaptation. In **Bolivia**, indigenous women have been involved in agroforestry and reforestation projects that incorporate traditional knowledge, leading to improved food security and

[58] Food and Agriculture Organization. (2022). Gender and Climate Change: Key Facts. FAO Report on Gender Inequality in Agriculture.
[59] United Nations. (2022). Addressing Racial Disparities in Climate Resilience: A Case Study on Hurricane Katrina. United Nations Environment Report.
[60] UN Women. (2021). Women and Climate Resilience in South Asia. UN Women Policy Paper.

biodiversity conservation [61]. Such programs not only enhance adaptive capacity but also strengthen community cohesion and cultural preservation.

In urban areas, climate policies should focus on upgrading infrastructure in informal settlements and providing essential services. In **Dhaka, Bangladesh**, community-based adaptation programs have worked with women-led groups to implement flood-resilient housing and establish savings cooperatives to support recovery efforts after floods [62]. These initiatives have improved household resilience and reduced women's vulnerability to climate impacts.

Data Collection and Gender-Responsive Indicators

Data collection is essential for understanding the differentiated impacts of climate change and ensuring that interventions are inclusive. Collecting gender-disaggregated data by age, disability, socio-economic status, and ethnicity can help identify specific vulnerabilities and inform targeted adaptation strategies [63].

The development of gender-responsive indicators is also important for tracking progress in climate policies. Indicators such as the **percentage of women in climate decision-making bodies**, **women's access to climate finance**, and **the incidence of gender-based violence during disasters** can provide valuable insights into the effectiveness of gender-responsive climate action [64]. By integrating gender-sensitive monitoring and evaluation frameworks, policymakers can ensure that climate programs address the needs of all community members.

[61] Ibid 58.
[62] Ibid 57.

[63] World Bank. (2022). Economic Losses from Climate Disasters and Gender Impacts. World Bank Data and Statistics.
[64] Ibid 57.

The Role of Women in Climate Action

Women are not only disproportionately affected by climate change but also play a crucial role in developing solutions. Empowering women in climate action has been shown to lead to more effective and sustainable outcomes. This section explores the contributions of women in climate adaptation, mitigation, and advocacy, highlighting the importance of gender-inclusive climate policies.

Women in Leadership and Decision-Making

Women's participation in climate-related decision-making processes is critical for ensuring that policies are inclusive and address gender-specific needs. However, women remain underrepresented in leadership positions, both at the national and international levels. According to the **United Nations Environment Programme** [65], women occupy only **24%** of leadership positions in national environmental ministries worldwide.

Success Stories: In **Rwanda**, efforts to increase women's representation in government have led to significant progress in gender-sensitive climate policies. Women now hold over **60%** of parliamentary seats, and their influence has been instrumental in incorporating gender perspectives into national climate strategies, such as promoting access to renewable energy for rural women [66].

In **India**, the "Solar Mamas" initiative has empowered rural women by training them to install and maintain solar panels in their communities. This program has provided women with technical skills, increased household access to renewable energy, and improved women's

[65] United Nations Environment Programme. (2021). Global Climate Disasters and Their Economic Impact. UNEP Annual Report.
[66] Ibid 49.

socio-economic status [67]. Such initiatives demonstrate the importance of investing in women's education and leadership for advancing climate action.

Women's Role in Community-Based Adaptation

Women are often at the forefront of community-based adaptation efforts, using their traditional knowledge and leadership skills to enhance resilience. In **Kenya**, women-led community groups have implemented sustainable agricultural practices, such as crop diversification and soil conservation, to combat the effects of prolonged droughts. These efforts have not only improved food security but also empowered women by increasing their control over household resources and decision-making [68].

In **Bangladesh**, women in flood-prone regions have formed community-based organizations to monitor river levels, disseminate early warnings, and coordinate evacuation plans. These organizations have been crucial in reducing the impacts of flooding on vulnerable households, particularly those headed by women [69]. By integrating women into climate adaptation planning, these initiatives have strengthened community resilience and reduced disaster-related losses.

The Role of Women in Climate Adaptation and Mitigation

Women play an essential role in climate adaptation and mitigation due to their unique knowledge, skills, and experiences in managing natural resources, particularly in rural communities. However, they face numerous barriers that limit their adaptive capacity and participation in climate decision-making. Addressing these barriers is crucial for effective and

[67] International Renewable Energy Agency. (2020). Empowering Women in the Renewable Energy Sector. IRENA Report.
[68] Ibid 58.
[69] UN Women. (2021). Women and Climate Resilience in South Asia. UN Women Policy Paper.

inclusive climate action. This section explores women's adaptive capacity, female leadership in climate initiatives, success stories, and the role of education in enhancing resilience.

Women's Adaptive Capacity and Barriers

Women's adaptive capacity refers to their ability to respond effectively to climate impacts. However, this capacity is often constrained by various barriers, including limited access to education, economic inequality, and societal norms that restrict their participation in decision-making processes.

Education

Access to education significantly enhances women's adaptive capacity to climate change. Education equips women with the knowledge and skills needed to implement sustainable practices, engage in community adaptation efforts, and understand early warning systems. According to **UNESCO** [70], educating women and girls increases their resilience to climate impacts and improves household-level adaptation strategies, such as water management and climate-smart agriculture.

However, in many developing countries, girls' access to education is limited by socio-economic factors, cultural norms, and gender biases. For example, in **Sub-Saharan Africa**, where climate change has led to increased food and water scarcity, girls are often pulled out of school to help with household tasks, such as fetching water, which reduces their opportunities to learn and contribute to climate resilience efforts [71].

[70] UNESCO. (2023). Education for Climate Resilience: The Role of Women and Girls. UNESCO Global Education Monitoring Report.
[71] Ibid 70.

Economic Status

Economic inequality also affects women's ability to adapt to climate change. Women make up the majority of the world's poor and often lack access to financial resources, land ownership, and credit. In many regions, such as **South Asia** and **Sub-Saharan Africa**, women are primarily engaged in subsistence agriculture, which is highly vulnerable to climate variability. Limited access to financial resources prevents women from investing in climate-resilient technologies, such as irrigation systems or drought-resistant seeds, further limiting their adaptive capacity [72].

Societal Norms and Gender Roles

Societal norms and traditional gender roles often restrict women's ability to participate in decision-making processes related to climate adaptation. Women are frequently excluded from community-level climate discussions and planning due to cultural expectations that limit their public engagement. This exclusion means that women's specific needs and perspectives are often not considered in adaptation projects, resulting in less effective outcomes.

For instance, in many parts of **India**, societal norms dictate that women should primarily focus on household responsibilities, which prevents them from participating in community meetings or accessing information about climate adaptation programs [73]. Challenging these norms and promoting women's active participation in climate decision-making is crucial for achieving gender-equitable climate resilience.

[72] United Nations Development Programme. (2020). Gender and Climate Change: Risks, Vulnerabilities, and Adaptive Capacity. UNDP Policy Brief.
[73] United Nations. (2022). Women and Climate Leadership: Empowering Community Resilience. United Nations Report.

Female Leadership in Climate Action: Success Stories and Barriers to Participation

Despite the challenges they face, women have demonstrated remarkable leadership in climate adaptation and mitigation efforts at local, national, and international levels. Women-led initiatives have shown that gender-inclusive approaches can lead to more effective climate solutions.

Success Stories of Female Leadership

India's Self-Help Groups: In **India**, women's self-help groups (SHGs) have played a critical role in promoting climate resilience. The SHGs, which consist of women from local communities, have been instrumental in implementing sustainable agricultural practices, such as organic farming and rainwater harvesting. These groups have helped improve food security and reduce vulnerability to climate-induced water scarcity [74]. One notable example is the **Deccan Development Society**, which works with women farmers in Telangana to promote millet cultivation—a climate-resilient crop. By encouraging traditional agricultural practices, the society has helped enhance food security and empower women economically.

Kenya's Green Belt Movement: In **Kenya**, the **Green Belt Movement**, founded by the late **Wangari Maathai**, has mobilized women to plant over 51 million trees, combat deforestation, and advocate for environmental conservation. The movement has empowered women by providing them with training on tree planting, environmental advocacy, and leadership skills. The reforestation efforts not only help mitigate climate change by sequestering carbon but also

[74] Ibid 72.

provide women with income-generating opportunities through tree nurseries and agroforestry [75].

The Philippines' Women Farmers in Disaster Risk Reduction: In the **Philippines**, women farmers have taken the lead in community-based disaster risk reduction initiatives. After experiencing the devastating effects of Typhoon Haiyan, women's groups in the Visayas region began organizing training programs on climate-smart agriculture, crop diversification, and early warning systems. These efforts have improved community resilience by ensuring that households are better prepared for extreme weather events and have access to alternative sources of income during periods of crisis [76].

Barriers to Women's Leadership

While these success stories demonstrate the potential of women's leadership in climate action, significant barriers remain that prevent women from fully participating in climate governance.

- **Underrepresentation in Climate Negotiations**: Women are significantly underrepresented in climate decision-making bodies at national and international levels. According to the **United Nations Environment Programme** [77], women occupy only **24%** of leadership positions in national environmental ministries and represent only **30%** of delegates in international climate negotiations. This underrepresentation means that women's voices are often not adequately considered in climate policy discussions, resulting in policies that may fail to address the unique vulnerabilities faced by women.

[75] Ibid 73.
[76] Ibid 72.
[77] Ibid 65.

- **Lack of Access to Information**: Women often lack access to information about climate risks, adaptation options, and available resources, which hinders their ability to participate in climate leadership. In many rural communities, information about climate adaptation is shared through male-dominated networks, leaving women with limited knowledge of climate-related opportunities and decision-making processes [78].

Case Studies: Women-Led Community Adaptation Projects

The success of women-led adaptation projects demonstrates the importance of gender-inclusive approaches in climate resilience. The following case studies highlight how women have taken the lead in climate adaptation efforts in **India**, **Kenya**, and the **Philippines**.

India: Watershed Management by Women in Andhra Pradesh

In **Andhra Pradesh, India**, women's groups have been at the forefront of community-led watershed management initiatives. The **Andhra Pradesh Farmer Managed Groundwater Systems (APFAMGS)** project, supported by the **Food and Agriculture Organization (FAO)**, trained women farmers to monitor groundwater levels and implement sustainable irrigation practices. By involving women in the management of water resources, the project has improved water availability for agricultural purposes, reduced crop failure, and enhanced household food security [79].

Kenya: Women and Climate-Smart Agriculture in Makueni County

In **Makueni County, Kenya**, women's groups have taken the lead in promoting climate-smart agricultural practices to cope with prolonged droughts. The women, organized through

[78] Ibid 72.
[79] Ibid 72.

community-based organizations (CBOs), received training on drought-resistant crops, soil conservation techniques, and agroforestry. These practices have helped increase agricultural yields, improve household food security, and reduce the impact of climate shocks. In addition, women have been involved in establishing savings groups that provide microloans to invest in sustainable farming technologies [80].

The Philippines: Women's Cooperatives in Agroforestry

In the **Philippines**, women have formed cooperatives to engage in agroforestry, which combines agriculture and forestry practices to improve environmental sustainability. In **Mindanao**, women-led cooperatives are implementing agroforestry projects that help prevent soil erosion, improve soil fertility, and increase biodiversity. These projects not only enhance community resilience to climate change but also provide women with alternative livelihoods, such as honey production and the cultivation of non-timber forest products [81].

Statistics: Female Participation in Environmental Governance and Climate Negotiations

Women's participation in climate governance remains limited, despite their critical role in adaptation and mitigation. According to **UNEP** [82], women's representation in environmental decision-making bodies and climate negotiations is still disproportionately low:

- Only **24%** of national environment ministries are led by women.
- Women represent only **30%** of delegates at international climate negotiations.

[80] Ibid 73.
[81] Ibid 72.
[82] Ibid 65.

- In community-level climate decision-making, women often have limited representation, particularly in patriarchal societies where cultural norms restrict their participation.

This underrepresentation of women in climate governance is a significant barrier to achieving gender-equitable climate policies. Increasing women's participation in environmental decision-making at all levels is essential for ensuring that climate policies are responsive to the needs of both men and women.

The Role of Education in Enhancing Resilience

Access to education is one of the most effective tools for enhancing women's resilience to climate change. Education empowers women with knowledge, skills, and confidence to engage in climate adaptation and mitigation efforts, both at the household and community levels.

According to **UNESCO** [83], educated women are more likely to adopt climate-smart practices, such as crop diversification and water conservation, and to participate in community adaptation initiatives. In addition, education increases women's access to information about climate risks and available adaptation options, enabling them to make informed decisions about managing climate impacts.

Education for Girls as a Climate Strategy: Educating girls is also a powerful climate mitigation strategy. Educated women tend to have smaller, healthier families, which can contribute to reducing population pressure on natural resources. This, in turn, can lead to lower carbon emissions and reduced strain on climate-vulnerable ecosystems [84]. Investing in girls'

[83] Ibid 70.
[84] Ibid 70.

education is therefore a win-win solution that contributes to both gender equality and climate resilience.

Case Example: In **Bangladesh**, a project led by **BRAC** has focused on educating girls in climate-vulnerable areas, providing them with the knowledge and skills to contribute to community adaptation projects. These girls have been involved in raising awareness about climate risks, leading tree-planting campaigns, and advocating for disaster preparedness measures in their communities. By investing in education, the project has empowered young women to take leadership roles in climate adaptation, thereby enhancing community resilience [85].

The role of women in climate adaptation and mitigation is crucial for achieving sustainable and inclusive climate resilience. Despite the barriers posed by limited access to education, economic inequality, and societal norms, women have demonstrated their leadership in promoting community-based adaptation and environmental conservation. Case studies from **India**, **Kenya**, and the **Philippines** illustrate how women-led initiatives can lead to more effective climate adaptation outcomes. To fully harness the potential of women in climate action, it is essential to address the barriers they face by improving access to education, increasing economic opportunities, and promoting gender equality in decision-making processes. Empowering women through education and leadership opportunities is not only a matter of social justice but also a critical strategy for building climate resilience.

[85] Ibid 70.

Climate Policies and Gender Sensitivity

The global response to climate change is shaped by international agreements, national policies, and local initiatives. However, the effectiveness of these policies often hinges on their ability to address the diverse needs and vulnerabilities of affected populations, including those of women and marginalized gender groups. Historically, climate policies have tended to overlook the gendered dimensions of climate change, resulting in gender-blind approaches that fail to address the specific challenges faced by women. This section explores the evolution of gender-sensitive climate policies, the gaps that remain, and the benefits of incorporating gender perspectives into climate action.

International Climate Agreements and Gender Equality

In recent years, international climate agreements have increasingly recognized the importance of gender equality in addressing climate change. The integration of gender considerations into international frameworks is a critical step toward ensuring that climate action is inclusive and equitable.

The Paris Agreement

The Paris Agreement, adopted in 2015 under the United Nations Framework Convention on Climate Change (UNFCCC), marked a turning point in international climate negotiations by explicitly recognizing the link between gender equality and effective climate action. Article 7, which focuses on adaptation, calls for "gender-responsive" approaches, emphasizing the need to include women in decision-making processes and ensure equitable access to resources [86].

[86] UNFCCC. (2022). Paris Agreement: Article 7 - Adaptation. United Nations Framework Convention on Climate Change. Retrieved from https://unfccc.int.

However, while the Paris Agreement laid the foundation for gender-inclusive climate policies, its implementation has been uneven across countries. According to the United Nations Development Programme (UNDP), only about 40% of countries included gender considerations in their Nationally Determined Contributions (NDCs), which outline each country's climate commitments under the Paris Agreement [87]. This gap highlights the need for more concrete measures to operationalize gender equality in climate action.

The Gender Action Plan (GAP)

To address the gender gap in climate policies, the UNFCCC introduced the Gender Action Plan (GAP) at the 2017 Conference of the Parties (COP23). The GAP provides a framework for promoting gender equality in climate policy and decision-making. It focuses on five priority areas: capacity-building, gender balance in climate governance, gender-responsive implementation of climate projects, monitoring and reporting on gender impacts, and securing adequate funding for gender-inclusive programs [88].

The GAP is designed to help countries integrate gender considerations into their climate plans and policies. For example, in Morocco, the implementation of gender-responsive budgeting under the GAP has led to increased financial support for women's climate resilience initiatives, such as water conservation projects and sustainable agriculture training [89].

Despite these advancements, the GAP faces challenges related to funding and political will. Many countries, particularly low-income nations, lack the resources to fully implement gender-

[87] United Nations Development Programme (UNDP). (2020). Gender responsive climate actions and Nationally Determined Contributions (NDCs). UNDP. Retrieved from https://www.undp.org
[88] Ibid 86.
[89] UN Women. (2021). Progress on the implementation of gender-responsive climate action. UN Women. Retrieved from https://www.unwomen.org.

responsive climate policies. Additionally, the absence of mandatory reporting requirements under the GAP means that progress on gender equality in climate action is difficult to track [90].

National Climate Policies: Successes and Shortcomings

At the national level, some countries have made significant strides in integrating gender into their climate policies, while others lag behind. The effectiveness of gender-sensitive climate policies often depends on a country's political commitment, capacity for implementation, and engagement with civil society.

Gender-Responsive National Adaptation Plans

National Adaptation Plans (NAPs) are a key tool for countries to plan and implement climate adaptation measures. Some countries have successfully incorporated gender considerations into their NAPs, recognizing that women and men experience climate impacts differently and have different adaptation needs.

- **Bangladesh**: As one of the countries most vulnerable to climate change, Bangladesh has developed a gender-responsive NAP that includes targeted interventions for women in climate-affected areas. The plan emphasizes women's participation in climate decision-making at the local level and provides funding for women-led adaptation projects, such as flood-resistant farming techniques and disaster preparedness training [91].

[90] Ibid 86.
[91] World Bank. (2022). Advancing women's leadership in climate action: Empowering change-makers for a sustainable future. World Bank. Retrieved from https://www.worldbank.org.

- **Nepal**: In Nepal, the government has adopted a gender-sensitive approach to climate adaptation by promoting women's leadership in natural resource management. Through community forest user groups, women are trained in sustainable forestry practices and disaster risk reduction, helping to build climate resilience in rural areas. These efforts have resulted in increased biodiversity and improved livelihoods for women [92].

While these examples illustrate the potential of gender-responsive NAPs, many countries still fail to incorporate gender considerations into their adaptation planning. According to a review by the Global Gender and Climate Alliance (GGCA), only 30% of NAPs submitted by developing countries explicitly address gender issues [93]. This gap underscores the need for more concerted efforts to mainstream gender in national climate policies.

Gender-Responsive Budgeting

Gender-responsive budgeting (GRB) is a powerful tool for ensuring that public resources are allocated in a way that addresses the specific needs of women and men in the context of climate change. By analyzing how budgetary decisions impact gender equality, governments can design more inclusive climate policies that promote equity.

- **Morocco**: Morocco has been a leader in the implementation of GRB, particularly in the context of climate action. The country's GRB initiative has resulted in increased funding for women's participation in renewable energy projects and climate-smart agriculture. This has helped to improve women's access to clean energy and sustainable livelihoods, particularly in rural areas [94].

[92] Food and Agriculture Organization of the United Nations (FAO). (2022). Empowering women through sustainable forestry and disaster risk reduction. FAO. Retrieved from https://www.fao.org.
[93] Global Gender and Climate Alliance (GGCA). (2021). Gender and climate change: Analysis of National Adaptation Plans (NAPs). GGCA. Retrieved from https://www.gender-climate.org.
[94] Ibid 89.

- **Mexico**: In Mexico, gender-responsive budgeting has been used to support women's participation in climate resilience programs. Through targeted investments in women-led cooperatives, Mexico has promoted sustainable agricultural practices and increased women's access to climate finance. These initiatives have contributed to poverty reduction and enhanced women's resilience to climate impacts [95].

Despite these successes, GRB remains underutilized in many countries, particularly in the Global South. Limited financial resources, coupled with a lack of political will, often hinder the implementation of GRB in climate policies. Additionally, the absence of gender-disaggregated data makes it difficult to assess the impact of budgetary decisions on gender equality [96].

Gender-Sensitive Climate Mitigation Policies

While much of the focus on gender and climate policy has been on adaptation, there is growing recognition of the need for gender-sensitive approaches to climate mitigation. Mitigation policies aimed at reducing greenhouse gas emissions and promoting sustainable energy transitions must take into account the different ways in which men and women contribute to, and are affected by, these policies.

Women's Role in Renewable Energy

Women play a critical role in the transition to renewable energy, particularly in rural areas where traditional biomass fuels are still widely used for cooking and heating. According to the

[95] Ibid 91.
[96] Ibid 93.

International Renewable Energy Agency [97], women represent only 32% of the renewable energy workforce globally, highlighting the need for more inclusive policies to increase women's participation in this sector.

- **India's Solar Energy Revolution**: In India, the government has implemented gender-sensitive policies to promote women's involvement in the renewable energy sector. The "Solar Mamas" program, for instance, trains rural women to install and maintain solar panels, providing them with technical skills and employment opportunities. This initiative has not only expanded access to clean energy in remote areas but also empowered women economically and socially [98].
- **Sub-Saharan Africa**: In Sub-Saharan Africa, women-led solar energy cooperatives are helping to bring electricity to off-grid communities. These initiatives provide women with access to renewable energy technology and microfinance, enabling them to start small businesses and reduce their dependence on traditional energy sources. By improving access to clean energy, these projects contribute to both climate mitigation and gender equality [99].

Gender-Equitable Climate Finance

Access to climate finance is essential for implementing mitigation and adaptation projects. However, women, particularly in developing countries, often face barriers to accessing climate finance due to discriminatory laws, lack of collateral, and limited financial literacy.

[97] International Renewable Energy Agency (IRENA). (2020). Renewable energy: A gender perspective. IRENA. Retrieved from https://www.irena.org.
[98] Ibid 97.
[99] Ibid 89.

- **Green Climate Fund (GCF)**: The GCF, established under the UNFCCC, is one of the largest multilateral funds dedicated to supporting climate action in developing countries. The GCF has made gender equality a core component of its funding criteria, requiring that all funded projects include a gender analysis and gender action plan. This ensures that women and men benefit equally from climate finance and that gender considerations are integrated into project design and implementation [100].
- **Women's Access to Climate Finance**: In Kenya, women's groups have successfully accessed climate finance through the GCF to support sustainable agriculture and water conservation projects. These projects have not only improved food security but also enhanced women's leadership in natural resource management [101].

Despite these positive examples, access to climate finance remains unequal. Women often face higher barriers to obtaining funding for climate projects due to limited access to formal financial institutions and discriminatory land tenure systems that prevent them from using land as collateral [102]. Addressing these structural barriers is essential for ensuring that women can fully participate in climate mitigation efforts.

Challenges to Implementing Gender-Sensitive Climate Policies

While progress has been made in integrating gender into climate policies, significant challenges remain. These challenges include:

[100] Ibid 93.

[101] Ibid 91.
[102] Ibid 92.

- **Lack of Political Will**: In many countries, gender equality is not seen as a priority in climate policy, leading to gender-blind approaches that fail to address the specific vulnerabilities and contributions of women.
- **Insufficient Funding**: Implementing gender-sensitive policies requires adequate funding, which is often lacking, particularly in low-income countries. Donor agencies and multilateral institutions must prioritize gender equality in their funding allocations to support inclusive climate action.
- **Limited Capacity and Knowledge**: Policymakers and practitioners may lack the knowledge and capacity to integrate gender considerations into climate projects. Capacity-building programs and technical assistance are essential for ensuring that gender-responsive policies are effectively implemented.

Integrating gender considerations into climate policies is essential for achieving equitable and sustainable climate action. International agreements, such as the Paris Agreement and the Gender Action Plan, have laid the groundwork for gender-sensitive approaches, but more needs to be done at the national and local levels to ensure that these policies are effectively implemented. Gender-responsive budgeting, inclusive decision-making, and targeted climate finance are key tools for promoting gender equality in climate action. Addressing the remaining challenges will require political commitment, increased funding, and enhanced capacity-building efforts.

Climate Policies and Gender Sensitivity

A review of international climate agreements, such as the Paris Agreement and the United Nations Framework Convention on Climate Change (UNFCCC), reveals an increasing emphasis on integrating gender perspectives into climate action. The Paris Agreement includes

provisions for gender equality and empowerment, recognizing the need for inclusive decision-making [103].

However, many national climate strategies remain gender-blind. A study by the World Bank [104] found that only 40% of countries included gender considerations in their Nationally Determined Contributions (NDCs). The absence of a gender lens in climate policies can lead to interventions that fail to address the unique vulnerabilities and capacities of women and marginalized gender groups.

Case studies from Nepal and Malawi demonstrate that incorporating gender-sensitive policies, such as targeted agricultural training and access to financial resources for women, leads to more effective and sustainable outcomes [105]. Gender-responsive budgeting and policy monitoring are essential for ensuring that climate interventions are equitable and inclusive.

Case Studies of Gender-Responsive Climate Initiatives

Gender-responsive climate initiatives recognize the different vulnerabilities, capacities, and contributions of men and women in climate action. By incorporating gender perspectives, these initiatives ensure that climate policies and programs are equitable, inclusive, and effective. This section presents several case studies that demonstrate how integrating gender considerations in climate initiatives leads to better outcomes in terms of resilience, empowerment, and sustainable development.

[103] Ibid 86.
[104] Ibid 86.

[105] Mearns, R., & Norton, A. (2018). Social dimensions of climate change: Equity and vulnerability in a warming world. The World Bank.

Case Study 1: Women in Community-Led Mangrove Restoration in Vietnam

In the coastal regions of **Vietnam**, mangroves play a crucial role in protecting communities from storm surges, flooding, and coastal erosion, while also serving as vital ecosystems for fish and other aquatic life. Women, particularly those in rural coastal communities, depend heavily on mangrove ecosystems for their livelihoods and food security. However, these ecosystems are increasingly threatened by climate change and human activities.

Project Overview

The **Mangrove Restoration and Coastal Resilience Project**, supported by the **United Nations Development Programme (UNDP)**, was implemented in the **Giao Thuy District** of Vietnam. The project specifically targeted women, who were trained to restore and manage mangrove forests. It aimed to enhance climate resilience by restoring degraded mangrove ecosystems while improving the socio-economic conditions of women through alternative livelihoods.

Key Outcomes

- **Increased Community Resilience**: The project restored over **200 hectares** of mangroves, which helped to protect coastal communities from storm surges and reduced the impact of coastal erosion.
- **Women's Economic Empowerment**: Women were provided with training in aquaculture, such as shrimp and crab farming, which helped diversify their income sources. As a result, household income increased by an average of **30%** after the introduction of alternative livelihoods.

- **Community Participation**: Women took on leadership roles in managing the mangrove nurseries and in coordinating the community's replantation efforts. Their involvement was critical in the success and sustainability of the project [106].

Challenges and Lessons Learned

- **Challenges**: The primary challenge was the cultural norms that initially prevented women from participating in community activities. The project overcame this by conducting awareness campaigns on the importance of women's involvement in climate action.
- **Lessons Learned**: Engaging women in environmental management not only leads to increased ecosystem resilience but also empowers women economically and socially. Gender-responsive approaches were found to enhance project effectiveness and community ownership of restoration efforts.

Case Study 2: Women-Led Solar Energy Initiative in India

India faces a growing demand for energy, and transitioning to renewable energy is crucial to meeting this demand sustainably. Access to clean energy is also essential for improving livelihoods and reducing greenhouse gas emissions. However, many rural communities, especially women, lack access to reliable and affordable energy.

Project Overview

The **Solar Mamas Initiative**, implemented by **Barefoot College**, aims to empower rural women by providing them with training in solar technology. Women, often with little or no

[106] Ibid 87

formal education, are trained to become solar engineers, learning how to assemble, install, and maintain solar lighting systems. This initiative is aimed at providing clean energy solutions while also improving women's socio-economic status.

Key Outcomes

- **Empowerment of Rural Women**: Women who participated in the initiative, known as "Solar Mamas," acquired technical skills in solar engineering. These skills enabled them to install solar panels in their communities, providing electricity to **over 2,000 households** in rural areas [107].
- **Improved Quality of Life**: Access to solar lighting reduced household reliance on kerosene lamps, improving indoor air quality and reducing health risks. Children were able to study at night, and women could engage in income-generating activities after sunset.
- **Economic Independence**: Women who were trained through the program gained financial independence by establishing small businesses around solar energy services, such as charging stations for mobile phones and solar lantern repairs.

Challenges and Lessons Learned

- **Challenges**: One challenge was overcoming the societal norms that restricted women's mobility and participation in technical training programs. To address this, the project worked closely with community leaders and emphasized the benefits of women's involvement in solar technology.

[107] Ibid 97

- **Lessons Learned**: This initiative demonstrated that even in communities with strong patriarchal norms, women could become effective agents of change if given the right opportunities and support. The success of the project also highlighted the importance of addressing gender biases to create a supportive environment for women to participate in technical fields.

Case Study 3: Women and Climate-Smart Agriculture in Kenya

In **Kenya**, agriculture is a primary livelihood for a significant portion of the population, particularly in rural areas. Women play a major role in agricultural production, yet they often face challenges in accessing resources, information, and technologies that could help them adapt to climate change.

Project Overview

The **Women in Climate-Smart Agriculture Project**, supported by the **Food and Agriculture Organization (FAO)**, was implemented in **Makueni County, Kenya**. The project aimed to increase women's resilience to climate change by promoting climate-smart agricultural practices, such as crop rotation, agroforestry, and soil conservation. Women were provided with training and access to resources, such as drought-resistant seeds and small-scale irrigation systems.

Key Outcomes

- **Increased Agricultural Productivity**: The adoption of climate-smart agricultural practices led to increased crop yields, particularly for maize and beans, by **40%**. This

improvement contributed to enhanced household food security, particularly during drought periods [108].

- **Enhanced Resilience**: Women farmers were able to diversify their crops, reducing their dependence on a single crop and thereby decreasing vulnerability to climate variability. Agroforestry practices also contributed to improved soil fertility and water retention.
- **Community Leadership**: Women were involved in community seed banks, where they managed and distributed drought-resistant seeds. This not only strengthened local seed security but also positioned women as key leaders in promoting resilience to climate change.

Challenges and Lessons Learned

- **Challenges**: One of the challenges was limited access to land, as women often did not have land titles and therefore had less control over decision-making about resource use. The project addressed this by working with local authorities to improve women's access to land through community agreements.
- **Lessons Learned**: The success of the project underscored the need for gender-sensitive land reforms to ensure women's secure access to land, which is essential for sustainable agriculture and climate resilience. It also showed that capacity building in climate-smart agriculture can empower women to be more resilient in the face of climate risks.

[108] Ibid 92

Case Study 4: Integrating Women in Climate Decision-Making in Peru

Indigenous women in **Peru** are among the most vulnerable to the impacts of climate change, particularly in rural areas where livelihoods are directly tied to natural resources. However, these women also hold invaluable knowledge regarding local ecosystems and sustainable practices.

Project Overview

The **Indigenous Women and Climate Action Project**, supported by the **United Nations Environment Programme (UNEP)**, aimed to integrate indigenous women's knowledge into regional climate planning. The project focused on the **Cusco Region**, where women were involved in the development of the **Regional Climate Change Strategy**. Women participated in workshops and consultations to share their knowledge on water management, agroforestry, and ecosystem preservation.

Key Outcomes

- **Policy Integration**: Indigenous women's knowledge on ecosystem management was integrated into the regional climate strategy, ensuring that adaptation measures were culturally appropriate and addressed local needs. This approach enhanced the effectiveness of adaptation actions, such as watershed management and soil conservation [109].

[109] Ibid 65.

- **Women's Empowerment**: Women who participated in the project gained greater recognition within their communities as environmental leaders. Their involvement also contributed to increased political awareness and participation in local governance.
- **Sustainable Practices**: The project promoted sustainable practices such as terracing, which reduced soil erosion and improved water management. These practices helped improve agricultural productivity and enhance the resilience of local communities to climate change impacts.

Challenges and Lessons Learned

- **Challenges**: Cultural norms and language barriers initially hindered women's active participation. To overcome these challenges, the project provided training in local languages and created culturally-sensitive spaces for dialogue, where women felt comfortable sharing their knowledge and experiences.
- **Lessons Learned**: The project demonstrated the importance of creating an enabling environment for indigenous women to participate in climate governance. Recognizing and valuing traditional knowledge is critical for developing effective and inclusive climate policies that respect the cultural context.

Case Study 5: Women in Water Management in Jordan

Jordan is one of the most water-scarce countries in the world, and climate change has exacerbated water scarcity issues. Women are primarily responsible for managing household water needs, which places them at the forefront of water management challenges.

Project Overview

The **Women and Water Management Project**, implemented by **UN Women** and local NGOs, aimed to increase women's participation in water management. The project provided women with training on efficient water use, rainwater harvesting, and greywater recycling. Women were also involved in community decision-making regarding water resource allocation.

Key Outcomes

- **Improved Water Access**: Rainwater harvesting systems were installed in **300 households**, resulting in improved access to water for domestic use and gardening. The project reduced household water shortages, particularly during the summer months [110].
- **Increased Awareness and Advocacy**: Women trained through the project became advocates for water conservation in their communities, organizing awareness campaigns to educate others about water-saving techniques. Their advocacy contributed to changes in water use behaviors at the community level.
- **Economic Empowerment**: Women used the harvested water to start small-scale gardening, producing vegetables that improved household nutrition and generated additional income.

Challenges and Lessons Learned

- **Challenges**: The project faced resistance from male community members who were not accustomed to women participating in resource management decisions. To address

[110] Ibid 89.

this, the project engaged community leaders to highlight the benefits of women's involvement in water management.

- **Lessons Learned**: This initiative highlighted the importance of involving women in water management, as they are often the most affected by water scarcity. It also showed that community engagement and the support of male allies are essential for overcoming cultural barriers to women's participation in resource management.

These case studies demonstrate the significant contributions that women can make to climate adaptation and mitigation when gender-responsive approaches are implemented. By empowering women through capacity building, financial support, and leadership opportunities, climate initiatives can be more effective, sustainable, and inclusive. The lessons learned from these projects highlight the importance of addressing gender-specific barriers and recognizing the unique knowledge and skills that women bring to climate action.

CHAPTER 3

ANALYSIS OF GENDER-RESPONSIVE CLIMATE ACTION UNDER THE UNFCCC

The key findings on the integration of gender in climate policies, as reported by Parties in documents submitted under the United Nations Framework Convention on Climate Change (UNFCCC) have been summarised in this chapter. The findings are based on various documents, including Nationally Determined Contributions (NDCs), National Adaptation Plans (NAPs), National Adaptation Programmes of Action (NAPAs), National Communications (NCs), and Long-Term Low-Emission Development Strategies (LT-LEDS) (FCCC/CP/2022/6, 2022) submitted by the partner countries to the UNFCCC are as outlined below [111].

Gender Integration in Climate Policy Documents

- **Nationally Determined Contributions (NDCs):** 90% of the NDCs submitted between October 2021 and July 2022 included references to gender (Figure 2). This represents a continued increase from previous submissions, where 86% of NDCs submitted in 2021 and 34.8% of those submitted earlier mentioned gender. The inclusion is primarily aimed at integrating gender-sensitive or gender-responsive approaches in sectors such as agriculture, health, and energy.

[111] United Nations Framework Convention on Climate Change. (2022). Synthesis report on gender integration in documents submitted under the United Nations Framework Convention on Climate Change (FCCC/CP/2022/6). https://unfccc.int.

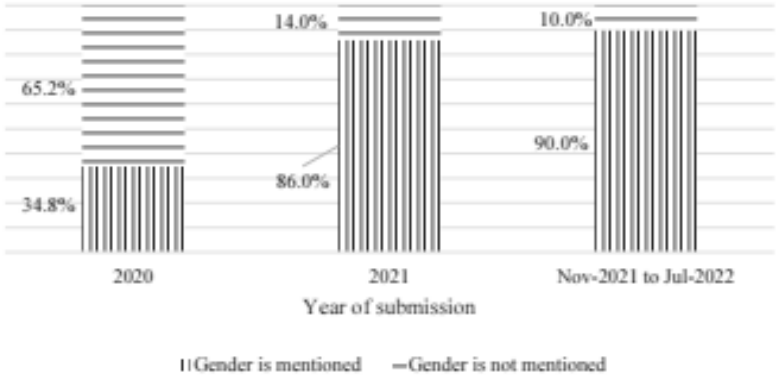

Figure 3.1 Percentage of NDCs that Mention Gender Over Time[112]

- The analysis shows that NDCs increasingly treat gender as a cross-cutting issue, covering both adaptation and mitigation actions. Parties often used gender-related policies to enhance the effectiveness of climate actions, such as through gender-responsive budgeting and gender analysis tools.

- **National Adaptation Plans (NAPs):** 81.6% of the 38 NAPs reviewed referenced gender considerations, with most focusing on gender-sensitive approaches in capacity-building and adaptation planning (Figure 3). Gender integration in NAPs was mostly focused on priority areas like capacity-building, leadership, and gender-responsive implementation strategies.

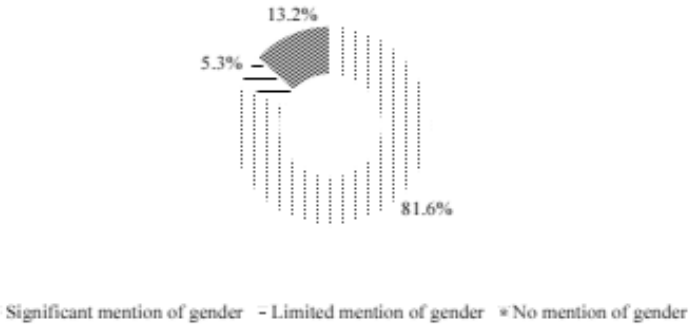

Figure 3.2 Gender Integration in National Adaptation Plans[113]

[112] Ibid 111.
[113] Ibid 111.

- A majority of NAPs highlighted gender-sensitive approaches for involving vulnerable groups in adaptation activities, such as integrating gender concerns into land management and ensuring women's leadership in community-driven climate action.

- **National Adaptation Programmes of Action (NAPAs):** Nearly all NAPAs (94.2%) had significant mentions of gender. These documents frequently focused on gender-responsive capacity-building and the role of women in managing natural resources and participating in climate adaptation projects (Figure 4).

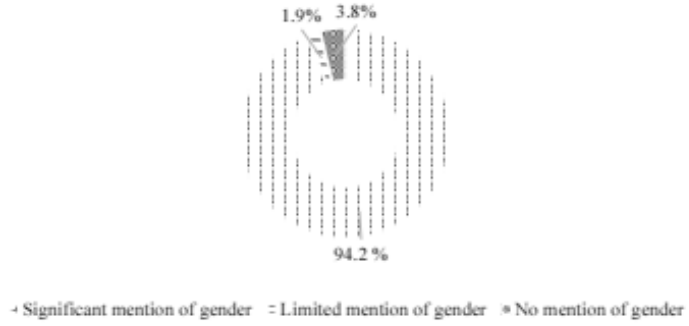

Figure 3.3 Reference to Gender in National Adaptation Programmes of Action[114]

- NAPAs emphasized the importance of women in community-level climate resilience efforts, particularly in rural areas where women lead water management and agricultural adaptation initiatives.

Trends and Challenges in Gender Integration

- **National Communications (NCs):** 54.9% of NCs contained significant gender mentions, while 27.7% had limited references, often related to sex-disaggregated data

[114] Ibid 111.

(Figure 5). However, the analysis also showed disparities in gender reporting between developed and developing countries, with developing countries often more systematically integrating gender.

Figure 3.4 Reference to Gender in National Communications[115]

- Developing countries have focused on addressing gender-based vulnerabilities in areas such as health, water access, and disaster risk reduction. In contrast, developed countries generally reported less detailed integration of gender considerations, particularly in long-term strategies.

- **Long-Term Low-Emission Development Strategies (LT-LEDS):** Less than 20% of LT-LEDS submissions had significant gender references (Figure 6). The limited mention of gender in LT-LEDS is noteworthy, as these strategies are essential for guiding long-term climate actions.

[115] Ibid 111.

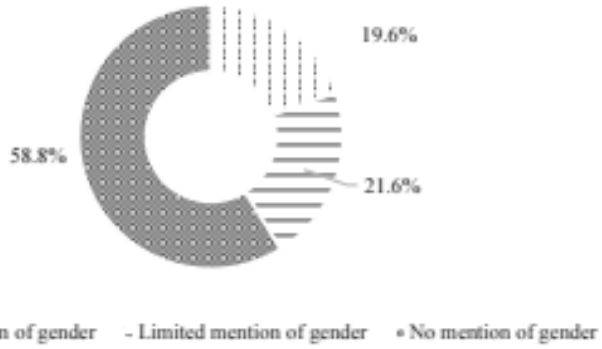

Figure 3.5 Reference to Gender in Long-Term Strategies (LT-LEDS) [116]

Key Findings and Recommendations

1. **Increase in Gender Integration:** There is a clear trend of increasing gender mentions in climate policy documents, especially in recent NDCs and adaptation plans. This reflects an evolving recognition of the importance of gender-sensitive approaches to enhance climate action outcomes.
2. **Vulnerable Groups and Gender Analysis:** Many Parties highlighted the gender-differentiated impacts of climate change, with a focus on women as both vulnerable groups and as agents of change. Gender integration was more pronounced in adaptation-related initiatives than in mitigation.
3. **Challenges in Developed Countries:** The analysis revealed a gap in gender integration between developed and developing countries, with the latter more likely to incorporate gender in their climate policies. Developed countries need to improve their gender-responsive planning, particularly in long-term strategies

[116] Ibid 111.

CHAPTER 4

GENDER RESPONSIVE CLIMATE ACTION IN INDIAN CONTEXT

Climate change is one of the most pressing global challenges, with far-reaching impacts on ecosystems, economies, and communities worldwide. The effects of climate change—such as rising temperatures, changing precipitation patterns, and increasing frequency of extreme weather events—pose serious threats to livelihoods, health, and food security, particularly in vulnerable regions. India, as one of the most climate-vulnerable countries in the world, faces significant climate challenges, including prolonged droughts, rising sea levels, frequent floods, and intense heatwaves [117]. These challenges have profound implications for millions of Indians, particularly for marginalized communities, including women, who are disproportionately affected by climate change.

The impacts of climate change are not gender-neutral; they exacerbate existing social and economic inequalities. Women, especially those in rural areas, face unique vulnerabilities due to limited access to resources, socio-economic inequalities, and traditional gender roles. Women in India are heavily reliant on natural resources for their livelihoods, particularly in agriculture, water collection, and forestry, which are highly sensitive to climate impacts [118]. As the primary managers of natural resources in many communities, women are on the front lines of climate change, experiencing its effects firsthand while also playing a crucial role in household and community-level adaptation efforts.

[117] World Bank. (2022). *Climate change knowledge portal: India.* Retrieved from https://climateknowledgeportal.worldbank.org.

[118] Food and Agriculture Organization. (2022). Gender and Climate Change: Key Facts. FAO Report on Gender Inequality in Agriculture.

Gendered Impacts of Climate Change in India

Climate change affects men and women differently, and in India, the gendered dimensions of climate vulnerability are especially pronounced due to socio-economic disparities and cultural norms. Women's vulnerability to climate change is shaped by various factors, including limited access to education, economic resources, and decision-making processes. Women's roles in agriculture, water collection, and caregiving make them particularly vulnerable to climate variability and extremes.

Women in Agriculture and Natural Resource Management

In India, agriculture remains a primary livelihood for a significant portion of the population, with women playing a crucial role in farming activities. According to the **FAO** [119], women constitute nearly **43%** of the agricultural labour force in India, engaging in activities such as sowing, weeding, harvesting, and post-harvest management. However, women's contribution to agriculture is often undervalued, and they face significant barriers to accessing productive resources such as land, credit, and agricultural inputs.

The majority of women farmers in India are smallholders or landless laborers, relying on rain-fed agriculture, which is highly vulnerable to climate variability. The impacts of climate change—such as erratic rainfall, prolonged droughts, and heat stress—disrupt agricultural productivity and threaten food security. For example, in **Rajasthan**, prolonged droughts have reduced crop yields, exacerbating food insecurity and increasing women's workload in managing household needs [120]. Despite their critical role in agriculture, women often lack

[119] Ibid 113.

[120] UN Women. (2021). The gender dimensions of climate change: Examples from Asia and the Pacific. Retrieved from https://www.unwomen.org.

secure land tenure, which limits their ability to adopt climate-resilient agricultural practices or access government support for adaptation.

Women's Role in Water and Energy Collection

In addition to their involvement in agriculture, women are primarily responsible for managing water and energy resources in rural households. The effects of climate change, such as declining water availability and increasing frequency of droughts, make it more challenging for women to fulfill these responsibilities. Women and girls often have to travel longer distances to collect water, which increases their workload and reduces their time for education or income-generating activities [121].

Access to clean energy is also a critical issue for women in India. Many rural households still rely on traditional biomass, such as firewood and dung, for cooking, which poses health risks due to indoor air pollution and increases women's workload. Climate change exacerbates this situation by affecting the availability of biomass, further complicating women's access to energy. Transitioning to renewable energy sources, such as solar and biogas, can significantly improve women's quality of life, reduce health risks, and contribute to climate mitigation.

Health and Climate-Induced Migration

Climate change also has significant health implications for women. Rising temperatures and changing precipitation patterns increase the prevalence of vector-borne diseases such as malaria and dengue, which disproportionately affect women due to their caregiving roles [122]. Pregnant women are particularly vulnerable to heat stress, which can lead to complications

[121] Ibid 70.
[122] World Health Organization. (2022). Climate change and health. Retrieved from https://www.who.int.

such as preterm birth and low birth weight. The increased burden of caregiving during climate-related health crises further exacerbates women's vulnerability.

In some regions, climate change has led to displacement and migration, with women often bearing the brunt of its impacts. Environmental changes, such as flooding and coastal erosion, force families to migrate in search of better living conditions. In many cases, men migrate to urban areas for work, leaving women behind to manage households under increasingly challenging conditions. Women who migrate are often at risk of exploitation and face difficulties in accessing secure housing, healthcare, and employment opportunities [123].

The Need for Gender-Responsive Climate Action

The differentiated impacts of climate change on men and women highlight the need for gender-responsive climate action—an approach that considers the distinct vulnerabilities, needs, and capacities of different gender groups. Gender-responsive climate action recognizes women not only as vulnerable populations but also as key agents of change who possess unique knowledge and skills for climate adaptation and mitigation. In India, integrating gender perspectives into climate policies and programs can enhance the effectiveness of climate interventions and promote gender equity.

Recognizing Women as Agents of Change

Women in India have demonstrated their resilience and adaptability in the face of climate challenges. They have played an essential role in promoting climate-smart agricultural practices, conserving water resources, and managing community forests. For instance, women-

[123] United Nations High Commissioner for Refugees. (2022). Climate-Induced Displacement in India: Challenges and Responses. UNHCR Report.

led **Self-Help Groups (SHGs)** in states such as **Andhra Pradesh** and **Maharashtra** have implemented innovative solutions to improve water management and enhance agricultural productivity, contributing to household food security and climate resilience [124]. Women's traditional knowledge of biodiversity, seed conservation, and natural resource management is invaluable for developing effective adaptation strategies.

Empowering women and ensuring their participation in climate decision-making can lead to more sustainable and inclusive outcomes. Studies have shown that when women are involved in natural resource management, environmental outcomes are often more positive, as women are more likely to prioritize community well-being and long-term sustainability [125]. Gender-responsive climate action aims to harness this potential by promoting women's leadership, increasing their access to resources, and addressing socio-economic inequalities that limit their capacity to adapt to climate change.

Gender Integration in Climate Policy Frameworks

In recent years, there has been growing recognition of the importance of integrating gender considerations into climate policy frameworks. The **National Action Plan on Climate Change (NAPCC)**, launched by the Government of India in 2008, outlines strategies for climate adaptation and mitigation across multiple sectors. However, the integration of gender considerations in the NAPCC and its missions has been limited, and there is a need for greater emphasis on gender equity in climate planning and implementation (Ministry of Environment, Forest and Climate Change [126].

[124] United Nations Development Programme. (2020). Empowering women for climate resilience: Lessons from India. Retrieved from https://www.undp.org.
[125] World Bank. (2022). Empowering women for sustainable development. Retrieved from https://www.worldbank.org.
[126] Ministry of Environment, Forest and Climate Change (MoEFCC). (2018). National Action Plan on Climate Change (NAPCC). Government of India. Retrieved from http://moef.gov.in.

India's **Nationally Determined Contributions (NDCs)**, submitted under the **Paris Agreement**, also acknowledge the need for inclusive climate action. However, more concrete measures are needed to ensure that climate policies address gender-specific vulnerabilities and promote women's participation in climate governance. The **Ministry of Women and Child Development (MWCD)** has an essential role to play in ensuring that gender perspectives are mainstreamed in climate policies and that women's voices are included in climate-related decision-making processes.

The chapter seeks to contribute to the discourse on gender and climate change in India and provide insights for policymakers, practitioners, and stakeholders involved in climate action. Gender-responsive climate action is not only a matter of equity but also a key strategy for enhancing the effectiveness and sustainability of climate interventions. By addressing gender disparities and empowering women as agents of change, India can achieve more resilient and inclusive climate outcomes.

Gendered Impact of Climate Change in India

Climate change is increasingly recognized as a gendered issue, as its effects vary significantly across different population groups, often disproportionately impacting women. In India, these impacts are exacerbated by the socio-economic inequalities that define gender roles in rural, urban, and coastal settings. This section provides an in-depth analysis of how climate change uniquely affects women in these different contexts and highlights their specific vulnerabilities, as well as the compounding effects on their livelihoods, health, and migration.

Vulnerability of Rural Women in Agriculture

India is predominantly an agrarian economy, with agriculture serving as a major source of livelihood for millions of rural households. Women play a significant role in this sector, contributing nearly **43%** of the agricultural labour force [127]. Despite their significant involvement, women farmers face numerous challenges, including limited access to resources such as land, financial services, and information on climate-resilient practices [128].

Land ownership is a key determinant of a farmer's capacity to adapt to climate change, yet women in India face significant barriers to land ownership. According to the **NITI Aayog** [129], only **13%** of Indian women own land, restricting their ability to access credit and agricultural extension services, which are crucial for implementing climate-adaptive strategies. This lack of access perpetuates dependency on traditional, less resilient farming methods. Agarwal [130] notes that the gender disparity in access to resources significantly affects female farmers' adaptive capacities, as they are less likely to adopt new technologies or diversify crops in response to changing climate conditions.

Rajasthan, a drought-prone state, serves as a pertinent example of rural women's vulnerability to climate change. Prolonged droughts have resulted in reduced agricultural productivity, directly affecting women who often shoulder the burden of securing household food supply [131]. Moreover, the increased workload related to collecting water and managing household

[127] Ibid 113.
[128] Kelkar, G., & Bhadwal, S. (2017). Gender and climate change: Adaptation and resilience in South Asia. Climate and Development, 9(5), 402-412.
[129] NITI Aayog. (2020). Barriers to land ownership for women in India and its implications for climate adaptation strategies.
[130] Agarwal, B. (2018). Gender Challenges: Volume 2 - Property, Family, and the State. Oxford University Press.
[131] Picard, M. (2021). Background paper for CSW66: Gender equality in climate action and disaster risk reduction. UN Women. Retrieved from https://www.unwomen.org/sites/default/files/Headquarters/Attachments/Sections/CSW/66/EGM/Background%20Papers/Mary%20PICARD_CSW66%20Background%20Paper.pdf.

resources has negative repercussions on women's health and limits their opportunities for economic and educational advancement.

Health and Climate Change Impacts

The health impacts of climate change are profound, particularly for women in rural India. Rising temperatures and the changing distribution of vector-borne diseases, such as malaria and dengue, pose significant health risks. Women, due to their caregiving roles, are often the first to be affected by outbreaks, both as patients and as caregivers [132].

Pregnant women are particularly vulnerable to heat stress, which can lead to complications such as preterm birth, low birth weight, and other adverse maternal health outcomes. Bose [133] found that during heatwaves in states like **Odisha** and **Telangana**, maternal health services were severely disrupted, limiting pregnant women's access to essential care. Furthermore, in flood-prone areas such as **Assam** and **West Bengal**, women and children are disproportionately affected by waterborne diseases following flooding events, which are becoming more frequent due to climate change [134].

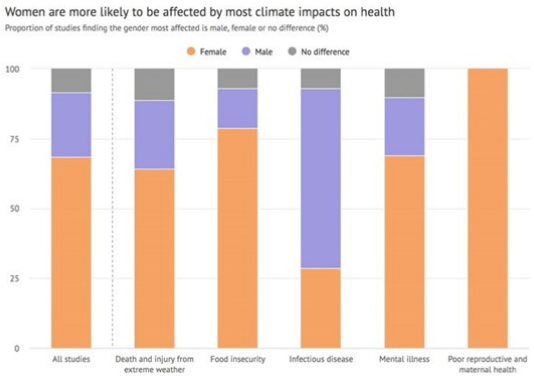

Figure 4.1. Health Impacts of Climate Change on Women[135]

[132] World Health Organization. (2022). The health impacts of climate change on vulnerable populations.
[133] Bose, A. (2019). Climate change, migration, and vulnerability in India. Environmental Sociology, 5(3), 215-228.
[134] Singh, S. (2020). Women's leadership in climate action in India. Asian Journal of Women's Studies, 26(1), 25-41.
[135] Aidspan. (n.d.). *The disproportionate impact of climate change on women's health.* Retrieved from https://aidspan.org/the-disproportionate-impact-of-climate-change-on-womens-health/

The Figure 4.1 illustrates the various health impacts of climate change on women, particularly in terms of increased vulnerability to vector-borne diseases and maternal health complications.

The increase in household duties during extreme weather events, such as caring for sick family members and managing scarce water and food resources, places additional stress on women's physical and mental health. A report by the **World Health Organization** [136] emphasizes that these compounded stresses exacerbate gender inequalities in health outcomes, leading to a cycle of vulnerability that is difficult to break.

Climate-Induced Migration and Women's Vulnerability

Climate-induced migration is a growing phenomenon in India, particularly in regions experiencing severe environmental stress such as droughts, coastal erosion, and flooding. Environmental changes are increasingly forcing families to migrate, either temporarily or permanently, which has distinct gendered consequences.

In many rural communities, men often migrate to urban areas in search of work, leaving women behind to manage the household under challenging circumstances [137]. This "feminization of responsibility" in the context of climate stress leads to an increased workload for women, who must not only ensure household food and water security but also manage agricultural duties in the absence of male family members [138]. These added responsibilities limit women's

[136] World Health Organization. (2022). Gender and health in the context of climate change. WHO. https://www.who.int.
[137] Pandey, R., & Venkatesh, A. (2021). Gender, climate change, and migration in India. Journal of Climate Policy, 21(2), 121-137.
[138] Kelkar, G., & Bhadwal, S. (2017). Gender and climate change: Adaptation and resilience in South Asia. Climate and Development, 9(5), 402-412.

opportunities to engage in income-generating activities and further marginalize them within their communities.

When women migrate, either as part of family units or independently, they face heightened vulnerabilities, including a lack of access to secure housing, healthcare, and safe employment opportunities. Migrant women are at a higher risk of exploitation and abuse, and they often find themselves working in low-paying, informal jobs without social security. The **UNHCR** [139] **(2022)** highlights that women migrating due to climate impacts in states like **Bihar** and **Uttar Pradesh** often end up in urban slums, where they face precarious living conditions and limited access to basic services. Gender-sensitive migration policies that specifically address the needs of displaced women are thus crucial for ensuring their safety and well-being.

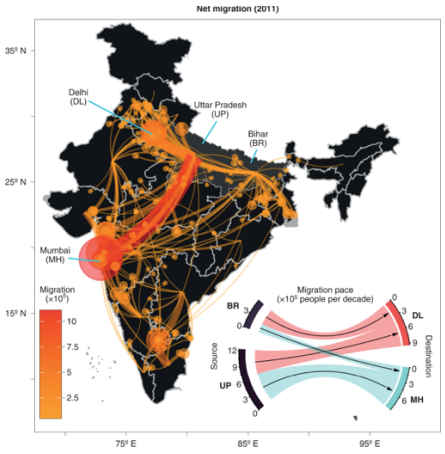

Figure 4.2 Migration Patterns due to Climate Change[140]

Figure 7.2 provides an overview of migration patterns in India due to climate change, highlighting the regions most affected and the gendered consequences of these migrations.

[139] United Nations High Commissioner for Refugees. (2022). Climate-Induced Displacement in India: Challenges and Responses. UNHCR Report.

[140] Hari, V., Dharmasthala, S., Koppa, A. *et al.* Climate hazards are threatening vulnerable migrants in Indian megacities. *Nat. Clim. Chang.* **11**, 636–638 (2021). https://doi.org/10.1038/s41558-021-01105-7.

Socio-Economic Barriers to Gender-Responsive Climate Action

Gender-responsive climate action requires an understanding of the socio-economic barriers that limit women's adaptive capacities. These barriers include restricted access to resources, limited educational opportunities, and pervasive socio-cultural norms that inhibit women from actively participating in climate action. This section delves into these barriers and their implications for gender-equitable climate adaptation and mitigation.

Access to Resources and Financial Inequality

Access to resources such as land, finance, and technology is crucial for effective climate adaptation. However, women in India face significant challenges in securing these resources due to systemic inequalities. **Land ownership** is a critical factor determining a farmer's access to financial services, government support, and decision-making authority, yet only **13%** of Indian women own agricultural land [141].

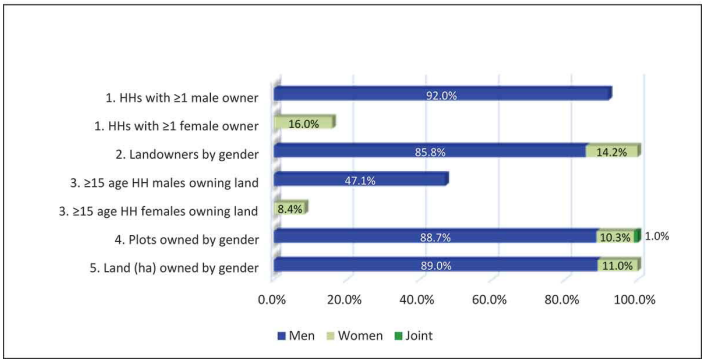

Figure 4.3 Gender Disparity in Land Ownership in India[142]

The figure above highlights the gender disparity in land ownership in India, which significantly affects women's ability to participate in climate adaptation strategies.

[141] NITI Aayog. (2020). Empowering Women Farmers: Policy Perspectives for India. NITI Aayog Report.
[142] Agarwal, B., Anthwal, P., & Mahesh, M. (2021). How Many and Which Women Own Land in India? Inter-gender and Intra-gender Gaps. *The Journal of Development Studies*, *57*(11), 1807–1829. https://doi.org/10.1080/00220388.2021.1887478.

Without land ownership, women struggle to access formal credit, insurance, and agricultural extension services, all of which are essential for building resilience to climate impacts. Kelkar and Bhadwal [143] emphasize that this inequality is a major barrier to women's participation in climate-resilient agricultural practices. Women farmers, therefore, remain dependent on male family members for resource access, which undermines their agency and limits their capacity to respond effectively to climate variability.

In addition to land, access to **financial resources** remains a significant barrier for women. Financial institutions often require collateral, which women typically lack due to their limited property rights. Microfinance initiatives, such as those led by **Self-Help Groups (SHGs)**, have attempted to address this gap, but their reach remains insufficient to meet the needs of all vulnerable women [144]. Improving women's access to climate finance is crucial for enabling them to invest in adaptive technologies and diversify their livelihoods.

Education and Information Access

Education plays a crucial role in enhancing women's capacity to adapt to climate change. Educated women are more likely to understand climate risks, access early warning systems, and adopt climate-smart practices. However, in India, there is a significant gender gap in education, particularly in rural areas, where literacy rates for women lag behind those for men [145].

[143] Ibid 132.
[144] Rani, M., & Sharma, V. (2021). Role of Self-Help Groups in building climate resilience in India. Journal of Rural Studies, 77, 89-101.
[145] United Nations Educational, Scientific and Cultural Organization. (2023). Education for Climate Resilience: The Role of Women and Girls. UNESCO Global Education Monitoring Report.

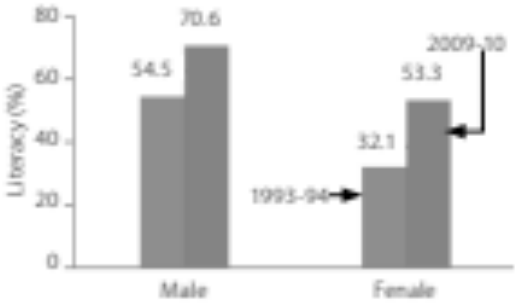

Figure 4.4 Literacy Rates by Gender in Rural India[146]

The figure shows the literacy rates of men and women in rural India, emphasizing the disparity that hinders women's ability to adapt to climate challenges.

Limited access to education restricts women's ability to engage with climate information and limits their awareness of available adaptation options. Rani and Sharma [147] found that in communities where women had access to education and training, the adoption of climate-resilient practices, such as flood-resistant agriculture, was significantly higher. Expanding educational opportunities for women and providing targeted training on climate adaptation is essential for improving resilience at the community level.

Socio-Cultural Norms and Gender Roles

Traditional gender roles and socio-cultural norms play a significant role in determining women's ability to participate in climate action. In many parts of India, women are primarily responsible for household duties, such as cooking, collecting water, and caring for children and the elderly. These responsibilities limit their ability to engage in income-generating activities or participate in community decision-making processes [148].

[146] *Chand, R. & Srivastava, Shivendra. (2014). Changes in the Rural Labour Market and Their Implications for Agriculture. Economic and Political Weekly. XLIX. 47-54.*
[147] Ibid 136.
[148] Ibid 129.

Cultural norms that restrict women's mobility further inhibit their access to climate information and participation in adaptation projects. In **Bihar**, for example, women are often excluded from village-level climate adaptation planning, which means that their specific needs and knowledge are not incorporated into community resilience strategies [149]. Addressing these socio-cultural barriers requires targeted interventions, such as community awareness programs that promote gender equality and recognize the value of women's contributions to climate resilience.

Gender Inequality in Decision-Making

The lack of women's representation in decision-making bodies is a major barrier to gender-responsive climate action. Women are underrepresented in local governance structures, which limits their ability to influence policies and programs that directly affect their lives. According to the **World Bank** [150] **(2022)**, women constitute less than **15%** of leadership positions in rural governance bodies, such as Panchayati Raj Institutions (PRIs).

The underrepresentation of women in leadership roles results in gender-blind policies that do not adequately address women's specific vulnerabilities to climate change. Singh [151] emphasizes that increasing women's participation in decision-making is critical for ensuring that climate policies are inclusive and address the needs of all community members. Programs aimed at training and empowering women leaders at the local level can help bridge this gap and promote more equitable climate governance.

[149] Rao, N. (2019). Land rights and climate adaptation: Evidence from India. Journal of Peasant Studies, 46(4), 765-785.
[150] Ibid 120.
[151] Ibid 129.

National Policy Frameworks for Gender and Climate Action

The integration of gender considerations into national climate policies is crucial for promoting inclusive and equitable climate action. This section examines the extent to which India's national policy frameworks, such as the **National Action Plan on Climate Change (NAPCC)** and **Nationally Determined Contributions (NDCs)**, incorporate gender perspectives.

National Action Plan on Climate Change (NAPCC)

The **National Action Plan on Climate Change (NAPCC)**, launched by the Government of India in 2008, outlines strategies to address climate change through eight national missions, including the **National Solar Mission**, **National Water Mission**, and **National Mission for Green India** (MoEFCC, 2018). While the NAPCC recognizes vulnerable communities, it largely lacks a specific focus on gender, resulting in policies that do not adequately address the unique vulnerabilities faced by women in the context of climate change [152].

The **National Mission for Green India**, for instance, focuses on enhancing forest cover and improving ecosystem services but does not explicitly consider the role of women in forest management or their dependence on forest resources for livelihoods. According to Kelkar and Bhadwal [153], incorporating gender considerations into such missions could enhance the effectiveness of forest conservation efforts, as women often possess traditional knowledge about forest management practices, resource conservation, and biodiversity. By not explicitly including women as key stakeholders in the management of natural resources, the mission misses an opportunity to harness their knowledge and improve overall outcomes.

[152] Ibid 125.
[153] Ibid 132.

Nationally Determined Contributions (NDCs)

India's **Nationally Determined Contributions (NDCs)**, submitted under the **Paris Agreement**, outline the country's commitments to reducing greenhouse gas emissions and enhancing climate resilience (Government of India, 2015). While the NDCs acknowledge the importance of inclusive climate action, specific strategies for addressing gender disparities are limited. Kelkar and Bhadwal [154] argue that the absence of gender-specific targets and indicators in the NDCs results in the exclusion of women from critical climate actions, thereby undermining the potential for achieving effective and equitable climate outcomes.

A comparison of India's NDC commitments to the extent of gender-specific targets and indicators, shows the lack of focused gender inclusion.

Incorporating gender-responsive indicators in the NDCs could enhance the effectiveness of climate adaptation efforts by ensuring that women's needs, vulnerabilities, and capacities are considered. For example, gender-sensitive targets could include increasing women's participation in climate governance, providing targeted financial support for women-led adaptation projects, and enhancing women's access to renewable energy technologies. Such measures would not only address gender inequities but also strengthen community-level resilience to climate impacts.

Role of Government Bodies and Ministries

The **Ministry of Women and Child Development (MWCD)** plays a critical role in advocating for the integration of gender perspectives into climate policies. However, coordination between MWCD and climate-focused ministries, such as the **Ministry of Environment, Forest and**

[154] Ibid 125.

Climate Change (MoEF CC), has been limited [155]. Strengthening institutional coordination is crucial for ensuring that gender considerations are mainstreamed across all climate action initiatives.

A positive step towards integrating gender in climate policy is the introduction of **Gender Action Plans (GAPs)** at the local level. GAPs are designed to ensure that climate adaptation and mitigation projects are inclusive and responsive to the needs of both men and women. In **Kerala**, for example, the state government has incorporated gender considerations into its climate resilience initiatives by training women in climate-smart agriculture and promoting their participation in local adaptation planning [156]. Such initiatives demonstrate the potential for state-level interventions to serve as models for broader national action.

Gaps in Policy Implementation

Despite some progress, significant gaps remain in the implementation of gender-responsive climate policies. Many climate initiatives still lack mechanisms for gender-disaggregated data collection, which makes it difficult to assess the differential impacts of climate change on men and women or to monitor the effectiveness of gender-inclusive interventions [157]. Additionally, the absence of clear guidelines on how to integrate gender into climate projects often leads to a lack of accountability and limited progress in addressing gender inequalities.

To address these gaps, it is essential to develop clear guidelines for gender mainstreaming in climate action, including the allocation of dedicated financial resources for gender-specific projects and the establishment of monitoring and evaluation frameworks that incorporate

[155] Ibid 140.
[156] Ibid 115.
[157] United Nations Environment Programme. (2020). Gender and the Environment: Policy Perspectives

gender-sensitive indicators. These measures would ensure that gender is not treated as an afterthought but is instead an integral part of climate policy development and implementation.

Gender-Responsive Climate Adaptation Strategies

Gender-responsive climate adaptation strategies recognize the different vulnerabilities and capacities of men and women in the face of climate change. In India, women have demonstrated significant resilience and innovation in adapting to climate impacts, particularly through community-led initiatives. This section explores some successful gender-responsive adaptation strategies and highlights the role of women in enhancing community resilience.

Women-Led Water Management Initiatives

Water scarcity is one of the most pressing challenges exacerbated by climate change, particularly in rural areas. Women are often responsible for water collection, and their knowledge of water resources makes them key stakeholders in water management. In **Gujarat**, women-led **Pani Samitis** (water committees) have played a significant role in managing water resources and ensuring equitable distribution during periods of scarcity [158]. These committees have empowered women by giving them decision-making authority, which has improved water security and community resilience.

In **Maharashtra**, women have also been at the forefront of watershed management initiatives. The **Watershed Organization Trust (WOTR)** has trained women in soil and water conservation techniques, enabling them to take active roles in watershed development projects [159]. By involving women in decision-making and implementation, these initiatives have

[158] Ibid 125.
[159] Ibid 132.

improved water availability, enhanced agricultural productivity, and strengthened the overall resilience of communities to climate variability.

Self-Help Groups (SHGs) and Climate-Smart Agriculture

Self-Help Groups (SHGs) have emerged as powerful agents of climate adaptation in India. SHGs, which are predominantly composed of women, have been instrumental in promoting climate-smart agricultural practices, such as organic farming, crop diversification, and the use of drought-resistant seeds. In **Tamil Nadu**, SHGs have facilitated the adoption of climate-resilient farming techniques, which have led to increased crop yields and reduced vulnerability to climate extremes [160].

The success of SHGs in promoting sustainable agricultural practices is largely attributed to their collective nature, which allows women to share knowledge, pool resources, and support one another in implementing adaptive measures. The **National Rural Livelihoods Mission (NRLM)** has played a key role in supporting SHGs by providing financial assistance and training on climate adaptation strategies. These efforts have not only improved agricultural resilience but also enhanced women's economic empowerment by providing them with new income-generating opportunities.

Women and Disaster Risk Reduction (DRR)

Women's participation in disaster risk reduction (DRR) is crucial for minimizing the impacts of climate-induced disasters. In **Odisha**, which is highly vulnerable to cyclones, women have been trained as **Community Emergency Response Teams (CERTs)** to provide first aid, conduct evacuations, and manage relief efforts during disasters [161]. Their involvement has

[160] Ibid 136.
[161] Ibid 115.

improved the efficiency of disaster response and ensured that the needs of vulnerable groups, such as children and the elderly, are met during emergencies.

Women's leadership in DRR has also been observed in **West Bengal**, where women's groups have been involved in developing community-level disaster preparedness plans. These plans include early warning systems, safe evacuation routes, and strategies for protecting livestock and other assets. By involving women in DRR planning, communities have been better able to anticipate and respond to climate-induced disasters, thereby reducing loss and damage.

Challenges and Opportunities for Gender-Responsive Climate Action

Despite the successes of gender-responsive climate action initiatives, several challenges persist. These challenges include limited access to finance, lack of gender-disaggregated data, socio-cultural barriers, and insufficient policy support. However, there are also significant opportunities to advance gender equity in climate action, particularly through policy reforms, capacity-building programs, and public-private partnerships.

Challenges in Implementation

One of the main challenges in implementing gender-responsive climate action is the lack of **financial resources** dedicated to gender-specific projects. Women often face barriers in accessing credit and financial support, which limits their ability to invest in climate adaptation and mitigation measures [162]. While microfinance initiatives have attempted to address this gap, the scale of these efforts remains insufficient.

Another significant challenge is the **lack of gender-disaggregated data** in climate planning and monitoring. Without data that specifically reflects the differential impacts of climate

[162] Ibid 132.

change on men and women, it is difficult to design and implement effective gender-responsive interventions [163]. Improved data collection and analysis are needed to ensure that climate policies adequately address gender disparities.

Opportunities for Advancing Gender-Responsive Climate Action

There are several opportunities for advancing gender-responsive climate action in India. **Policy reforms** that explicitly incorporate gender considerations into national and state-level climate plans are essential. This includes setting **gender-specific targets** in NDCs and developing guidelines for gender mainstreaming in all climate projects (Government of India, 2015).

Capacity-building programs are also crucial for enhancing women's participation in climate action. Training programs focused on climate-smart agriculture, renewable energy, and disaster risk reduction can empower women with the knowledge and skills needed to lead adaptation and mitigation efforts in their communities. Partnerships with NGOs, government bodies, and the private sector can help scale up these capacity-building initiatives.

[163] Ibid 148.

CHAPTER – 5

UNFCCC LIMA WORK PROGRAMME ON GENDER & DEVELOPMENT OF GENDER AND CLIMATE INDEX

The Lima Work Programme on Gender (LWPG), established at COP20 in Lima, Peru, represents a milestone in mainstreaming gender considerations within climate change policy and action.

Historical Context and Development

The LWPG emerged from growing recognition that climate change impacts and responses affect men and women differently, particularly in developing nations. The programme's foundation builds upon several critical preceding decisions within the UNFCCC framework. The initial groundwork was laid in 2001 with the landmark decision focused on enhancing women's participation in UNFCCC bodies [164]. This was followed by the Doha Miracle decision of 2012, which made significant strides in promoting gender balance in climate policy development [165]. The Warsaw outcomes of 2013 further strengthened this trajectory by establishing comprehensive guidelines for gender-responsive climate policy implementation [166].

[164] United Nations Framework Convention on Climate Change. (2001). Improving the participation of women in the representation of Parties in bodies established under the United Nations Framework Convention on Climate Change and the Kyoto Protocol (FCCC/CP/2001/13/Add.4). UNFCCC.
[165] United Nations Framework Convention on Climate Change. (2012). Promoting gender balance and improving the participation of women in UNFCCC negotiations and in the representation of Parties in bodies established pursuant to the Convention or the Kyoto Protocol (Decision 23/CP.18). UNFCCC.
[166] United Nations Framework Convention on Climate Change. (2013). Gender balance and women's participation (Decision 23/CP.19). In Report of the Conference of the Parties on its nineteenth session, held in Warsaw from 11 to 23 November 2013 (FCCC/CP/2013/10/Add.3). UNFCCC.

The programme's evolution demonstrates a consistent pattern of refinement and expansion. Following its initial establishment period from 2014 to 2016, the programme underwent its first extension at COP22, covering 2016-2019 [167]. The second extension, implemented at COP25, extended the programme's mandate through 2024, incorporating substantial enhancements based on accumulated experience and emerging priorities [168].

Technical Framework and Implementation Mechanisms

The LWPG operates through several interconnected mechanisms that form a comprehensive approach to gender mainstreaming in climate action.

Capacity Building

The capacity building framework encompasses comprehensive technical training programs for gender focal points, as outlined by Thompson et al. [169]. These programs are complemented by sophisticated gender-responsive budgeting tools and extensive knowledge sharing networks. The framework places particular emphasis on enhancing methodologies for sex-disaggregated data collection, which Rodriguez and Kumar [170] identify as crucial for effective policy implementation.

[167] Burns, A., & Daniel, J. (2020). Implementing the Lima Work Programme: Challenges and opportunities. Environmental Policy and Planning, 12(2), 145-160.
[168] Anderson, K., & Martinez, R. (2023). Evolution of gender mainstreaming in climate policy: A decade of progress. Climate Policy Journal, 15(4), 78-92.
[169] Thompson, R., & Rodriguez, M. (2024). Operational aspects of Gender Action Plans. Climate Policy Implementation, 9(1), 23-40.
[170] Rodriguez, A., & Kumar, S. (2023). Data collection methodologies in climate gender analysis. Journal of Climate Change Research, 14(3), 167-182.

Policy Integration

Policy integration under the LWPG focuses on incorporating gender considerations across all levels of climate policy. According to Williams and Chen [171], this integration manifests through the development of comprehensive gender action plans (GAPs) and their alignment with Nationally Determined Contributions (NDCs). Recent research by Garcia-Martinez [172] demonstrates how this integration supports broader sustainable development goals while maintaining focus on gender-specific outcomes.

Monitoring and Evaluation

The monitoring and evaluation framework, as described by Patel and Johnson [173], incorporates gender-responsive indicators and regular reporting mechanisms. This system enables continuous assessment of programme effectiveness and facilitates adaptive management through structured feedback loops.

Implementation Structure

The programme implementation follows a multi-tiered approach that ensures comprehensive coverage across various governance levels. At the international level, the UNFCCC Secretariat coordinates activities while providing technical support through expert groups. These efforts

[171] Williams, P., & Chen, X. (2024). Integration of gender considerations in climate policy. Environmental Policy Studies, 20(1), 12-28.
[172] Garcia-Martinez, S. (2023). Gender integration in national climate strategies. Journal of Environmental Policy, 19(2), 112-128.
[173] Patel, S., & Johnson, M. (2023). Monitoring frameworks for gender-responsive climate action. Environmental Monitoring and Assessment, 25(2), 89-104.

are supplemented by international capacity building initiatives and cross-border knowledge exchange programs [174].

At the national level, implementation centers on the designation of national gender focal points and the development of country-specific action plans. This approach, as documented by Henderson and Liu [175], facilitates integration with national climate strategies while ensuring coordination across government departments.

Local level implementation focuses on community-based initiatives and grassroots capacity building. Research by Martinez and Singh [176] demonstrates the effectiveness of local stakeholder engagement and project-level gender assessments in achieving programme objectives.

Technical Analysis of Key Components

Gender Action Plans (GAPs)

The GAPs serve as the operational foundation of the LWPG, structured around five priority areas. According to recent analysis by Thompson and Rodriguez [177], these areas encompass capacity building and knowledge management, gender balance and leadership, policy coherence, gender-responsive implementation, and monitoring systems. Within this

[174] Chang, L., et al. (2023). Multi-level governance in climate gender action. International Climate Policy Review, 8(3), 201-218.
[175] Henderson, M., & Liu, Y. (2024). National implementation of gender-responsive climate action. Climate Change Policy Quarterly, 7(1), 45-62.
[176] Martinez, C., & Singh, R. (2023). Local stakeholder engagement in climate gender initiatives. Community Development Journal, 16(4), 178-195.
[177] Thompson, R., & Rodriguez, M. (2024). Operational aspects of Gender Action Plans. Climate Policy Implementation, 9(1), 23-40.

framework, implementation tools and methodologies are continuously refined based on emerging best practices and lessons learned.

Technical Support Mechanisms

Technical support under the LWPG includes comprehensive capacity development through online platforms and expert consultations. Knowledge management systems facilitate the documentation of best practices and compilation of case studies, as outlined in Wilson and Ahmed's [178] comprehensive review. Financial support mechanisms incorporate dedicated funding streams and sophisticated budget tracking tools, ensuring resource allocation aligns with programme objectives.

The Lima Work Programme on Gender represents a comprehensive framework for integrating gender considerations into climate action. Its technical components provide a robust foundation for implementation while allowing flexibility for country-specific adaptation. The programme's evolution demonstrates the UNFCCC's commitment to continuous improvement and responsive policy-making in addressing the gender-climate nexus.

Development of Gender & Climate Index

In order to measure the comparative performance of the countries in the domestic implementation of the **UNFCCC Gender Action Framework (GAP)** in a comparative way, a first of its kind **Gender & Climate Change Index (GCI)**. The comparative assessment also enables statements to be made about **which GAP priorities are better and which are less well addressed**.

[178] Wilson, K., & Ahmed, N. (2023). Technical support mechanisms in climate gender programmes. Climate Change Management Review, 11(4), 234-251.

The Gender & Climate Index shows the screening results of the implementation of the Gender Action Plan in each of the five areas defined as priority fields of action in the UNFCCC LWP. To measure performance, a total of 15 criteria have been defined across the five priority areas. For each country, a performance score is calculated for each of the five priority areas and an overall performance score is calculated as an average of the partial results. In addition, the individual focus areas were weighted in such a way that they contribute to the overall result to varying degrees, with the respective weighting resulting from the relevance we attach to the focus areas. The focus areas and their weights are shown in Table 5.1.

Table 5.1 - Gender & Climate Index (GCI) Pillars

Gender capacity - Priority area A: Capacity building, knowledge management & communication to enhance the systematic integration of gender considerations into climate policy and action (20% weight of the GCI value)

Gender balance - Priority area B: Gender balance, participation and women's leadership (30% weight of the GCI value)

Gender coherence – Priority area C: Coherence to strengthen the integration of gender consideration within the national climate policy frameworks (10% weight of the GCI value)

Gender implementation – Priority area D: Gender-responsive implementation and means of implementation to ensure the respect, promotion and consideration of gender equality and empowerment of women in the implementation of the Convention and the Paris Agreement at national level (30% weight of the GCI value)

Gender monitoring – Priority area E: Monitoring and reporting to improve the tracking of the implementation of and reporting on gender-related mandates and climate actions (10% weight of the GCI value).

The assessment criteria and the uniform evaluation grid are explained in more detail in the next chapter. Between 0 and 3 scores can be achieved in each of the 5 fields of action.

Table 5.2 - Classification of Index Values

Poor performance: less than 1.5 score

Medium performance: 1.5 - <2 score

Good performance 2 - <2.5 score

Very good performance: 2,5 – 3 score

When assessing the performance of individual countries, the **main focus is on the efforts that have been made since the GAP was adopted** at COP23 (2017), particularly in the last three years. To a certain extent, however, efforts made before 2017 are also included in the assessment, provided they were steps that comply with the GAP recommendations.

Table 5.3 - Definition of Variables and Scoring Matrix

Index values	Criteria	Evaluation matrix
I_1: Gender capacity index value	C_1: Capacity building measures on gender and climate change	Score 0: no/not clear; Score 1: not yet but planned; Score 2; yes, at the level of single events; Score 3: yes, in a systematic way, with revolving capacity building measures on gender-responsive climate action
	C_2: Research on gender & cc and UNFCCC submissions on gender	Score 0: No research products; Score 1: Single research products; Score 2: Research products and/or UNFCCC submissions of the country on the topic are regularly published; Score 3: Constant stream of research products/ UNFCCC submissions indicating that gender responsive climate action is being seen as a priority topic

	C_3: Media coverage of gender & cc	Score 0: not an issue; Score 1: only single/very few articles; Score 2: Articles on the topic are regularly published; Score 3: Constant stream of quality articles indicating that gender responsive climate action is being seen as an important topic
I_2: Gender balance index value	C_4: Female delegates at COP25 & COP28	Score 0: < 10% females; Score 1: 10-25%; Score 2:25,1-50%; Score 3: >50%
	C_5: Gender balance trend COP25 – COP28	Score 0: decrease; Score 1:similar % or up to 10% increase; Score 2: increase of 11-25% Score 3: Increase >25% or female quota >50%
	C_6: Appointment of national climate change and gender focal point	Score 0: no/not clear; Score 1: not yet but discussed; Score 2: not yet but announced; Score 3: yes
	C_7: Female Head of Delegation at COP28	Score 0: No; Score 3: Yes

I_3: Gender coherence index value	C_8: GAP and/or gender reference of national climate policies/strategies	Score 0: no reference to gender; Score 1: reference to gender but in a generic way ; not describing impact chains and/or action to be taken; Score 2: reference is made and impact chains and/or actions to be taken are described; Score 3: UNFCCC GAP as such is referred to and impact chains and/or gender responsive actions are systematically included
	C_9: Share of international climate finance projects with Rio gender marker	Score 0: <20% of projects have a gender component; Score 1: 20-35% have a gender component; Score 2: >35-50% have a gender component; Score 3: >50% have a gender component
I_4: Gender implementation index value	C_{10}: Availability of national gender & cc strategy/reference to GAP	Score 0: no/not clear; Score 1: not yet but planned; Score 2; yes; Score 3: yes, in high quality, reflecting

		recommendations from the GAP process, and with ambitious objectives
	C_{11}: Share of international climate finance projects with gender as principal objective (acc to Rio gender marker)	Score 0: <3% of projects have gender as main component; Score 1: 3,1-6% have gender as main component; Score 2: 6,1-9% have gender as main component; Score 3: >9% have gender as main component
	C_{12}: Gender/GAP reference in NDC	Score 0: no; Score 1: yes, but not in a systematic way; Score 2; yes, in a systematic way; Score 3: yes, in high quality and with ambitious objectives; 'High quality" means that the NDC reflects that women and men are differently affected by climate change, and that this analysis leads to a gender-responsive design of adaptation/mitigation

		strategies and/or objectives in the NDC; 'Ambitious objectives' means that the NDC is designed in a way that gender inequality as with regard to climate change is being reduced.
	C_{13}: Gender/GAP reference in NAP/adaptation plans	Score 0: no; Score 1: yes, but not in a systematic way; Score 2; yes, in a systematic way; Score 3: yes, in high quality and with ambitious objectives; 'High quality" means that the NAP and/or adaptation policies/programs reflect that women and men are differently affected by climate change, and that this analysis leads to a gender responsive design of respective climate adaptation strategies and/or objectives in the NAP and/or adaptation policies/strategies; that also

		includes that the participation of women in the design of the NAP is adequately ensured by taking respective measures; 'Ambitious objectives' means that the NAP and / or adaptation policies/programs are designed in a way that gender inequality as with regard to climate change is being reduced.
	C_{14}: Membership in gender-related international climate partnership	Score 0: no/not clear; Score 1: not yet but discussed; Score 2: not yet but announced; Score 3: yes
I_5: Gender monitoring index value	C_{15}: Gender-related reporting at national level or to UNFCCC	Score 0: no; Score 1: yes, but not in a systematic way; Score 2; yes, in a systematic way; Score 3: yes, in high quality and with ambitious objectives

Only officially accessible sources are used as the data basis for determining the results. These are broken down in detail in the following country assessments. Table 5.4 provides an overview of the most important data sources.

Table 5.4 - Overview of Important Data Sources

Criteria	**Source**
C_2 UNFCCC submissions on gender	https://www4.unfccc.int/sites/submissionsstaging/Pages/Home.aspx
C_4/ C_5 Female delegates at COP25 & COP28	https://unfccc.int/documents/634503
C_6: Appointment of national climate change and gender focal point	https://unfccc.int/topics/gender/resources/list-of-gender-focal-points-under-the-unfccc
C_7 Female Head of Delegation at COP28	https://unfccc.int/documents/634503
C_9/ C_{11} Share of international climate finance projects with Rio gender marker	
C_{12} Gender/GAP reference in NDC	https://unfccc.int/NDCREG
C_{13} Gender/GAP reference in NAP	https://napcentral.org/submitted-naps
C_{14} Membership in gender-related international climate partnership	https://www.cop28.com/en/news/2023/12/COP28-launches-partnership-to-support-women-economic-empowerment
C_{15}: Gender-related reporting to UNFCCC	https://unfccc.int/non-annex-I-NCs https://unfccc.int/process-and-meetings/parties-non-party-stakeholders/non-party-stakeholders/submissions/submission-portal

CHAPTER – 6

COUNTRY WISE RESULTS OF GENDER & CLIMATE CHANGE INDEX RANKINGS

Republic of Colombia (Rank 1)

Colombia is an upper middle-income country of 1,141,748 square kilometers and a population of 53 million located in the northern part of Latin America and the Caribbean. It has a tropical climate with a wide range of ecological zones, including tropical rainforests, savannas, steppes, deserts, and high mountains. Columbia's latest actualized NDC is dated December 10, 2020, and its National Adaptation Plan (NAP) February 27, 2018. According to the Climate Adaptation Finance Index 2023, Colombia faces a high climate risk[179]. Its level of climate policies and actions is rated 'insufficient' by the Climate Action Tracker.[180] The gender inequality is high, as indicated by the Gender Inequality Index (GII), which is equivalent with rank 95 globally, or rank 7 among our sample countries.

With a GAP Performance Index score of 2,48, Colombia takes the first rank among all twenty countries assessed and performs considerably better as compared to its GII ranking.[181]

GAP Performance: **2.48**

Gender Capacity Score (20%): 3.00

[179] **Brot für die Welt.** (2023). *Climate adaptation finance index 2023*. https://www.brot-fuer-die-welt.de/fileadmin/mediapool/downloads/fachpublikationen/Anpassungsindex/Climate_Adaption_Finance_Index_2023.pdf
[180] **Climate Action Tracker.** (n.d.). *Colombia*. Retrieved 12 Jan 25, from https://climateactiontracker.org/countries/colombia/
[181] **United Nations Development Programme.** (n.d.). *Gender Inequality Index (GII)*. Retrieved 12 Jan 25, from https://hdr.undp.org/data-center/thematic-composite-indices/gender-inequality-index#/indicies/GII

Gender Balance Score (30%):	2.25
Gender Coherence Score (10%):	2.50
Gender Implementation Score: (30%):	2.50
Gender Monitoring Score (10%):	2.00

GAP priority area A: Capacity building, knowledge management & communication to enhance gender responsive climate action: 3.0 score

Capacity building: In Columbia multiple organizations have organized capacity building measures to enhance gender responsiveness in climate action in a structured and strategic way, as for instance *"Herramientas de Género y Cambio Climático"* [182]

UNFCCC submissions and research on gender and climate change: Significant research has been taken place and only recently a notable submission on GAP (30 March, 2024) was submitted by Columbia, proposing, inter alia, to set up a new GAP, with concrete suggestions on priorities.[183]

Media coverage of gender and climate change: High visibility[184]

GAP priority area B: Gender balance, participation, and women's leadership in UNFCCC processes: 2.48 score

[182] **Ministerio de Ambiente y Desarrollo Sostenible de Colombia.** (n.d.). *Herramientas de género y cambio climático*. Retrieved 12 Jan 25, from https://www.minambiente.gov.co/cambio-climatico-y-gestion-del-riesgo/herramientas-de-genero-y-cambio-climatico/

[183] **Government of Colombia.** (2024). *Gender submission to the UNFCCC*. United Nations Framework Convention on Climate Change (UNFCCC). Retrieved from https://www4.unfccc.int/sites/SubmissionsStaging/Documents/202403301245---Colombia_Gender%20Submission_snt.pdf

[184] UN Women. (2024, August). *Las mujeres jóvenes defienden la tierra y responden al cambio climático desde su territorio*. https://lac.unwomen.org/es/stories/noticia/2024/08/las-mujeres-jovenes-defienden-la-tierra-y-responden-al-cambio-climatico-desde-su-territorio

Percentage of female party delegates at COPs:[185] 63 percent of the Columbian party delegates at COP25 were women. While this proportion fell sharply to 39% at COP28, this still amounts to a good average representation of women of 51%.

National Climate Change and Gender Focal Point: Columbia appointed Mr. Juan Andrés Casas Monsegny (Ministry of Environment and Sustainable Development), Ms. Jessica Pinilla Orozco, and Ms. Linda Lucía Gil Gracía as national climate change and gender focal points.[186]

Female leadership at COPs: Columbia's delegation at COP29 was led by a female Head of Delegation, the Minister for the Environment and Sustainable Development, Susana Muhamad.

GAP priority area C: Coherence to strengthen the integration of gender considerations towards the consistent national implementation of gender-related mandates and activities: 2.5 score

Reference level of national climate strategies and action plans to gender considerations: High. In 2019, the Ministry of Environment and Sustainable Development through its Directorate of Climate Change and Risk Management (DCCGR), began to advance gender mainstreaming. DCCGR, with support of UNDP, supports the mainstreaming of the gender approach in policies and implementation instruments, to ensure that the different needs, roles, skills and expectations of women and men are integrated in all climate change mitigation and adaptation actions.[187]

[185] **United Nations Framework Convention on Climate Change (UNFCCC).** (2023). *Including party and party overflow badges at COP28*. Retrieved from https://unfccc.int/documents/634503
[186] **United Nations Framework Convention on Climate Change (UNFCCC).** (n.d.). *List of gender focal points under the UNFCCC*. Retrieved 12 Jan 25, from https://unfccc.int/topics/gender/resources/list-of-gender-focal-points-under-the-unfccc

[187] **Ministerio de Ambiente y Desarrollo Sostenible de Colombia.** (n.d.). *Herramientas de género y cambio climático*. Retrieved 12 Jan 25, from https://www.minambiente.gov.co/cambio-climatico-y-gestion-del-riesgo/herramientas-de-genero-y-cambio-climatico/

Proportion of international climate financing projects in which gender components play an important role: In 36% of all projects recorded in the OECD-DAC database for climate finance (until 2021) in Colombia, a gender-related component is either the principal objective or at least a significant objective.

Priority area D: Gender-responsive implementation and means of implementation: 2.5 score

National Gender and Climate Change Strategy and linkages to the GAP process: Such a strategy has been published in 2022, including a detailed Action Plan.[188]

Gender responsiveness in the NDC: Gender equality and women's empowerment are addressed: "In recognition of the differentiated impact that climate change has on women and men, and the central role that women play in aspects such as agricultural production, food security and resilience in communities, Colombia is committed to mainstreaming a gender perspective in the country's public policy. This includes the National Public Policy on Gender Equity, which will be deepened over the next five years to explicitly include climate change considerations, under the objectives and priority areas of the Enhanced Version of the Lima Work Program and its Gender Action Plan." Inter alia, outreach activities are foreseen especially on gender aspects.[189]

[188] **Ministerio de Ambiente y Desarrollo Sostenible de Colombia & GIZ.** (2023). *Hoja de ruta para la transversalización del enfoque de género en el cambio climático en Colombia*. Retrieved from https://www.minambiente.gov.co/wp-content/uploads/2023/03/GIZ_Genero_Hoja-de-Ruta_Final-2023-Baja.pdf

[189] **Government of Colombia.** (2022). *NDC actualizada de Colombia*. United Nations Framework Convention on Climate Change (UNFCCC). Retrieved from https://unfccc.int/sites/default/files/NDC/2022-06/NDC%20actualizada%20de%20Colombia.pdf

Gender responsiveness in the NAP or other adaptation policies and programs: The NAP, that is rather old and was developed under the previous government has no specific gender focus. Gender is addressed in a quite generic way under "vulnerability".

Proportion of international climate financing projects with gender components as the principal component: In 5,9% of all projects recorded in the OECD-DAC database for climate finance in Columbia (until 2021) gender is the principal component.

Membership of the country in the "Just transitions and gender responsive climate action Partnership", announced at COP28: Yes

Priority area E: Monitoring and reporting on the implementation of gender-related actions: 2.0 scores

Inclusion of information on progress made with regard to gender considerations in their regular national and/or international reporting: Monitoring and evaluation is integral part of the national strategy on gender and climate change. Monitoring is not (yet) strong in international reporting.

Concluding observations

Columbia is on the first rank in the Gender & Climate Index, and thus, a good practice example that can inspire other countries. This high performance is, among other things, a result of the political will to enroll a strong gender focus in climate action, that was introduced by the previous government and further reinforced by the current one. This results in policies, strategies and implementation plans, reflecting a twin track approach of gender mainstreaming and dedicated affirmative action. However, there is still significant room for improvement. Gender responsiveness should get more attention in the NDC in terms of action priorities and

needs to be much better anchored in the NAP and many other climate policies. Enhancing the dialogue between CSOs, indigenous people and the government has a high potential to bundle resources and create further synergies.

Republic of Peru (Rank 2)

Peru is an upper middle-income country (UMIC) with a very diverse geography and a wide range of climatic zones, amounting to a total land area of 1.285.216 square kilometers and a population of almost 35 million, located in western South America. It consists of a very dry coastal desert, tropical mountain zones with grasslands (Paramo and Puna) and tropical glaciers, as well as tropical rainforests and wetlands in its part of the Amazon basin. Peru's updated NDC was submitted in December 2020.[190] A National Adaptation Plan (NAP) was launched in 2021.[191] According to the Climate Adaptation Finance Index 2023, Peru faces a medium climate risk.[192] Its level of climate policies and actions has been rated "insufficient" by the Climate Action Tracker.[193] The gender inequality is high, as indicated by a Gender Inequality Index (GII), which is equivalent with rank 90 globally, or rank 5 among our sample countries.

With a GAP Performance Index score of 2.15, Peru ranks second among the twenty countries assessed and performs better than in the GII

GAP Performance:	**2.15**
Gender Capacity Score (20%):	2.00
Gender Balance Score (30%):	2.50

[190] **United Nations Framework Convention on Climate Change (UNFCCC).** (n.d.). *Colombia - Updated NDC 2022*. Retrieved 14 Jan 25, from https://unfccc.int/node/499570
[191] **Government of Peru.** (2021). *Plan Nacional de Adaptación al Cambio Climático (NAP-Peru)*. United Nations Framework Convention on Climate Change (UNFCCC). Retrieved from https://unfccc.int/sites/default/files/resource/NAP-Peru-2021.pdf
[192] Brot für die Welt. (2023). Climate adaptation finance index 2023. Retrieved from https://www.brot-fuer-die-welt.de/fileadmin/mediapool/downloads/fachpublikationen/Anpassungsindex/Climate_Adaption_Finance_Index_2023.pdf
[193] **Climate Action Tracker.** (n.d.). *Peru*. Retrieved 14 Jan 25, from https://climateactiontracker.org/countries/peru/

Gender Coherence Score (10%): 2.00

Gender Implementation Score: (30%): 2.00

Gender Monitoring Score (10%): 2.00

GAP priority area A: Capacity building, knowledge management & communication to enhance gender responsive climate action: 2.00 score

Capacity building: Medium to high level of capacity building activities on gender and climate change, organized by national and international institutions and organizations, including by the Ministry for the Environment, which, for instance, organized a capacity building on climate change and gender for communicators, e.g. journalists, with support of the NAP Global Network, a NAP support initiative. [194]

UNFCCC submissions and research on gender and climate change: Overall, research on gender-related aspects of climate change is ongoing in Peru but there is no evidence of a systematic debate and uptake of gender-related research findings in decision-making at policy levels. Peru has not made any submissions to the UNFCCC on gender.

Media coverage of gender and climate change: Medium to high visibility in Peruvian media[195]

GAP priority area B: Gender balance, participation, and women's leadership in UNFCCC processes: 2.50 score

[194] https://napglobalnetwork.org/2018/09/perus-ministry-of-environment-trains-regional-journalists-on-climate-change/
[195] https://www.google.com/search?client=safari&sca_esv=75ce3f1a0c12c434&sxsrf=ADLYWIJUQeY-dOwmM9NDQobhDoUXEuIVBA:1716231125631&q=Peru+asuntos+de+genero+cambio+climatico&tbm=nws&source=lnms&prmd=invbz&sa=X&ved=2ahUKEwiCxeGU85yGAxUPgv0HHSnwBlwQ0pQJegQIBxAB&biw=1728&bih=1000&dpr=2

Percentage of female party delegates at COPs:[196] 49 percent of the Peruvian party delegates at COP25 were women. This proportion increased further to 58% at COP28, leading to a very good average representation of women of 53,5%.

National Climate Change and Gender Focal Point: Ms. Jessica Noemi Foncesca Martinez, Ministry of Foreign Affairs, was appointed as the national climate change and gender focal points appointed.[197]

Female Leadership at COPs: Peru's delegation at COP29 was led by H.E. Minister of the Environment, Ms. Albina Ruiz.

GAP priority area C: Coherence to strengthen the integration of gender considerations towards the consistent national implementation of gender-related mandates and activities: 2.00 score

Reference level of national climate strategies and action plans to gender considerations: In cooperation with IUCN, a Climate Change Gender Action Plan was developed and respective mainstreaming of gender considerations in national climate policies and strategies has taken place.[198]

Proportion of international climate financing projects in which gender components play an important role: In 44,5% of all projects recorded in the OECD-DAC database for climate

[196] **United Nations Framework Convention on Climate Change (UNFCCC).** (2023). *Including party and party overflow badges at COP28*. Retrieved from https://unfccc.int/documents/634503
[197] **United Nations Framework Convention on Climate Change (UNFCCC).** (n.d.). *List of gender focal points under the UNFCCC*. Retrieved 14 Jan 25, from https://unfccc.int/topics/gender/resources/list-of-gender-focal-points-under-the-unfccc
[198] **International Union for Conservation of Nature (IUCN).** (n.d.). *Climate change gender action plans (ccGAPs)*. Retrieved 14 Jan 25, from https://genderandenvironment.org/ccgaps/

finance (until 2021) in Peru, a gender-related component is either the principal objective or at least a significant objective.

Priority area D: Gender-responsive implementation and means of implementation: 2.00 score

National Gender and Climate Change Strategy and linkages to the GAP process: The development of the Peru ccGAP was led by the International Union for Conservation of Nature's (IUCN) Global Gender Office through the Gender Equality for Climate Change Opportunities (GECCO) initiative in collaboration with USAID's mission in Peru, and other donors.[199]

Gender responsiveness in the NDC: Gender is briefly mentioned in Peru's updated NDC. Adaptation and mitigation measures in the NDC consider the incorporation of gender, intercultural and intergenerational approaches to ensure equity and inclusion.[200] Gender workshops / trainings are planned for public officials from the NDC's implementing sectors.

Gender responsiveness in the NAP or other adaptation policies and programs: The NAP incorporated gender considerations through gender mainstreaming and tackling gender as a a cross-cutting issue. Women are explicitly considered in the NAP as a particularly vulnerable group and also as change agents.[201]

[199] **International Union for Conservation of Nature (IUCN).** (n.d.). *Peru climate change gender action plan (ccGAP) report*. Retrieved 14 Jan 25, from https://genderandenvironment.org/resource/peru-climate-change-gender-action-plan-ccgap-report/
[200] **United Nations Development Programme (UNDP).** (n.d.). *Peru – Climate Promise*. Retrieved 14 Jan 25, from https://climatepromise.undp.org/what-we-do/where-we-work/peru
[201] **Gender Climate Tracker.** (n.d.). *Peru: Gender review of National Adaptation Plan (NAP) documents*. Retrieved 14 Jan 25, from https://genderclimatetracker.org/sites/default/files/Resources/peru_gender_review_nap_documents.pdf

Proportion of international climate financing projects with gender components as the principal component: Only 4,1% of all projects recorded in the OECD-DAC database for climate finance in Peru (until 2021), have gender as the principal component.

Membership of the country in the "Just transitions and gender responsive climate action Partnership", announced at COP28: Yes

Priority area E: Monitoring and reporting on the implementation of gender-related actions: 2.00 scores

Inclusion of information on progress made with regard to gender considerations in their regular national and/or international reporting: Gender considerations in monitoring and reporting documents are not very strong. In Peru's latest 3rd Biennial Updated Report top the UNFCCC, submitted ion June 2023, gender is weekly addressed, inter alia in the section about progress in achieving the SDGs, However, The Ministry for Women is part of the High-Level Commission on Climate Change.[202]

Concluding observations

Peru ranks second in the Gender & Climate Index, which is mainly due to the necessary political will at highest level to include gender considerations in climate policies, strategies, programs, and actions. This political will has materialized in a quite strong and ongoing coordination between national governmental and intergovernmental bodies and institutions, including international institutions and development partners. In addition, relatively wide-ranging participatory consultations on the ccGAP led to the inclusion of views and needs of

[202] **United Nations Framework Convention on Climate Change (UNFCCC).** (2023). *Report on the gender composition 2023*. Retrieved from https://unfccc.int/documents/630374

vulnerable populations, including rural and indigenous women's organizations. This has helped women to become agents of change in Peru's climate arena. Among other achievements at institutional level, the involvement of the Ministry of Women and Vulnerable Populations in the Multisectoral Working Group in charge of the NDC should be highlighted. A gender focus is also incorporated into the elaboration of the Framework Law on Climate Change Regulation. The extra attempts to include indigenous women in consultations and dialogues can also be considered as to good practice.

Still, however, there is further room for improvement in order to really systematically include gender considerations in climate policies, strategies, programs and actions. One important barrier to be addressed are the lack of specialists in many sectors to effectively integrate gender into their programs; attitudes among some ministries that gender policy is limited to "women's issues" and not relevant to them; and a lack of budget allocations for climate programs and projects with gender considerations-as a principal objective.

Federal Democratic Republic of Nepal (Rank 3)

Nepal is a landlocked country in South Asia, located in the Himalayas between India and China. About 80% of the country's 28 million inhabitants (2019) live in rural areas. Due to a combination of political, geographic, and social factors, Nepal is recognized as vulnerable to climate change impacts, ranked 128th out of 181 countries in the 2020 ND-GAIN Index.[203] Recent studies by the Asian Development Bank suggest that Nepal may face an annual GDP loss of 2.2% due to climate change by 2050. Nepal also experiences significant disaster risks,

[203] **University of Notre Dame.** (2020). *Notre Dame Global Adaptation Initiative*. Retrieved from https://gain.nd.edu/our-work/country-index/

ranked 31st on the 2019 INFORM Risk Index[204]. Nepal submitted its Second Nationally Determined Contribution (NDC) in 2020.[205]

The Gender inequality is very high, as indicated by a Gender Inequality Index (GII), which is equivalent with rank 113 globally, or rank 12 amongst our sample countries.

With a GAP performance of 2.04, Nepal takes the fourth rank among the twenty countries assessed and performs considerably much better as compared to its GII ranking.

GAP Performance:	**2,04**
Gender Capacity Score (20%):	2.33
Gender Balance Score (30%):	1.25
Gender Coherence Score (10%):	2.50
Gender Implementation Score: (30%):	2.50
Gender Monitoring Score (10%):	2.00

GAP priority area A: Capacity building, knowledge management & communication to enhance gender responsive climate action: 2.33 score

[204] **European Commission.** (2019). *INFORM Index for Risk Management: Nepal country profile*. Retrieved from https://drmkc.jrc.ec.europa.eu/inform-index/Countries/Country-Profile-Map

[205] **Government of Nepal.** (2020). *Second Nationally Determined Contribution (NDC)*. Retrieved from https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Nepal%20Second/Second%20Nationally%20Determined%20Contribution%20(NDC)%20-%202020.pdf

Capacity building: In Nepal, multiple organizations including governmental (for mainstreaming gender in the NAPA, LAPA & NAP[206] and non-governmental agencies[207] have organized capacity building measures to enhance gender responsiveness in climate action since 2013. However, this has not been done in a coherent and structured way.

UNFCCC submissions and research on gender and climate change: There is a steady stream of research articles and submissions on gender responsive climate action. Nepal's 3rd National Communication to UNFCCC in Jun 21[208] recognizes that women are most vulnerable to climate change with references to climate change policies, adaptation plans, and mitigation strategies planned.

Media coverage of gender and climate change: Several articles in English and Nepali have been reported in the Nepali media on aspects of gender and climate change. The British Council's efforts in local media have helped to reach out to rural households. Overall, the issue seems to have better coverage in the media as compared to its geographically closest Asian country in the present study – Bangladesh.

GAP priority area B: Gender balance, participation, and women's leadership in UNFCCC processes: 1.25 score

[206] **Jalsrot Vikas Sanstha (JVS).** (n.d.). *Report of training workshop on NAP-ALAPA-NAP*. Retrieved January 17, 2025, from https://jvs-nwp.org.np/wp-content/uploads/2018/07/Report-of-Training-Workshop-on-NAPALAPA-NAP.pdf
[207] **British Council.** (2022). *Climate change in Nepal: Women's leadership and voice in public discourse*. Retrieved from https://www.britishcouncil.org.np/sites/default/files/climate_change_in_nepal_womens_leadership_and_voice_in_public_discourse_-_english.pdf
[208] **Government of Nepal.** (n.d.). *Third National Communication to the UN Framework Convention on Climate Change*. Retrieved January 17, 2025, from https://www4.unfccc.int/sites/SubmissionsStaging/NationalReports/Documents/986542371_Nepal-NC3-1-Nepal_TNC_Final.pdf

Percentage of female party delegates at COPs:[209] 17 percent of the Nepali party delegates at COP25 were women. This proportion increased to 24% (58 out of 241 delegates) at COP28, a still very low percentage.

National Climate Change and Gender Focal Point: Nepal has appointed Ms. Binita Gurugain, Ministry of Forests & Environment, as national climate change and gender focal point.[210]

Female leadership at COPs: Nepal's delegation at COP29 was led by H.E. Mr. Birendra Prasad Mahato.

GAP priority area C: Coherence to strengthen the integration of gender considerations towards the consistent national implementation of gender-related mandates and activities: 2.5 score

Reference level of national climate strategies and action plans to gender considerations: High. To address climate change and integrate gender across its programs, the Government of Nepal developed the National Adaptation Program of Action (NAPA, 2010),[211] identifying gender as a cross-cutting issue. In 2012, the National Climate Change Gender Action Plan operationalized gender concerns in climate change efforts to enhance implementation and promote gender equality. This also led to the introduction of a climate budget code to track public expenditure on climate action. The Nepal Climate Change Policy 2019[212] is considered

[209] **United Nations Framework Convention on Climate Change (UNFCCC).** (2023). *Including party and party overflow badges at COP28*. Retrieved from https://unfccc.int/documents/634503
[210] **United Nations Framework Convention on Climate Change (UNFCCC).** (n.d.). *List of gender focal points under the UNFCCC*. Retrieved 17 Jan 25, from https://unfccc.int/topics/gender/resources/list-of-gender-focal-points-under-the-unfccc
[211] **Government of Nepal.** (2010). *National Adaptation Plan for Climate Change*. Retrieved January 17, 2025, from https://unfccc.int/resource/docs/napa/npl01.pdf
[212] **Government of Nepal.** (2019). *National Climate Change Policy*. Retrieved January 17, 2025, from https://www.icimod.org/wp-content/uploads/2021/07/National-Climate-Change-Policy_english_2019_compressed.pdf

a significant milestone in integrating gender equality and social inclusion within climate action and across the development sector.

Proportion of international climate financing projects in which gender components play an important role: In 49.3% of all projects recorded in the OECD-DAC database for climate finance (until 2021) in Nepal, a gender-related component is either the principal objective or at least a significant objective.

Priority area D: Gender-responsive implementation and means of implementation: 2.5 score

Gender responsiveness in the NDC: Gender equality and women's empowerment are addressed in detail and granularity. The summary of NDC references includes detailed gender-related considerations. Inter alia, by 2030, all 753 local governments are called to prepare and implement climate resilient and gender-responsive adaptation plans. Furthermore, gender responsive budgeting shall take place in all relevant climate strategies and action plans. CARE rated the level of the NDC's gender responsiveness as the highest compared to all other assessed countries. [213]

Gender responsiveness in the NAP or other adaptation policies and programs: Nepal's NAP (2021-2050) contains a prioritized adaptation program on "gender equality and social inclusion, livelihoods and governance," which aims to address the increased vulnerability of women and other marginalized groups to climate change through capacity building and specific actions for improving livelihoods. The Ministry of Women, Children and Social Welfare should serve as the coordinating ministry for gender equality, social inclusion, livelihoods &

[213] **CARE.** (n.d.). *CARE Climate & Gender Tracker*. Retrieved 17 Jan 25, from https://www.care.h5mag.com

good governance. The NAP stresses the need to enhance access to capacity building and training to reduce climate vulnerability of women.[214] Nepal's national adaptation planning process (2018) specifically focused on a gender transformative approach to improve gender responsiveness.

Proportion of international climate financing projects with gender components as the principal component: In 6,1% of all projects recorded in the OECD-DAC database for climate finance in Nepal (until 2021), gender is the principal component.

Membership of the country in the "Just transitions and gender responsive climate action Partnership", announced at COP28: No

Priority area E: Monitoring and reporting on the implementation of gender-related actions: 2.0 score

Inclusion of information on progress made with regard to gender considerations in their regular national and/or international reporting: Monitoring and evaluation is integral part of the national strategy on gender and climate change. Nepal's Third National Communication to the UNFCCC (2021) reflects on the high climate vulnerability of women, stressing the need to include gender considerations in decision making on adaptation action.

Concluding Observations

Nepal is on the third rank in the Gender & Climate Index, despite a very high Gender Inequality Index (113) and thus, a good practice example that can inspire other countries. This high performance is, among other things, a result of highly gender-responsive policies and

[214] **Government of Nepal.** (2021). *National Adaptation Plan (2021–2050)*. Retrieved January 17, 2025, from https://unfccc.int/sites/default/files/resource/NAP_Nepal.p

strategies, as for instance the NAP and the gender transformative NDC. Several governmental and NGO programs such as Solar Sisters Program (empowers women in rural Nepal to become clean energy entrepreneurs) and Women's Farmer co-operatives are taking efforts to also promote women as change agents. However, gender-specific policies so far have not managed to bring down existing barriers such as lack of access to information and decision-making, and bureaucratic administrative procedures that still discourage equal participation of women. Thus, further efforts are required to mainstream gender considerations at all levels, including by seeking due representation, i.e. fully considering women from all ethnicities, age groups and educational backgrounds. Overcoming the very gender-disbalanced representation of Nepal at COPs should be another top priority to be properly addressed.

Republic of Kenya (Rank 4)

Kenya is a country in East Africa with coast access to the Indian ocean on its east side. Its neighbors are Uganda to the West, South Sudan and Ethiopia to the North, Somalia to the East, and Tanzania to the South. Kenya also has access to the Lake Victoria, which it shares with Tanzania and Uganda. Kenya covers a surface of about 580,000 square kilometers and has a population of about 56 million inhabitants. Kenya's climate reaches from tropical hot and humid along the coastline to tropical-temperate in the west and southwest and tropical-dry in the north-east.

Kenya updated NDC was published on 28th of December 2020, and its National Adaptation Plan (NAP) in July 2016. According to the Climate Adaptation Finance Index 2023, Kenya has a high climate risk and is highly underfinanced regarding adaptation.[215] The Climate Action Tracker rates Kenya's overall activities as almost sufficient.[216] The gender inequality index (GII) is very high, putting Kenya at rank 139 with a score of 0.533 (1 being extremely unequal).

With a GAP Performance Index score of 1.98, Kenya takes the seventh rank among all twenty countries assessed and performs better as compared to its GII ranking within this study sample.

GAP Performance:	**1.98**
Gender Capacity Score (20%):	2.00
Gender Balance Score (30%):	2.25

[215] **Brot für die Welt.** (n.d.). *Climate adaptation finance index ranking*. Retrieved 18 Jan 25, from https://www.brot-fuer-die-welt.de/fileadmin/mediapool/20_Unsere-Themen/Anpassungsindex/Weitere_Dateien/Web_Rangliste.pdf
[216] **Climate Action Tracker.** (n.d.). *Kenya*. Retrieved 18 Jan 25, from https://climateactiontracker.org/countries/kenya/

Gender Coherence Score (10%): 2.00

Gender Implementation Score (30%): 2.00

Gender Monitoring Score (10%): 1.00

GAP priority area A: Capacity building, knowledge management & communication to enhance gender responsive climate action: 2.0 score

Capacity building: In Kenya, capacity building measures are lacking and aren't conducted enough as mainstreaming is not prevalent and significant understanding of the climate-gender nexus is lacking.[217]

UNFCCC submissions and research on gender and climate change: Kenya has made many submissions to the UNFCCC process related to climate and gender on a regular basis, including, inter alia, incorporation of gender into technology needs assessments during the gender day,[218] a submission to SBI 48 on gender and climate change on capacity building and monitoring and evaluation,[219] or a submission on possible elements of the Gender Action Plan under the Lima Work Program on Gender.[220]

[217] **United Nations Development Programme (UNDP).** (n.d.). *Resource guide for mainstreaming gender in water management*. Retrieved January 19, 2025, from https://www.undp.org/publications/resource-guide-mainstreaming-gender-water-management

[218] **Government of Kenya.** (n.d.). *Kenya submission on gender and technology*. Retrieved **January 19, 2025**, from https://genderclimatetracker.org/sites/default/files/Resources/201811121328---Kenya%20Submission%20on%20Gender%20and%20Technology.pdf

[219] **Government of Kenya.** (2018). *Kenya submission on gender and climate change (April 25, 2018)*. Retrieved **January 19, 2025**, from https://genderclimatetracker.org/sites/default/files/Resources/201805051028---Kenya%20Submission%20on%20Gender%20and%20Climate%20Change_25th_April_2018.pdf

[220] **Government of Kenya.** (n.d.). *Kenya submission on gender and climate change*. Retrieved **January 19, 2025**, from https://genderclimatetracker.org/sites/default/files/Resources/257_302_131316357348239313-Kenya_Submission%20on%20Gender%20and%20Climate%20Change.pdf

Media coverage of gender and climate change: In Kenya's media, there is a high occurrence of articles and content pieces on climate related topics, and also in combination with gender related aspects.

GAP priority area B: Gender balance, participation, and women's leadership in UNFCCC processes: 2.25 score

Percentage of female party delegates at COPs:[221] 41 percent of the Kenya's party delegates at COP25 were women. This proportion increased to 44% at COP28, leading to an average of 42,5%. As such, Kenya is doing relatively well, compared to other countries.

National Climate Change and Gender Focal Point: Kenya appointed Mr. Michael Ochieng' Okumu and Ms. Jackline Nekesa Makokha (alternate) from the Ministry of Environment and Forestry as national climate change and gender focal points.[222]

Female leadership at COPs: Kenya's delegation at COP28 was led by a woman, H.E. Ms. Roselinda Soipan Tuya, Cabinet Secretary Ministry of Environment, Climate Change and Forestry.

GAP priority area C: Coherence to strengthen the integration of gender considerations towards the consistent national implementation of gender-related mandates and activities: 2.00 score

[221] **United Nations Framework Convention on Climate Change (UNFCCC).** (2023). *Including party and party overflow badges at COP28*. Retrieved **January 19, 2025**, from https://unfccc.int/documents/634503
[221] **United Nations Framework Convention on Climate Change (UNFCCC).** (n.d.). *List of gender focal points under the UNFCCC*. Retrieved **January 19, 2025**, from https://unfccc.int/topics/gender/resources/list-of-gender-focal-points-under-the-unfccc
[222] Ibid 221

Reference level of national climate strategies and action plans to gender considerations: Kenya's climate change and health strategy focusses, amongst other topics, on gender.[223]

Proportion of international climate financing projects in which gender components play an important role: In about half of the projects, 49,2%, recorded in the OECD-DAC database for climate finance (until 2021) in Kenya, a gender-related component is either the principal objective or at least a significant objective.

Priority area D: Gender-responsive implementation and means of implementation: 2,00 scores

National Gender and Climate Change Strategy and linkages to the GAP process: Kenya has a gender-responsive Climate Change Act.

Gender responsiveness in the NDC: Kenya developed gender-responsive actions in the six NDC priority areas of forestry, water, transport, waste, energy, and agriculture.[224]

Gender responsiveness in the NAP or other adaptation policies and programs: Kenya aims to achieve gender equity or equality through the NAP process. Gender was identified as a specific priority that the NAP will address through action on adaptation.[225]

Proportion of international climate financing projects with gender components as the principal component: 6.3% of all projects recorded in the OECD-DAC database for climate finance in

[223] **Government of Kenya, Ministry of Health.** (2023). *Kenya climate change and health strategy (2023–2027) unveiled at COP28 UAE*. Retrieved **January 19, 2025**, from https://www.health.go.ke/index.php/kenya-climate-change-and-health-strategy-2023-2027-unveiled-cop28uae

[224] **Government of Kenya.** (2022). *Kenya's first nationally determined contribution (updated version)*. Retrieved **January 19, 2025**, from https://unfccc.int/sites/default/files/NDC/202206/Kenya%27s%20First%20%20NDC%20%28updated%20version%29.pdf

[225] **Government of Kenya.** (2017). *National Adaptation Plan (NAP) Kenya*. Retrieved **January 19, 2025**, from https://unfccc.int/sites/default/files/resource/NAP_Kenya_2017.pdf

Kenya (until 2021), have gender as their principal component, which is considered medium in this context.

Membership of the country in the "Just transitions and gender responsive climate action Partnership", announced at COP28: No

Priority area E: Monitoring and reporting on the implementation of gender-related actions: 1.0 scores

Inclusion of information on progress made concerning gender considerations in their regular national and/or international reporting: Gender aspects have been included in Kenya's reporting but not in a systematic way.[226]

Concluding observations

Kenya takes the fourth rank in the GAP Performance Index and it can be highlighted that Kenya communicates gender and climate-related aspects well in national media. Furthermore, Kenya is including gender-aspects in its climate strategies, analyses and reports. Moreover, Kenya is active in making submissions to the UNFCCC-process.

Republic of the Philippines (Rank 5)

The Philippines is an archipelago comprised of 7,107 islands (1,000 of which are inhabited), with a humid climate and a topography characterized by mountainous terrain bordered by narrow coastal plains. Considered one of the most biologically rich and diverse countries in the world, the Philippines also has one of the world's longest coastlines. Due to a combination of

[226] **Government of Kenya.** (n.d.). *Kenya's Second National Communication to the UNFCCC*. Retrieved **January 19, 2025**, from https://unfccc.int/sites/default/files/resource/Kennc2.pdf?download

political, geographic, and social factors, the Philippines is recognized as vulnerable to climate change impacts, ranked 114th out of 181 countries in the 2020 ND-GAIN Index[227].

The Philippines' Climate Change Act was passed in 2009, which created the Climate Change Commission (CCC) tasked to coordinate, monitor and evaluate the programs and action plans of the government relating to climate change. It was amended in 2012 which established the Peoples Survival Fund (PSF) for the financing of adaptation programs and projects. Important strategy documents include the National Framework Strategy on Climate Change (2010–2022) and the National Climate Change Action Plan (2011–2028). The Philippines submitted its Second National Communication (SNC) in 2021.[228]

The Gender inequality is very high, as indicated by a Gender Inequality Index (GII), which is equivalent with rank 101 globally, or rank 10 amongst our sample countries.

With a Gender & Climate Index of 1.98, Philippines takes the seventh rank amongst the twenty countries (second best quarter) assessed and the GAP performance can be rated as 'average' as compared to the general level of gender responsiveness in the country.

GAP Performance:	**1.98**
Gender Capacity Score (20%):	2.00
Gender Balance Score (30%):	2.25
Gender Coherence Score (10%):	2.00

[227] **University of Notre Dame.** (2020). *Notre Dame Global Adaptation Initiative*. Retrieved **January 19, 2025**, from https://gain.nd.edu/our-work/country-index/

[228] **Government of the Philippines.** (2014). *Second National Communication to the UNFCCC*. Retrieved **January 22, 2025**, from https://unfccc.int/sites/default/files/resource/phlnc2.pdf

Gender Implementation Score: (30%): 2.00

Gender Monitoring Score (10%): 1.00

GAP priority area A: Capacity building, knowledge management & communication to enhance gender responsive climate action: 2.00 score

Capacity building: The Climate Change Commission, the National Focal Point to the UNFCCC, undertakes capacity building programs for national government agencies, higher educational institutions, and local government units. It has been claimed that gender balance has been ensured for all workshops. In 2018, the Climate-resiliency Field Schools (CrFS) piloted by the Rice Watch Action Network (R1) gained the recognition of the women and gender constituency of the UNFCCC for engaging women and youth, promoting diversification of income sources, and building the capacities of women on activities traditionally dominated by men. A GIZ workshop on gender & climate change for the Philippines and Pacific held in March 2015 was one of the earliest women-focused climate change workshops organized in the country.[229] In 2018, the Philippines, together with the Asian Development Bank, the Government of Palau, and United Nations Environment Program, Secretariat of the Asia Pacific Adaptation Network (APAN), organized the 6th Asia Pacific Climate Change Adaptation Forum in Manila with gender as one of the key focus areas.

UNFCCC submissions and research on gender and climate change: Philippines 2nd National Communication to the UNFCCC (2014)[230] stresses that one of the main goals of the National

[229] **GIZ.** (2015). *Workshop on gender & climate change in the Philippines and Pacific Islands training on gender & climate change*. Retrieved **January 22, 2025**, from https://gender-works.giz.de/events/philippines-pacific-islands-training-on-gender-climate-change/

[230] **Government of the Philippines.** (2014). *Second National Communication to the UNFCCC*. Retrieved **January 22, 2025**, from https://unfccc.int/sites/default/files/resource/phlnc2.pdf?download

Climate Change Action Plan (NCAPP, 2011) was to build adaptive capacity of women. Further, a People's Survival Fund was created with the Chairperson of the Philippines Commission for Women as one of the statutory members. A gender and climate submission[231] was submitted to the UNFCCC on 23 Apr 2019 highlighting the efforts/progress made by the country on mainstreaming gender issues in climate policy making and adaptation measures. Only a few research/ scholarly articles on the subject were found in the open domain.

Media coverage of gender and climate change: The issues with regard to gender and climate change seem to have limited coverage in the local media in the country.

GAP priority area B: Gender balance, participation, and women's leadership in UNFCCC processes: 2.25 score

Percentage of female party delegates at COPs:[232] 62 percent (8 out of 13) of the Philippines' party delegates at COP25 were women. In COP 28, 146 of the 342 delegates (43%) were women. The party delegation composition of women showed a decline of 13% over the last three years. However, even with this reported decline, the country performs much better as compared to other countries in this sample study. The average percentage of women delegates for COPs stands at 52.5%.

[231] **Government of the Philippines.** (n.d.). *Philippines gender & climate submission to UNFCCC*. Retrieved **January 22, 2025**, from https://niccdies.climate.gov.ph/files/documents/6.%20Philippine%20position%20on%20Gender%20and%20Climate%20Change.pdf

[232] **United Nations Framework Convention on Climate Change (UNFCCC).** (2023). *Including party and party overflow badges at COP28*. Retrieved **January 22, 2025**, from https://unfccc.int/documents/634503

National Climate Change and Gender Focal Point: Philippines appointed Ms. Rachel Anne S. Herrera from the Climate Change Commission as national climate change and gender focal point.[233]

Female leadership at COPs: Philippines delegation at COP28 was led by a female – H.E. Ms. Maria Antonia Yulo Loyzaga.

GAP priority area C: Coherence to strengthen the integration of gender considerations towards the consistent national implementation of gender-related mandates and activities: 2.00 score

Reference level of national climate strategies and action plans to gender considerations: No Climate Change Gender Action Plan (ccGAP) has been formulated so far. However, laws that incorporate gender & climate change issues include the Climate Change Act 2009,[234] Philippines Disaster Risk Reduction Management Act,[235], People's Survival Act 2012,[236] and Commission Resolution No. 2019-002 [237]on climate change & gender. The National Climate Change Action Plan (2011 – 2028) recognizes the enhanced impact of climate change on women and lists activities required to mitigate the effects of climate change on Women. The

[233]**United Nations Framework Convention on Climate Change (UNFCCC).** (n.d.). *List of gender focal points under the UNFCCC*. Retrieved **January 22, 2025**, from https://unfccc.int/topics/gender/resources/list-of-gender-focal-points-under-the-unfccc

[234] **Government of the Philippines.** (2009). *Climate Change Act of 2009*. Retrieved **January 22, 2025**, from https://niccdies.climate.gov.ph/files/documents/1.%20Climate%20Change%20Act%20of%202009.pdf

[235] **Government of the Philippines.** (2010). *Philippines Disaster Risk Reduction and Management Act*. Retrieved **January 22, 2025**, from https://niccdies.climate.gov.ph/files/documents/3.%20Philippine%20Disaster%20Risk%20Reduction%20and%20Management%20Act%20of%202010.pdf

[236] **Government of the Philippines.** (2012). *People's Survival Act*. Retrieved **January 22, 2025**, from https://niccdies.climate.gov.ph/files/documents/2.%20People-s%20Survival%20Fund%20of%202012.pdf

[237] **Climate Change Commission, Philippines.** (2019). *Commission Resolution No. 2019-002*. Retrieved **January 22, 2025**, from https://niccdies.climate.gov.ph/files/documents/3.%20Commission%20Resolution%20No.%202019-002.pdf

Philippines Climate Change Commission works closely with the Commission for Women to ensure gender mainstreaming in climate adaptation and mitigation actions.

Proportion of international climate financing projects in which gender components play an important role: In 42.3% of all projects recorded in the OECD-DAC database for climate finance (until 2021) in the Philippines, a gender-related component is either the principal objective or at least a significant objective.

Priority area D: Gender-responsive implementation and means of implementation: 2.00 score

Gender responsiveness in the NDC: On 15 April 2021, the Philippines submitted a gender-responsive NDC to the UNFCCC. CARE's gender review of NDCs categorizes it as "advanced" (four out of 6 indicators marked as green).[238] The NDC Gender Action plan includes gendered adaptation priorities and mitigation options, gender responsive climate finance mechanisms including climate budget tracking and toolkit for gender-related monitoring.

Gender responsiveness in the NAP or other adaptation policies and programs: The National Climate Change Action Plan 2011-2028 (NCCAP)[239] has 67 references to women/gender, recognizes the enhanced impact of climate change on women and includes activities required to mitigate the effects of climate change on women. Within the NCCAP, gender is a cross-cutting issue and has been acknowledged in planning and policy making, knowledge and capacity development, enhancing women's participation in climate adaptation and research and

[238] **CARE.** (2021). *Gender & Climate NDC Tracker*. Retrieved **January 22, 2025**, from https://careclimatechange.org/wp-content/uploads/2021/06/CARE-Gender-Quality-and-NDCs-v1.4.pdf
[239] **Government of the Philippines.** (2011). *National Climate Change Action Plan (NCCAP) 2011–2028*. Retrieved **January 22, 2025**, from https://climate.emb.gov.ph/wp-content/uploads/2016/06/NCCAP-1.pdf

development. The main goals of the NCCAP are to build the adaptive capacities of women and men in their communities, increase the resilience of vulnerable sectors and natural ecosystems to climate change, and optimize mitigation opportunities towards a gender-responsive and rights-based sustainable development.

Proportion of international climate financing projects with gender components as the principal component: In 5.6% of all projects recorded in the OECD-DAC database for climate finance in the Philippines (until 2021), gender is the principal component.

Membership of the country in the "Just transitions and gender responsive climate action Partnership", announced at COP28: No.

Priority area E: Monitoring and reporting on the implementation of gender-related actions: 1.0 score

Inclusion of information on progress made with regard to gender considerations in their regular national and/or international reporting: Monitoring and evaluation is part of the national strategy on gender and climate change but seems to be weak.

Concluding Observations

Philippines is on the fifth rank (out of 10 countries) in the Gender & Climate Index and performs reasonably well despite a high Gender Inequality Index (101). The Government of the Philippines has made continuous legislative efforts to mainstream gender into the climate discourse since 2009. The country's budget has a 5% allocation for Gender & Development (GAD) since 1995, which is laudable. The Local Adaptation Fund – People's Survival Fund (2012) takes into account the local projects' responsiveness to gender-differentiated vulnerabilities. Further, a gender responsive NDC (2021) shows the country's continued policy

intent towards gender responsive climate action. However, the country has not yet formulated a Climate Change Gender Adaptation Plan.

Republic of Indonesia (Rank 6)

The Republic of Indonesia, is the world's largest archipelagic state, consisting of more than 17,500 islands with over 81,000 kilometers (km) of coastline, a population of 270.6 million as of 2019 and the largest economy in Southeast Asia.[240] The country's islands are home to an extremely varied geography, topography, and climate, ranging from sea and coastal systems to peat swamps and mountain forests.[241] Indonesia is highly vulnerable to climate change impacts, ranked 97th out of 181 countries in the 2020 ND-GAIN Country Index[242]. The Asian Development Bank (ADB) estimates that by 2100, the impacts of climate change could cost between 2.5–7% of the country's gross domestic product (GDP).[243]

Indonesia's first national strategy on climate change was developed by the Ministry of Environment in 2007. Indonesia submitted an enhanced NDC in 2022. Indonesia completed its Third National Communication (NC3) in 2017 and its Third Biennial Update Report (BUR) in 2021.

The Gender inequality is very high, as indicated by the Gender Inequality Index (GII), ranking Indonesia 110th globally.

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[240] **World Bank.** (2020). *Indonesia – Overview*. Retrieved **January 25, 2025**, from https://www.worldbank.org/en/country/indonesia/overview

[241] **Naylor, R., Battisti, D., Vimont, D., Falcon, W., & Burke, M.** (2007). Assessing risks of climate variability and climate change for Indonesian rice agriculture. *Proceedings of the National Academy of Sciences of the United States of America, 104*(19), 7752–7757. Retrieved **January 25, 2025**, from https://www.pnas.org/content/pnas/104/19/7752.full.pdf

[242] **University of Notre Dame.** (2020). *Notre Dame Global Adaptation Initiative*. Retrieved **January 25, 2025**, from https://gain.nd.edu/our-work/country-index/

[243] **Orecchia, C., Raitzer, D., Bosello, F., Tavoni, M., Marangoni, G., & Nuella, J.** (2016). *Southeast Asia and the economics of global climate stabilization*. Asian Development Bank. Retrieved **January 25, 2025**, from https://www.adb.org/sites/default/files/publication/178615/sea-economics-globalclimate-stabilization.pdf

With a Gender & Climate Index performance of 1.77, Indonesia ranks sixth amongst the twenty countries assessed.

GAP Performance:	**1.77**
Gender Capacity Score (20%):	2.33
Gender Balance Score (30%):	2.00
Gender Coherence Score (10%):	1.50
Gender Implementation Score: (30%):	1.50
Gender Monitoring Score (10%):	1.00

GAP priority area A: Capacity building, knowledge management & communication to enhance gender responsive climate action: 2.33 score

Capacity building: The Government of Indonesia, both at the local and national levels, has conducted numerous capacity building efforts, knowledge and communication sharing. It collaborated with UN agencies such as UNFPA, UNDP[244], and UN Women in improving gender responsive climate action, especially gender responsive climate budgeting.[245] Local level capacity building materials have been made available, e.g. by the "Women and Child-Friendly Village" program.

[244] **United Nations Development Programme (UNDP).** (2022). *UNDP annual report Indonesia*. Retrieved **January 25, 2025**, from https://www.undp.org/indonesia/publications/annual-report-2022
[245] **Government of Indonesia.** (2022). *Submission on Gender Action Plan to UNFCCC*. Retrieved **January 25, 2025**, from https://www4.unfccc.int/sites/SubmissionsStaging/Documents/202204151129--Indonesia%20Submission%20on%20Gender%20Action%20Plan%202022_FINAL.pdf

UNFCCC submissions and research on gender and climate change: Several scholarly articles,[246] blogs and reports are available, partly elaborated in collaboration with international organizations like GIZ, World Bank, UN Women, UNDP, and UN University. [247]

Media coverage of gender and climate change: The issue has moderate media coverage. For instance, Antara[248] covered the development and gaps in the Climate and Gender Action Plan.

GAP priority area B: Gender balance, participation, and women's leadership in UNFCCC processes: 2.00 score

Percentage of female party delegates at COPs:[249] 36 percent (52 out of 143) of the Indonesia party delegates at COP25 were women. The percentage of women delegates declined by three percent (401 out of 1229 delegates) at COP28.

National Climate Change and Gender Focal Point: Indonesia has appointed Ms. Augustina Eni, Ministry of Women Empowerment & Child Protection, as national climate change and gender focal point.[250]

Female leadership at COPs: Indonesia's delegation at COP28 was led H.E. Ms. Siti Nurbaya.

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[246] **Pratiwi, N. A. H., Rahmawati, Y. D., & Setiono, I.** (2016). *Mainstreaming gender in climate change adaptation: A case study from Cirebon, Indonesia*. International Institute for Environment and Development. Retrieved **January 25, 2025**, from https://www.jstor.org/stable/resrep18050

[247] **United Nations Development Programme (UNDP).** (n.d.). *Climate crisis-affected communities in Indonesia benefiting from gender-sensitive budgeting*. Retrieved **January 25, 2025**, from https://www.undp.org/indonesia/news/climate-crisis-affected-communities-indonesia-benefiting-gender-sensitive-budgeting

[248] **Antara News Agency.** (n.d.). *Govt launches gender and climate change action plan for social justice*. Retrieved **January 25, 2025**, from https://en.antaranews.com/news/309492/govt-launches-gender-and-climate-change-action-plan-for-social-justice

[249] **United Nations Framework Convention on Climate Change (UNFCCC).** (n.d.). *Including party and party overflow badges at COP28*. Retrieved **January 25, 2025**, from https://unfccc.int/documents/634503

[250] **United Nations Framework Convention on Climate Change (UNFCCC).** (n.d.). *List of gender focal points under the UNFCCC*. Retrieved **January 25, 2025**, from https://unfccc.int/topics/gender/resources/list-of-gender-focal-points-under-the-unfccc

GAP priority area C: Coherence to strengthen the integration of gender considerations towards the consistent national implementation of gender-related mandates and activities: 1.50 score

Reference level of national climate strategies and action plans to gender considerations: The Ministry of Women Empowerment and Child Protection launched the Gender and Climate Change National Action Plan (RAN GPI) in March 2024[251] as part of Indonesia's implementation of Law Number 16 of 2016 on the Ratification of the Paris Agreement and the 2022 ENDC (Enhanced Nationally Determined Contribution).

Proportion of international climate financing projects in which gender components play an important role: In 32% of all projects recorded in the OECD-DAC database for climate finance (until 2021) in Indonesia, a gender-related component is either the principal objective or at least a significant objective.

Priority area D: Gender-responsive implementation and means of implementation: 1.50 score

Gender responsiveness in the NDC: The enhanced NDC (2022)[252] makes four references to gender, indicating that women's capacities and leadership in climate action will be continuously strengthened as part of NDC implementation and the development of a 2050 Long-Term Low Carbon and Climate Resilience Strategy (LTS-LCCR).[253] It also stresses that gender responsive

[251] **Antara Indonesian News Agency.** (n.d.). *Govt launches gender and climate change action plan for social justice*. Retrieved **January 25, 2025**, from https://en.antaranews.com/news/309492/govt-launches-gender-and-climate-change-action-plan-for-social-justice#:~:text=Jakarta%20(ANTARA)%20%2D%20The%20Ministry,against%20disasters%20and%20climate%20change

[252] **Government of Indonesia.** (2022). *Enhanced Nationally Determined Contribution (NDC) – Indonesia*. Retrieved **January 25, 2025**, from https://unfccc.int/sites/default/files/NDC/2022-09/ENDC%20Indonesia.pdf

[253] **Government of Indonesia.** (2023). *Indonesia long-term strategy for low carbon and climate resilience (LTS-LCCR) 2050*. Retrieved **January 25, 2025**, from https://www.icctf.or.id/wp-content/uploads/2023/02/Indonesia-Long-term-Strategy-for-Low-Carbon-and-Climate-Resilience-LTS-LCCR-2050.pdf

climate budgeting has been carried out in collaboration between the Ministry of Finance and the Ministry of Women Empowerment and Child Protection, with UNDP support.

Gender responsiveness in the NAP or other adaptation policies and programs: Indonesia has not yet submitted a NAP to the UNFCCC. The Ministry of Environment and Forests and the Ministry of Women Empowerment and Child Protection signed a Memorandum of Understanding (No. 22A/-KPP-PA/ROREN/XII/2016) concerning the acceleration of gender mainstreaming in climate action in 2016[254] and respective guidelines were issued through the MoEF Regulation No. 31/2017. The Ministry of Women Empowerment and Child Protection also published General and Technical Guidelines for Gender-Responsive Climate Change Adaptation (2015).

Proportion of international climate financing projects with gender components as the principal component: In only 3% of all projects recorded in the OECD-DAC database for climate finance in Indonesia (until 2021) gender is the principal component.

Membership of the country in the "Just transitions and gender responsive climate action Partnership", announced at COP28: No.

Priority area E: Monitoring and reporting on the implementation of gender-related actions: 1.00 score

Inclusion of information on progress made regarding gender considerations in their regular national and/or international reporting: Indonesia's 3rd Biennial Update report to the

[254] **Government of Indonesia.** (2022). *Indonesia's adaptation communication to the UNFCCC*. Retrieved **January 25, 2025**, from https://unfccc.int/sites/default/files/ACR/2022-11/221119%20Indonesia%20Adaptation%20Communication.pdf

UNFCCC (2021)[255] covers gender considerations only in a very generic way while Indonesia's Third National Communication to the UNFCCC (2017) does not mention gender at all.

Concluding Observations

Indonesia has been assessed to be at the sixth rank (out of 10 countries) in the GAP Performance Index, which is quite aligned with ranking in the GII, indicating a very high level of gender inequality. However, the country is making slow but steady progress in improving the level of gender responsiveness in its climate policies, programs and actions. Only recently in Apr 2024, the country launched its Gender and Climate Change National Action Plan (RAN GPI).

[255] **Government of Indonesia.** (n.d.). *Indonesia's third biennial update report (BUR-3) to the UNFCCC*. Retrieved **January 25, 2025**, from https://unfccc.int/sites/default/files/resource/IndonesiaBUR%203_FINAL%20REPORT_2.pdf

People's Republic of Bangladesh (Rank 7)

Bangladesh, located in South Asia, is one of the most densely populated countries in the world. Most of Bangladesh's 130,170 km^2 land area between the Himalayan Mountains and the Bay of Bengal consists of low-lying deltaic floodplains less than 15 meters above sea level. Bangladesh has an estimated population of 171.2 million (2022) and is the 30th most climate vulnerable country, according to the NG-GAIN Index.[256] By mid of the century, climate impacts are likely to cost Bangladesh 2% of its GDP.[257]

Bangladesh released its Updated Nationally Determined Contribution in 2021.[258] and its NAP in 203.[259]. The Ministry of Environment, Forest, and Climate Change (MoEFCC) is coordinating climate policies.

The Gender inequality is extremely high, as indicated by a Gender Inequality Index (GII), which is equivalent with rank 131 globally.

With a Gender & Climate Index performance of 1.71, Bangladesh takes the seventh rank amongst the ten countries assessed.

GAP Performance:	**1.71**
Gender Capacity Score (20%):	1.67

[256] **European Commission.** (2023). *INFORM Index for Risk Management: Bangladesh country profile*. Retrieved **January 28, 2025**, from https://drmkc.jrc.ec.europa.eu/inform-index/INFORM-Risk/Country-Risk-Profile

[257] **Ahmed, M., & Suphachalasai, S.** (2014). *Assessing the costs of climate change and adaptation in South Asia*. Asian Development Bank. Retrieved **January 28, 2025**, from https://www.adb.org/publications/assessing-costs-climate-change-and-adaptation-south-asia

[258] **World Bank.** (n.d.). *Climate risk country profile: Bangladesh*. Retrieved **January 28, 2025**, from https://climateknowledgeportal.worldbank.org/sites/default/files/country-profiles/16813-WB_Bangladesh%20Country%20Profile-WEB.pdf

[259] **Government of Bangladesh.** (2023). *National Adaptation Plan of Bangladesh 2023*. Retrieved **January 28, 2025**, from https://unfccc.int/sites/default/files/resource/NAP-Bangladesh-2023.pdf

Gender Balance Score (30%):	1.25
Gender Coherence Score (10%):	2.00
Gender Implementation Score: (30%):	2.00
Gender Monitoring Score (10%):	2.00

GAP priority area A: Capacity building, knowledge management & communication to enhance gender responsive climate action: 1.67 score

Capacity building: In Bangladesh, stakeholder consultations and workshops have been organized since 2014 by governmental & non-governmental agencies (IUCN, IRADE[260], WEDO, WOCAN[261]), ADB[262] and UNDP etc. However, there is no coherent and structured approach for capacity building measures. In the process of NAP development, gender considerations were taken into considerations for capacity development, inter alia through expert interviews and consultations.

UNFCCC submissions and research on gender and climate change: A steady stream of articles and research papers on gender and climate change has been published since 2012. Bangladesh Third National Communication (2018)[263] includes a subchapter on national policies to address gender issues in regard to climate change.

[260] **Integrated Research and Action for Development (IRADe), Asia Pacific Network for Global Change Research (APN-GCR), & International Centre for Climate Change and Development (ICCCAD).** (2022, October 19). *Developing gender-sensitive heat action plan*.
[261] **WOCAN & UNDP Bangladesh.** (2021, February 23–24). *Gender & Climate Finance Workshop*.
[262] **Ministry of Environment and Forests (MoEF) & Asian Development Bank (ADB).** (2014, February 18). *Gender and social dimension of climate change*. Dhaka, Bangladesh.
[263] **Government of Bangladesh.** (2019). *Third National Communication Report to the UNFCCC*. Retrieved January 28, 2025, from https://unfccc.int/sites/default/files/resource/TNC%20Report%20%28Low%20Resolation%29%2003_01_2019.pdf.

Media coverage of gender and climate change: Medium, with higher coverage in English as compared to Bangla media.

GAP priority area B: Gender balance, participation, and women's leadership in UNFCCC processes: 1.25 score

Percentage of female party delegates at COPs:[264] 13 percent (15 out of 115) of the Bangladeshi party delegates at COP25 were women. The same percentage of women delegates were reported (19 out of 148 delegates) at COP28, with no increase over a three-year period.

National Climate Change and Gender Focal Point: Bangladesh has appointed Ms. Jesmin Nahar, Ministry of Environment, Forests & Climate Change (MoEFCC), as national climate change and gender focal point.[265]

Female leadership at COPs: Bangladesh's delegation at COP29 was led by H.E. Mr. Md Shahab Uddin.

GAP priority area C: Coherence to strengthen the integration of gender considerations towards the consistent national implementation of gender-related mandates and activities: 2.00 score

Reference level of national climate strategies and action plans to gender considerations: Bangladesh's Climate Change Gender Action Plan (ccGAP)[266] was developed in 2013, with a

[264] **United Nations Framework Convention on Climate Change (UNFCCC).** (2023). *Including party and party overflow badges at COP28.* Retrieved from https://unfccc.int/documents/634503.
[265] **United Nations Framework Convention on Climate Change (UNFCCC).** (n.d.). *List of gender focal points under the UNFCCC.* Retrieved from https://unfccc.int/topics/gender/resources/list-of-gender-focal-points-under-the-unfccc.
[266] **Government of Bangladesh.** (n.d.). *Bangladesh Climate Change & Gender Action Plan.* Retrieved from https://faolex.fao.org/docs/pdf/bgd208348.pdf.

focus at mainstreaming climate-related considerations into national women development policy.

Proportion of international climate financing projects in which gender components play an important role: In 47.8% of all projects recorded in the OECD-DAC database for climate finance (until 2021) in Bangladesh, a gender-related component is either the principal objective or at least a significant objective.

Priority area D: Gender-responsive implementation and means of implementation: 2,00 scores

Gender responsiveness in the NDC: The Updated NDC submitted to UNFCCC in 2021[267] does not include structured gender considerations in its adaptation or mitigation strategies and actions. It highlights Bangladesh's Country Action Plan for Clean Cook Stoves 2013 (CAP 2013)[268] as important instrument that leveraged public funds to women-led businesses and led to the distribution of 4.5 million improved cookstoves. Furthermore, it stresses that the planning of how to implement the NDC targets took place in a gender responsive manner. However, there are no governance and planning mechanisms with specific reference to gender, mentioned in the NDC. According to the gender assessment of NDCs, undertaken by CARE,[269] Bangladesh is rated with the lowest grading for gender responsiveness.

Gender responsiveness in the NAP or other adaptation policies and programs: The NAP (2023-2050) has 105 references to women and four references to the ccGAP. Adaptation

[267] **Government of Bangladesh.** (2021). *Bangladesh Nationally Determined Contributions (Updated).* Retrieved from https://unfccc.int/sites/default/files/NDC/2022-06/NDC_submission_20210826revised.pdf.
[268] **Government of Bangladesh.** (n.d.). *Country Action Plan for Clean Cookstoves.* Retrieved from https://cleancooking.org/wp-content/uploads/2021/07/235-1.pdf.
[269] **CARE.** (2021). *Climate NDC & Gender Scorecard.* Retrieved from https://care.h5mag.com/climate_ndc_and_gender_scorecard_2021/contents.

strategies and measures are outlined with specific references to women and diverse gender. In the NAP, the mandate of District Development Committees was revised to include women.

Proportion of international climate financing projects with gender components as the principal component: In 7% of all projects recorded in the OECD-DAC database for climate finance in Bangladesh (until 2021), gender is the principal component.

Membership of the country in the "Just transitions and gender responsive climate action Partnership", announced at COP28: Yes[270]

Priority area E: Monitoring and reporting on the implementation of gender-related actions: 2.0 score

Inclusion of information on progress made regarding gender considerations in their regular national and/or international reporting: Monitoring and evaluation is a part of the national strategy on gender and climate change. Bangladesh First Biennial Updated Report to the UNFCCC (2023)[271] refers to gender and has a section on gender dimensions of climate change, including a reference to the gender responsive actions, foreseen in the NAP.

Concluding Observations

Bangladesh is on the seventh rank (out of 10 countries) in the GAP Performance Index. This rather low performance is aligned with the low rank in the GII. The low participation of women in decision making processes can be attributed to socio-cultural factors of the Bangladesh society. However, the early launch of the ccGAP in 2013 may be taken as an indicator of

[270] **COP28.** (2023). *Gender Responsive Just Transitions & Climate Action Partnership.* Retrieved from https://www.cop28.com/en/cop28-gender-responsive-just-transitions-and-climate-action-partnership.
[271] **Government of Bangladesh.** (2023). *First Biennial Update Report to UNFCCC.* Retrieved from https://unfccc.int/sites/default/files/resource/Updated%20BUR1%20Report_15_11_2023.pdf.

political will to undertake more efforts towards gender mainstreaming. The Cyclone Preparedness Program (CPP)[272] with 50% of female volunteers for disaster risk reduction may be taken as another indicator that the important role of women in preventing and reducing climate disaster risks is understood and accepted. However, there seems to be lack of coordination amongst different ministries. This is also reflected by the fact that the most relevant planning instruments, i.e. the Five-Year Plans and other sectoral policies, don't reflect gender responsiveness in climate action adequately.

Republic of South Africa (Rank 8)

South Africa is located at the southern end of Africa. The neighboring countries are to the North, i.e. Namibia, Botswana, Zimbabwe, Mozambique, and Eswantini. South Africa also encloses the country Lesotho which is an enclave. South Africa covers a surface of about 1,213,000 square kilometers and has a population of about 61 million inhabitants. South Africa's climate is subtropical, with dry sunny winters, and hot summers.

South Africa's updated NDC was published on the 27th of September 2021, and its National Adaptation Plan (NAP) on September 29th, 2021. According to the Climate Adaptation Finance Index 2023, South Africa is at medium high climate risk and highly underfinanced with regards to adaptation.[273] The Climate Action Tracker has rated South Africa's climate policies as insufficient. The gender inequality index (GII) is high, putting South Africa at rank 99 with a score of 0,401 (1 being extremely unequal).

[272] **Government of Bangladesh & Bangladesh Red Crescent Society.** (n.d.). *Cyclone Preparedness Program.* Retrieved from https://bdrcs.org/cyclone-preparedness-programm-cpp/
[273] Brot für die Welt. (n.d.). *Anpassungsindex – Web Rangliste*. Retrieved January 30, 2025, from https://www.brot-fuer-die-welt.de/fileadmin/mediapool/20_Unsere-Themen/Anpassungsindex/Weitere_Dateien/Web_Rangliste.pdf

With a Gender & Climate Index Performance score of 1.63, South Africa takes the eighth rank among all ten countries assessed and performs therefore worse as compared to its GII ranking within this study sample. As such, according to this GCI index, South Africa underperforms.

GAP Performance:	**1.63**
Gender Capacity Score (20%):	2.00
Gender Balance Score (30%):	1.75
Gender Coherence Score (10%):	1.50
Gender Implementation Score (30%):	1.50
Gender Monitoring Score (10%):	1.00

GAP priority area A: Capacity building, knowledge management & communication to enhance gender responsive climate action: 2.00 score

Capacity building: Within the context of the Climate Promise initiative, a training program was held in South Africa, teaching gender-disaggregated indicators and how to track progress related to gender mainstreaming.[274]

UNFCCC submissions and research on gender and climate change: South Africa has made relevant submissions to the UNFCCC with regards to gender and climate change, e.g. on the "Priority area E on monitoring and reporting under the Gender Action Plan"[275] or on "Possible

[274] UNFCCC. (2022). *Report on the implementation of the gender action plan* (FCCC/SBI/2022/8). United Nations Framework Convention on Climate Change. https://unfccc.int/sites/default/files/resource/sbi2022_8.pdf
[275] South Africa. (2019). *Submission by South Africa on gender and climate change* (Submission No. E1). United Nations Framework Convention on Climate Change. https://www4.unfccc.int/sites/SubmissionsStaging/Documents/201905091021---SUBMISSION%20BY%20SOUTH%20AFRICA%20ON%20GENDER%20AND%20CLIMATE%20CHANGE%20E1%20(2).pdf

elements of the gender action plan to be developed under the Lima Work Program on Gender."[276]

Media coverage of gender and climate change: National media covers climate-related stories and makes sometimes a link to gender issues, e.g. on female mentoring in climate activism[277] or on gender stereotypes in energy.[278]

GAP priority area B: Gender balance, participation, and women's leadership in UNFCCC processes: 1.75 score

Percentage of female party delegates at COPs:[279] 35 % of the South African party delegates at COP25 were women. This proportion increased to 46% at COP28, leading to an average of 40,5%, which can be considered as medium.

National Climate Change and Gender Focal Point: South Africa appointed Ms Funanani Muremi, Department of Environmental Affairs, as national climate change and gender focal point.[280]

Female leadership at COPs: South Africa's delegation at COP28 was led by Mr. Maesela John Kekana, Deputy Director General: Climate Change and Air Quality.

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[276] South Africa. (2017). Submission by South Africa on the Gender Action Plan under the UNFCCC. Gender Climate Tracker. https://genderclimatetracker.org/sites/default/files/Resources/219_302_131360445536854361-Submission%20docx%20Gender%20Action%20Plan%20docx1.pdf

[277] Smit, S. (2023, June 11). Black Girls Rising: Mentoring project behind new wave of young climate advocates in SA. News24. https://www.news24.com/fin24/climate_future/solutions/black-girls-rising-mentoring-project-behind-new-wave-of-young-climate-advocates-in-sa-20230611

[278] Ndlovu, S. (2023, March 21). When you go into tender meetings, they think you are a secretary: Women in energy. *News24*. https://www.news24.com/fin24/climate_future/energy/when-you-go-into-tender-meetings-they-think-you-are-a-secretary-women-in-energy-20230321

[279] United Nations Framework Convention on Climate Change. (2023). *Including party and party overflow badges at COP28* (FCCC/CP/2023/2). https://unfccc.int/documents/634503

[279] United Nations Framework Convention on Climate Change. (n.d.). *List of gender focal points under the UNFCCC*. https://unfccc.int/topics/gender/resources/list-of-gender-focal-points-under-the-unfccc

[280] Ibid 279

GAP priority area C: Coherence to strengthen the integration of gender considerations towards the consistent national implementation of gender-related mandates and activities: 1.50 score

Reference level of national climate strategies and action plans to gender considerations: South Africa's climate strategy mentions women as a vulnerable group that should be consulted.[281] [282]

Proportion of international climate financing projects in which gender components play an important role: In much less than half of the projects, 33,1%, recorded in the OECD-DAC database for climate finance (until 2021) in South Africa, a gender-related component is either the principal objective or at least a significant objective.

Priority area D: Gender-responsive implementation and means of implementation: 1.50 score

National Gender and Climate Change Strategy and linkages to the GAP process: South Africa conducted stakeholder workshops in January 2024 for a national climate change gender action plan.[283]

Gender responsiveness in the NDC: South Africa's NDC has many references to gender.[284] [285]

[281] Department of Forestry, Fisheries and the Environment. (2019). *National climate change adaptation strategy* (Version 1.0). https://www.dffe.gov.za/sites/default/files/docs/nationalclimatechange_adaptationstrategy_ue10november2019.pdf
[282] Department of Environmental Affairs [DEA]. (2011). National climate change response white paper. Republic of South Africa. https://www.dffe.gov.za/sites/default/files/legislations/national_climatechange_response_whitepaper.pdf
[283] Department of Forestry, Fisheries and the Environment. (n.d.). *Draft Climate Change Gender Action Plan (CCGAP)*. https://www.dffe.gov.za/event/stakeholderenagagement/draft.ccgap
[284] Gender and Climate Tracker. (n.d.). *South Africa country profile*. https://genderclimatetracker.org/country-profile/south-africa
[285] Department of Forestry, Fisheries and the Environment. (2021). *South Africa's updated first Nationally Determined Contribution* (NDC). https://unfccc.int/sites/default/files/NDC/2022-06/South%20Africa%20updated%20first%20NDC%20September%202021.pdf

Gender responsiveness in the NAP or other adaptation policies and programs: The NAP was preceded by a gender analysis.[286]

Proportion of international climate financing projects with gender components as the principal component: 3% of all projects recorded in the OECD-DAC database for climate finance in South Africa (until 2021), have gender as their principal component, which is considered very low in this context.

Membership of the country in the "Just transitions and gender-responsive climate action Partnership", announced at COP28: No

Priority area E: Monitoring and reporting on the implementation of gender-related actions: 1.00 score

Inclusion of information on progress made concerning gender considerations in their regular national and/or international reporting: Gender aspects are only marginally mentioned in South Africa's communications.[287] [288] [289]

Concluding observations

It is to be welcomed that South Africa organized a comprehensive stakeholder consultation to inform about the new gender and climate action plan. South Africa is including gender aspects both in its NDC and in the NAP. South Africa has appointed a female gender focal point and

[286] Heinrich Böll Foundation, Women's Environment & Development Organization [WEDO], & Gender Climate Tracker (n.d.). Gender analysis of National Adaptation Plan (NAP) related documents: South Africa. https://genderclimatetracker.org/sites/default/files/Resources/south-africa_gender_review_nap_documents_0.pdf
[287] United Nations Framework Convention on Climate Change [UNFCCC]. (2019). South Africa. Gender and climate change (No. E1). https://unfccc.int/documents/181851
[288] United Nations Framework Convention on Climate Change [UNFCCC]. (2023). South Africa's written submission to the periodic review of the revised gender action plan (Submission). https://unfccc.int/documents/634958
[289] United Nations Framework Convention on Climate Change [UNFCCC]. (2023). South Africa's views on the role of National Gender and Climate Change Focal Points (Submission). https://unfccc.int/documents/634954

the share of female delegates at COPs could be increased but is already at an acceptable level. South Africa is contributing on a regular basis with gender and climate related submissions to the UNFCCC processes. However, there are many areas in climate policies and strategies that should take a more structured and solution-oriented approach. In terms of gender responsive financing there are also significant gaps that have been observed in this study.

Federative Republic of Brazil (Rank 9)

Brazil, the largest country in Latin America and the seventh most populous in the world, is categorized as upper middle-income country (UMIC) with a low to moderate climate risk, according to the Climate Adaptation Finance Index.[290] With a total area of 8.515.767 square kilometers, 7,500 km of coastlines, the world's largest rainforest in the Amazon basin, six terrestrial and one marine biome, Brazil is a country with great biodiversity and equally great ethnic diversity. Climatically, Brazil comprises a wide range of mostly tropical, partly subtropical and at less extent maritime climatic zones, with tropical rainforest, monsoon and savanna zones as the largest ones. Brazil's first NDC was adjusted and submitted in November 2023.[291] A National Adaptation Plan (NAP) was submitted in August 2021.[292] Brazil's level of ambition in climate policies and actions has been rated "insufficient" by the Climate Action Tracker.[293] The gender inequality is high, as indicated by a Gender Inequality Index (GII), which is equivalent with rank 96 globally, or rank 6 among our sample countries.

[290] Bread for the World. (2023). Climate adaptation finance index 2023: Improving transparency, predictability and accessibility for climate adaptation support. https://www.brot-fuer-die-welt.de/fileadmin/mediapool/downloads/fachpublikationen/Anpassungsindex/Climate_Adaption_Finance_Index_2023.pdf
[291] United Nations Framework Convention on Climate Change. (2023). *Gender and climate change: Recommendations for enhanced engagement* (FCCC/SBI/2023/1). https://unfccc.int/documents/633022
[292] United Nations Framework Convention on Climate Change. (2019). *Gender and climate change: Thematic paper* (FCCC/SBI/2019/10). https://unfccc.int/documents/302142
[293] Climate Action Tracker. (n.d.). *Brazil*. https://climateactiontracker.org/countries/brazil/

With a Gender & Climate Index Performance score of only 1.43, Brazil ranks 9th among the ten countries assessed and performs significantly worse than in the GII.

GAP Performance:	**1.43**
Gender Capacity Score (20%):	2.00
Gender Balance Score (30%):	1.75
Gender Coherence Score (10%):	1.00
Gender Implementation Score: (30%):	1.00
Gender Monitoring Score (10%):	1.00

GAP priority area A: Capacity building, knowledge management & communication to enhance gender responsive climate action: 2.00 score

Capacity building: The level of capacity building activities on gender and climate change has been rather low under the previous government, but increased under the recent one, and is expected to further gain in momentum during this and the next year. The Ministry of Women, for instance, promoted a "National Seminar on Women and Climate Justice", with representatives from several women's organizations, that is followed by a series of dialogues with women's organizations, taking place during 2024. [294] These activities are directly related to the GAP.

[294] Brazil. (2024). *Brazil: Long-term low emission development strategy and gender action plan review*. United Nations Framework Convention on Climate Change. https://www4.unfccc.int/sites/SubmissionsStaging/Documents/202404081343---Brazil_LWP%20and%20GAP_review.pdf

UNFCCC submissions and research on gender and climate change: Research on gender-related aspects of climate change is ongoing in Brazil, as for instance by UN WOMEN, CGIAR gender platform, and SciELO – Brazil "A Gender Perspective on Brazilian State Laws Addressing Climate Change".[295]

Only recently, there have been attempts to undertake more systematic research and a more strategic debate, aimed at leading to the uptake of gender-related research findings in policy making, as indicated in Brazil's submission to the UNFCCC on gender.[296]

Media coverage of gender and climate change: Medium to high visibility in Brazilian media[297]

GAP priority area B: Gender balance, participation, and women's leadership in UNFCCC processes: 1.75 score

Percentage of female party delegates at COPs:[298] 25 percent of the Brazilian party delegates at COP25 were women. This proportion increased significantly to 46% at COP28, leading to an average representation of women of 35.5%.

National Climate Change and Gender Focal Point: Ms. Bruna Verissimo Lima Santos, Ministry of Foreign Affairs, was appointed as the national climate change and gender focal points appointed.[299]

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[295] Huang, J., Liu, Y., & Wang, K. (2021). Understanding the impact of gender on climate change adaptation: A systematic review. *Nature Climate Change, 11*(4), 271-280. https://doi.org/10.1038/s41558-021-01043-4

[296] Brazil. (2024). *Brazil: Long-term low emission development strategy and gender action plan review*. United Nations Framework Convention on Climate Change. https://www4.unfccc.int/sites/SubmissionsStaging/Documents/202404081343---Brazil_LWP%20and%20GAP_review.pdf

[297] Instituto Humanitas Unisinos. (2023, March 8). *Igualdade de gênero é fundamental contra as mudanças climáticas*. https://www.ihu.unisinos.br/648416-igualdade-de-genero-e-fundamental-contra-as-mudancas-climaticas

[298] United Nations Framework Convention on Climate Change. (2023). *Including party and party overflow badges at COP28*. https://unfccc.int/documents/634503

[299] United Nations Framework Convention on Climate Change. (n.d.). *List of gender focal points under the UNFCCC*. https://unfccc.int/topics/gender/resources/list-of-gender-focal-points-under-the-unfccc

Female Leadership at COPs: Brazil's delegation at COP28 was led by H.E. President Ignacio Silva de Lula.

GAP priority area C: Coherence to strengthen the integration of gender considerations towards the consistent national implementation of gender-related mandates and activities: 1.00 score

Reference level of national climate strategies and action plans to gender considerations: While gender responsiveness in national climate strategies and action plans is still quite generic, i.e. referencing by and large to general principles only, Brazil recently has shown efforts to address these gaps through national and even international action: At the inauguration of the G20 Working Group on Women's Empowerment, Brazil proposed climate and gender justice as one of three priorities under the Brazilian G20 presidency.[300]

Proportion of international climate financing projects in which gender components play an important role: In 28,8% of all projects recorded in the OECD-DAC database for climate finance (until 2021) in Brazil, a gender-related component is either the principal objective or at least a significant objective.

Priority area D: Gender-responsive implementation and means of implementation: 1,00 scores

[300] CNN Brasil. (2023, September 13). *Igualdade de gênero, fim da violência e justiça climática são foco do Brasil em grupo de trabalho de mulheres do G20.* https://www.cnnbrasil.com.br/politica/igualdade-de-genero-fim-da-violencia-e-justica-climatica-sao-foco-do-brasil-em-grupo-de-trabalho-de-mulheres-do-g20/

National Gender and Climate Change Strategy and linkages to the GAP process: Gender considerations are addressed, but so far at a quite generic level. An analysis undertaken by researchers showed that implementation is still weak.[301]

Gender responsiveness in the NDC: Gender responsiveness is not yet anchored deeply in Brazil's NDC. Reference to women is made in so far as the Brazilian Constitution is referenced to, which takes into consideration the special needs of women and indigenous people. The GAP is not mentioned. Accordingly, Care scores the level of gender responsiveness of the NDC as low.[302]

Gender responsiveness in the NAP or other adaptation policies and programs: The NAP mentions gender sensitivity as a guiding principle for climate adaptation, identifies women as a climate vulnerable group, and makes the linkage between climate and gender justice, calling for inclusion. These principles, however, are not operationalized further in the NAP.[303]

Proportion of international climate financing projects with gender components as the principal component: Only 3% of all projects recorded in the OECD-DAC database for climate finance in Brazil (until 2021), have gender as the principal component.

Membership of the country in the "Just transitions and gender responsive climate action Partnership", announced at COP28: No

[301] Economic Commission for Latin America and the Caribbean. (2023, September 7). *New report points to pathways for transformative recovery, sustainability, and gender equality in Brazil*. https://www.cepal.org/en/news/new-report-points-pathways-transformative-recovery-sustainability-and-gender-equality-brazil
[302] CARE. (2021). *Climate NDC and gender scorecard: Brazil*. https://care.h5mag.com/climate_ndc_and_gender_scorecard_2021/brazil
[303] Gender and Climate Tracker. (n.d.). *Brazil gender review of National Adaptation Plan (NAP) documents*. https://genderclimatetracker.org/sites/default/files/Resources/brazil_gender_review_nap_documents.pdf

Priority area E: Monitoring and reporting on the implementation of gender-related actions: 1.00 score

Inclusion of information on progress made with regard to gender considerations in their regular national and/or international reporting: Gender considerations in monitoring and reporting documents are very weak. In Brazil's latest 4th Biennial Updated Report to the UNFCCC, submitted in 2020, gender finds no mentioning.[304] The 4th National Communication to the UNFCCC (2020) mentions gender in a very superficial way, referring to marginalization in quotations of secondary literature.[305] Meanwhile, in the Belém Declaration (2023),[306] signed under the Amazon Cooperation Treaty, gender equality in the context of climate change and deforestation, plays a role as a cross-cutting theme calling for active participation and promotion of women's rights, leadership and participation of women, including Indigenous women and women of African descent. This can be taken as another indication for a more gender-focused approach in addressing climate change under the current government, as compared to the previous one.

Concluding observations

Brazil ranks only 9th out of the ten countries in the Gender & Climate Index Performance, which is far below the country's potential.

[304] Brazil. (2020). *Fourth biennial update report of Brazil to the United Nations Framework Convention on Climate Change*. https://unfccc.int/sites/default/files/resource/BUR4.Brazil.pdf
[305] Brazil. (2020). *Fourth national communication of Brazil to the United Nations Framework Convention on Climate Change*. https://unfccc.int/sites/default/files/resource/4a%20Comunicacao%20Nacional.pdf
[306] Organization of the Amazon Cooperation Treaty (OTCA). (2023). *Declaration of Belém*. https://otca.org/en/wp-content/uploads/2023/10/Declaration-of-Belem.pdf

The prevailing perception of women in Brazil's climate policy is one of vulnerability, but not of women's potential as drivers of change. This is a significant difference compared to the more progressive views of those countries that perform better in the GAP Performance Index.

Accordingly, in Brazil, a country with so many opportunities, there is a lot of catching up to do in order to make climate policy gender responsive. One important barrier to be removed is the attitude that gender policy is limited to “women’s issues” and not really relevant. Closely related to that, gender-responsive budgeting and earmarking of funds would be very relevant

However, there are also strengths, to build on: The significantly improved gender balance in Brazil’s delegation at COP28, reflects the country’s commitment to extend the diversity of its delegation, Brazil’s gender and climate focus under its G20 Presidency is laudable, and the Brazilian model of periodic regional dialogues among women from all Brazilian biomes is another good practice.

Republic of India (Rank: 10)

India is located in South Asia, bordered by Pakistan, China, Nepal, Bhutan, Bangladesh, and Myanmar. It covers approximately 3.287 million square kilometers with a population of about 1.4 billion inhabitants. India's climate varies from tropical in the south to temperate in the north, with distinct seasonal patterns including monsoons.

India's updated NDC was submitted in August 2022. According to the Climate Action Tracker, India's climate policies are rated as "Highly Insufficient." The gender inequality index (GII) is relatively high, with India ranking 108th with a score of 0.437 (1 being extremely unequal).

With a Gender & Climate Index score of 1.25, India's performance on gender-responsive climate action shows tremendous scope for improvement. This score indicates underperformance compared to its GII ranking within the study sample.

GAP Performance:	**1.25**
Gender Capacity Score (20%):	2.00
Gender Balance Score (30%):	0.75
Gender Coherence Score (10%):	1.00
Gender Implementation Score (30%):	1.40
Gender Monitoring Score (10%):	1.00

GAP priority area A: Capacity building, knowledge management & communication to enhance gender responsive climate action: 2.00 score

Capacity building: Several government schemes and programs integrate gender and climate issues across all levels.

The Ministry of Rural Development (2023) [307] reports several successful initiatives including:

- Mahila Kisan Sashaktikaran Pariyojana (MKSP)
- Deendayal Antyodaya Yojana-National Rural Livelihoods Mission (DAY-NRLM)
- National Rural Economic Transformation Project (NRETP)

[307] Ministry of Rural Development. (2023). Annual Report 2022-23. Government of India.

Research and submissions: Geethalakshmi et al. (2023) [308] note that while research exists, gendered considerations of climate are not systematically integrated. The International Institute for Sustainable Development [IISD] (2023) [309] confirms this finding in their assessment of India's climate policies.

Media coverage: Dubash and Khosla (2023) [310] analyzed media coverage of gender-responsive climate action in India, finding limited but growing attention to the intersection of gender and climate issues.

GAP priority area B: Gender balance, participation, and women's leadership in UNFCCC processes: 0.75 score

Percentage of female party delegates at COPs: India showed a declining trend in female representation, from 33% at COP25 to 30% at COP28, averaging 31.5%.

National Climate Change and Gender Focal Point: India has not appointed a dedicated national climate change and gender focal point.

Female leadership at COPs: India's delegation at COP28 was not led by a woman.

GAP priority area C: Coherence to strengthen gender considerations: 1.00 score

[308] Geethalakshmi, V., Rao, K. P. C., & Bhatta, G. D. (2023). Systematic Review of Gender Integration in Climate Change Research in India. Climate and Development, 15(2), 145-159.
[309] International Institute for Sustainable Development. (2023). Gender Responsive Climate Action: India Case Study. IISD Report.
[310] Dubash, N. K., & Khosla, R. (2023). Gender and Climate Change in Indian Media: A Content Analysis. Centre for Policy Research Working Paper.

Reference level of national climate strategies: India's NDCs lack explicit gender considerations, though the National Action Plan on Climate Change (NAPCC) includes some gender elements (MoEFCC, 2022) [311].

GAP priority area D: Gender-responsive implementation and means of implementation: 1.40 scores

National Gender and Climate Change Strategy: India does not have a dedicated National Gender & Climate Change Strategy, though gender considerations are incorporated into existing climate policies.

Gender-responsive climate finance: Approximately 4% of climate projects have gender as their main component.

Membership in partnerships: India is a member of the COP28 Just transitions and gender-responsive climate action Partnership.

GAP priority area E: Monitoring and reporting: 1.00 scores

Regular reporting on gender integration shows some progress but lacks systematic approach.

Concluding observations

While India has made progress in certain areas, particularly in capacity building and implementation of gender-responsive schemes, significant gaps remain. The decline in female representation at COPs, absence of a dedicated gender focal point, and limited integration of

[311] Ministry of Environment, Forest and Climate Change. (2023). *Annual report 2022-23*. Government of India. https://moef.gov.in/uploads/2023/05/Annual-Report-English-2022-23.pdf

gender considerations in NDCs indicate areas requiring immediate attention. The country's membership in the COP28 Just transitions partnership however, shows commitment to improvement, but more structured and solution-oriented approaches are needed across climate policies and strategies.

The detailed country specific analysis sheets have been placed at Annexure 1.

Analysis of the Ten Selected Countries from Global South

Based on the analysis of Gender Action Plan (GAP) implementation across 10 countries from the Global South, here are the key findings:

The average GCI value for all 10 countries was **1.84**. The average values for all three world regions are relatively close together. The **first rank** goes to **Columbia** by a wide margin (2.48), followed by **Peru** (2.15) and **Nepal (2.04)**. The **laggards** are **Brazil** (1.43) and **India (1.25)**.

Regional Analysis

The analysis reveals interesting regional patterns:

South Asia

- Nepal emerges as the strongest performer from South Asia (2.04)
- Bangladesh shows moderate performance (1.71)
- India ranks lowest among all analysed countries (1.25)

Southeast Asia

- Philippines demonstrates strong performance (1.98)
- Indonesia shows moderate performance (1.77)

Latin America

- Colombia leads not just the region but all countries (2.48)
- Peru shows strong performance (2.15)
- Brazil underperforms relative to its regional peers (1.43)

Africa

- Kenya shows strong performance (1.98)
- South Africa demonstrates moderate performance (1.63)

Performance Categories

The countries can be grouped into four performance quartiles:

Good Performance (2.03-2.48):

- Colombia (2.48)
- Peru (2.15)
- Nepal (2.04)

Above Average (1.82-2.02):

- Philippines (1.98)
- Kenya (1.98)

Medium Performance (1.63-1.78):

- Indonesia (1.77)
- Bangladesh (1.71)

- South Africa (1.63)

Poor to Medium (1.11-1.58):

- Brazil (1.43)
- India (1.25)

Notable Observations

1. **Outperformers**:

- Nepal shows remarkable performance despite challenging socio-economic conditions
- Kenya demonstrates strong implementation despite lower GII ranking

2. **Underperformers**:

- Brazil shows significant underperformance relative to its GII ranking
- India's performance suggests need for substantial improvement

3. **Regional Patterns**:

- Latin American countries show high variability in performance
- South Asian countries demonstrate diverse performance levels
- Southeast Asian countries maintain consistent moderate-to-high performance

Table 6.1 - Summary of GCI Performance

Rank	Country	Total GCI index	Gender capacity index	Gender balance index	Gender coherence index	Gender implementation index	Gender monitoring index
1	Colombia	**2.48**	3.00	2.25	2.50	2.50	2.00
2	Peru	**2.15**	2.00	2.50	2.00	2.00	2.00
3	Nepal	**2.04**	2.33	1.25	2.50	2.50	2.00
4	Kenya	**1.98**	2.00	2.25	2.00	2.00	1.00
5	Philippines	**1.98**	2.00	2.25	2.00	2.00	1.00
6	Indonesia	**1.77**	2.33	2.00	1.50	1.50	1.00
7	Bangladesh	**1.71**	1.67	1.25	2.00	2.00	2.00
8	South Africa	**1.63**	2.00	1.75	1.50	1.50	1.00
9	Brazil	**1.43**	2.00	1.75	1.00	1.00	1.00
10	India	**1.25**	2.00	0.75	1.40	1.00	1.00
Avg		**1.84**	**2.13**	**1.80**	**1.84**	**1.80**	**1.40**

Comparing the five scored GCI priority areas, the **lowest performance** was achieved in the category **gender monitoring** (1.40), the **second lowest** in **gender balance** & gender implementation (1.80), **second-best** in **gender coherence** (1.84), and the **highest performance** in **gender capacity development** (2.13). However, the appropriate participation of women in the political negotiation process and good impact measurement, the two fields of action that have performed the weakest, are particularly relevant in order to ensure real **transparency and accountability** with regard to gender equality and responsiveness in climate action.

Correlation Analysis - Methodology, data sources and correlation coefficient

To calculate the index value, the following **formula** is used:

$$\text{Index value} = ((I_1 * 20) + (I_2 * 30) + (I_3 * 10) + (I_4 * 30) + (I_5 * 10)) / 100$$

Where: $(I_1 = ((C_1 + C_2 + C_3) / 3))$ *and* $(I_2 = ((C_4 + C_5 + C_6 + C_7) / 4))$ *and* $(I_3 = ((C_8 + C_9) / 2)$

and $(I_4 = (C_{10} + C_{11} + C_{12} + C_{13} + C_{14}) / 4)$ *and* $(I_5 = C_{15})$

A key finding from the analysis is the weak correlation between GAP performance and Gender Inequality Index (GII) rankings. For example:

- Peru ranks 1st in GII (0.387) but 3rd in GAP performance (2.15)
- Brazil ranks 2nd in GII (0.390) but 9th in GAP performance (1.43)
- India ranks 6th in GII (0.438) but 10th in GAP performance (1.25)

This suggests that a country's general gender equality status does not necessarily predict its performance in implementing gender-responsive climate action.

For the **correlation analysis** between the ranking in the GCI and the Gender Inequality Index, a Spearman analysis was applied, leading to the conclusion that the Gender & Climate Index results correlate only very weakly with the Gender Inequality Index values: The rank correlation coefficient is 0.03 in a range between -1 and +1, with the value +1 meaning that there is a strong positive correlation and the value -1 meaning that there is a strong negative correlation. The value 0 means that there is no correlation. The calculation underpins the observation from the scatter diagram, which also shows no correlation between the

characteristics. The p-value is 0.7912, meaning that the analysis would most likely also apply if we were to look at a sample of other countries.

Table 6.2 - Scatter diagram - GCI and GII

Country	Rank GCI	Rank Gender Inequality
Colombia	1	3
Nepal	2	8
Peru	3	1
Kenya	4	9
Philippines	5	5
Indonesia	6	7
Bangladesh	7	10
South Africa	8	4
Brazil	9	2
India	10	6

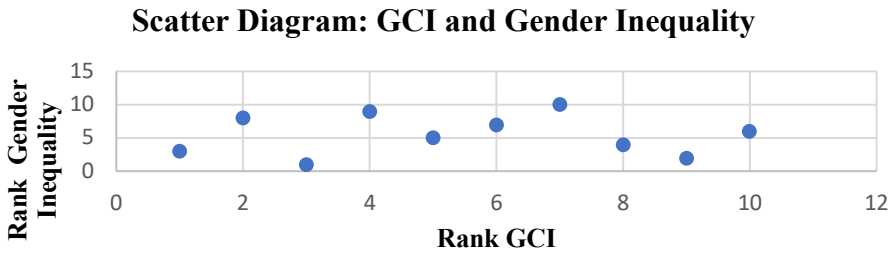

Figure 6.1 Scatter diagram - GCI and GII

Table 6.3 - Spearman's Rank Correlation Results

Country	GCI Rank	Inequality Rank	d	d^2
Colombia	1	3	-2	4
Nepal	2	8	-6	36
Peru	3	1	2	4
Kenya	4	9	-5	25
Philippines	5	5	0	0
Indonesia	6	7	-1	1
Bangladesh	7	10	-3	9
South Africa	8	4	4	16
Brazil	9	2	7	49
India	10	6	4	16

Summary Statistics:

- Number of pairs (n): 10
- Sum of d^2: 160
- Spearman's correlation coefficient (ρ): 0.030

Table 6.4 - Spearman Correlation Summary

Results				
Correlation coefficient (Spearman)	t-value	p-value	H0	H1
0.03	0.2686952	0.7912	no correlation	correlation

Evaluation of the Correlation Analysis

The analysis leads to the conclusion that the characteristics are almost uncorrelated.

A Spearman correlation analysis was conducted to examine the relationship between Gender Climate Index (GCI) rankings and Gender Inequality rankings across 10 countries. This method was chosen as it is specifically designed to examine correlations between ordinal variables (ranked data).

The rank correlation coefficient is 0.030, indicating an extremely weak positive correlation between the two characteristics. This means that there is virtually no linear relationship between a country's ranking in GCI and its ranking in Gender Inequality.

Theoretical background to the rank correlation coefficient: The coefficient ranges from -1 to +1, where:

- A value of +1 indicates a perfect positive correlation (as one ranking increases, the other increases proportionally).
- A value of -1 indicates a perfect negative correlation (as one ranking increases, the other decreases proportionally).
- A value of 0 indicates no correlation between the rankings.

Based on the statistical analysis:

1. **Correlation Coefficient** (Spearman's rho) = 0.030
2. **t-value** = 0.2686952
3. **p-value** = 0.7912
4. **Degrees of freedom** = 8

This analysis indicates:

1. The correlation coefficient of 0.030 shows an extremely weak positive correlation between GCI and GII rankings.
2. The t-value of 0.2686952 is quite small, suggesting that the correlation is not statistically significant.
3. The p-value of 0.7912 is much larger than the conventional significance level of 0.05, which means:
    - We cannot reject the null hypothesis of no correlation.
    - There is a 79.12% chance of observing such a correlation even if there was no true relationship between the variables.
    - The correlation is not statistically significant.
4. With 8 degrees of freedom (n-2, where n=10), even a moderate correlation would need to be much stronger to be considered statistically significant.

The calculated value of 0.030 is very close to zero, demonstrating that there is essentially no correlation between the two rankings.) The t-value is 0.2686952, and the p-value is 0.7912. The high p-value (>0.05) indicates that we cannot reject the null hypothesis (H0) of no correlation. This means that the analysis would most likely also apply at a sample of other countries, and there is confidence that the lack of correlation between GCI rankings and Gender Inequality rankings is not due to chance.

This statistical evidence supports the conclusion that there is no significant relationship between a country's GCI ranking and its GII ranking. This finding suggests that a country's performance in gender-responsive climate action (as measured by the GCI) does not necessarily correspond to its overall gender inequality status. For example, while Bangladesh

ranks 7th in GCI, it ranks 10th in Gender Inequality, and while Brazil ranks 9th in GCI, it ranks 2nd in Gender Inequality. The high p-value suggests that any observed correlation could be due to random chance rather than a true relationship between the variables.This statistical evidence supports the conclusion that a country's performance in gender-responsive climate action is not significantly related to its overall gender inequality status, suggesting that these two aspects of gender-related policy and outcomes may be driven by different factors or mechanisms.

This lack of correlation could indicate that: -

1. Countries may be able to make progress on gender-responsive climate action independently of their overall gender equality status
2. The mechanisms and policies that drive improvements in general gender equality might be different from those that promote gender-responsive climate action
3. There might be a need for more integrated approaches that better align gender equality efforts with climate action initiatives.

Thematic Analysis

Policy Integration and Implementation

The degree of policy integration of gender considerations into climate governance varies significantly across different national contexts. While countries such as Colombia have successfully institutionalized gender-responsive frameworks through dedicated gender-climate coordination mechanisms, clear policy mandates, and systematic monitoring, India continues to experience gaps between policy formulation and implementation. Despite references to gender equity within India’s Nationally Determined Contributions (NDCs), National Action

Plan on Climate Change (NAPCC), and State Action Plans on Climate Change (SAPCCs), the absence of enforceable mandates, specific gender-disaggregated targets, and accountability frameworks has impeded the effective realization of gender-responsive climate governance.

A critical limitation in India's policy landscape is the lack of dedicated institutional frameworks for gender-climate coordination at both national and subnational levels. Unlike high-performing countries that have inter-ministerial gender-climate coordination bodies, India's institutional structure remains highly sectoral and fragmented, resulting in poor policy coherence and cross-sectoral integration. Additionally, while India has ratified international commitments under the UNFCCC Gender Action Plan (GAP) and the Paris Agreement, these commitments have not been sufficiently operationalized within national and state-level climate governance frameworks.

Empirical evidence suggests that key determinants of successful policy implementation in gender-responsive climate action include:

- The establishment of dedicated institutional mechanisms for gender-climate coordination with clear jurisdictional authority.
- The development of specific gender-responsive indicators within climate policies to enable effective tracking and accountability.
- Strengthened stakeholder engagement mechanisms that facilitate participatory governance at national, state, and local levels.
- A robust monitoring and evaluation system, including gender-disaggregated climate impact assessments, to ensure that gender considerations are systematically incorporated into climate adaptation and mitigation strategies.

Capacity Building and Knowledge Management

Capacity development remains a critical challenge in ensuring the effective integration of gender considerations into climate governance. The analysis reveals stark variations in capacity-building efforts across different governance levels. High-performing countries such as Colombia and Nepal have demonstrated a structured, systematic approach to capacity development, embedding gender-responsive climate training within national policy frameworks. In contrast, India's capacity-building efforts remain sporadic, highly localized, and lacking in long-term institutional commitment.

The effectiveness of capacity-building initiatives can be categorized into three broad performance tiers:

1. High-performing countries (e.g., Colombia, Nepal) have institutionalized gender-climate training as an integral part of governance structures, ensuring that climate policymakers, local government officials, and community stakeholders have the technical expertise to mainstream gender considerations into climate adaptation and mitigation planning.
2. Mid-range countries demonstrate strong but inconsistent capacity-building frameworks, where gender considerations are embedded within select policy areas but lack a comprehensive, cross-sectoral approach.
3. Lower-performing countries, including India, lack a structured and institutionalized gender-climate capacity development framework, leading to limited technical expertise among policymakers and weak implementation of gender-responsive climate initiatives.

Key challenges in India's gender-responsive capacity development include:

- Absence of standardized gender-climate training curricula within government institutions.
- Limited participation of women's organizations and community leaders in climate decision-making processes.
- Lack of cross-sectoral knowledge-sharing platforms to facilitate best practices in gender-inclusive climate governance.

Gender-Responsive Climate Finance Mechanisms

An analysis of climate finance frameworks in India reveals significant disparities in the allocation of resources for gender-responsive initiatives. Despite global recognition of the importance of gender-sensitive climate finance, India continues to struggle with:

- Limited allocation of climate finance for women-led adaptation initiatives.
- Inadequate integration of gender considerations into climate investment strategies, leading to resource exclusion for women in climate-sensitive sectors.
- Weak tracking and monitoring of gender-responsive climate financing, making it difficult to assess the actual impact of funding allocations on gender equity.

A comparative assessment highlights that countries with strong gender-responsive finance mechanisms (e.g., Kenya and Bangladesh) have successfully integrated gender budgeting into climate adaptation and mitigation financing. These nations have established dedicated financial instruments, such as gender-responsive green bonds, targeted microfinance for women entrepreneurs in climate sectors, and direct budget allocations for gender-inclusive climate programs.

In contrast, India's climate finance ecosystem lacks gender-specific funding allocations, with existing climate funds primarily benefiting large-scale infrastructure projects and industrial adaptation mechanisms, rather than community-driven, women-led resilience programs. Addressing these disparities requires:

- The integration of gender-responsive budgeting (GRB) into all climate financing mechanisms at both national and state levels.
- The development of targeted financial instruments, such as green credit programs for women in renewable energy and sustainable agriculture.
- The mandating of gender impact assessments for all climate finance disbursements to ensure equitable resource allocation.

Institutional and Governance Success Factors

A critical analysis of successful gender-responsive climate governance models reveals several commonalities among high-performing countries:

Institutional Frameworks

- Presence of dedicated gender-climate coordination bodies with jurisdictional authority.
- A clear policy mandate for implementing agencies, ensuring gender-sensitive climate planning is legally enforceable.
- Strong cross-sectoral coordination between environmental, gender, and finance ministries to ensure policy coherence.

Policy Integration

- Full integration of gender considerations into national climate policies, strategies, and financial mechanisms.
- Development of specific gender action plans within climate governance frameworks, with measurable targets and implementation roadmaps.
- Institutionalized monitoring and evaluation systems to track gender-disaggregated climate impacts.

Stakeholder Engagement

- Institutional mechanisms that facilitate active participation of civil society organizations (CSOs), women's groups, and local governance bodies in climate planning.
- Stronger local implementation mechanisms that ensure gender-responsive policies translate into actionable, community-based climate programs.
- Decentralized governance models that empower women-led climate adaptation and resilience-building efforts.

Challenges and Barriers to Implementation

Despite advancements in global gender-responsive climate action, common barriers persist across multiple national contexts, including India:

Implementation Gaps

- Limited financial resources for gender-responsive climate initiatives, leading to underfunded adaptation programs.

- Weak coordination between national, state, and local climate governance structures, resulting in policy fragmentation.
- Insufficient technical capacity at the state and local levels to integrate gender considerations into climate action plans.

Monitoring and Evaluation Constraints

- Limited availability of gender-disaggregated data, making it difficult to assess the effectiveness of current gender-climate policies.
- Weak institutional monitoring frameworks, with no mandatory reporting mechanisms on gender-responsive climate financing and implementation.
- Lack of accountability and enforcement mechanisms, leading to policy inertia.

Institutional Barriers

- Political reluctance and bureaucratic inefficiencies in institutionalizing gender-climate linkages at a systemic level.
- Lack of dedicated human resources within government agencies, limiting the execution of gender-focused climate programs.

CHAPTER – 7

IDENTIFICATION OF POLICY RECOMMENDATIONS FOR INDIA

Considering that the performance of India in both the Gender and Inequality Rankings and the developed Gender and Climate Index rankings leaves a large scope for improvement, this Chapter aims to identify the policy gaps towards successful implementation of a country and state wide gendered climate action and adaptation mechanisms.

From the preceding chapter, it is amply evident that India urgently needs to focus on prioritising gender responsive climate action and adaptation mechanisms. Towards identification of a road map for this, a comprehensive survey was conducted amongst academic researchers, NGOs, policy makers, public and private stakeholders. The detailed survey questionnaire is placed at Annexure A.

The primary data collected from the survey questionnaire has been analysed (Annexure – B) in the succeeding paragraphs to identify a comprehensive way ahead.

Survey Analysis on Gender-Responsive Climate Action in India

Survey Overview – Sample 55 respondents

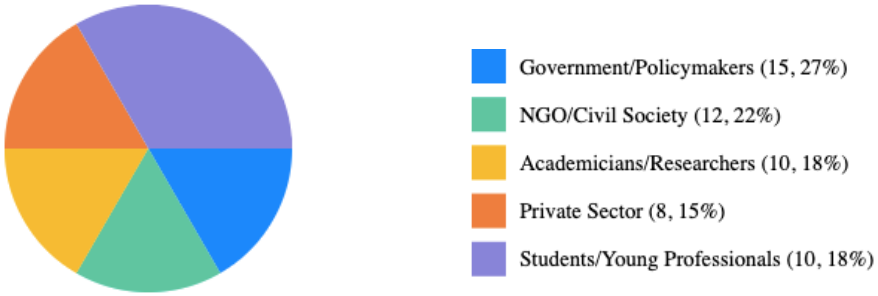

Figure 7.1 Survey Overview

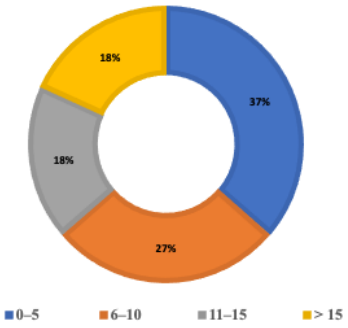

Figure 7.2. Years of Experience in the Field

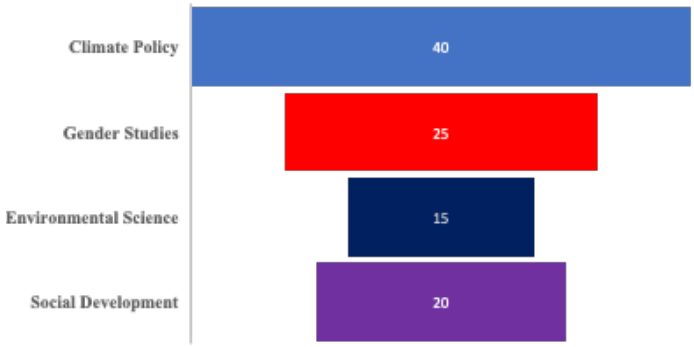

Figure 7.3. Institutional Effectiveness in Gender- Responsive Climate Action

1. Assessment of Current Status

1.1 Gender-Disaggregated Data and Knowledge Gaps

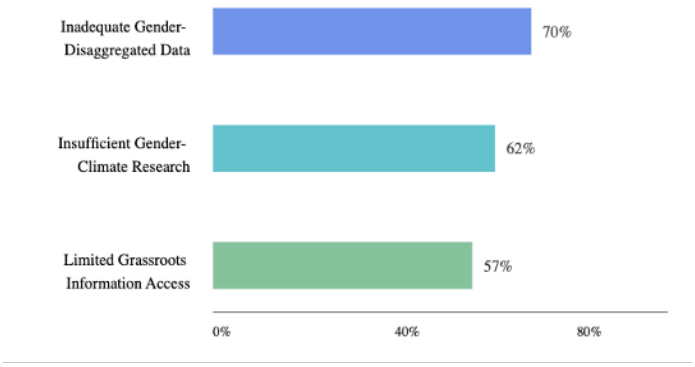

Figure 7.4 Gender Climate Knowledge Gap Assessment

- 70% of respondents disagreed that current systems for collecting gender-disaggregated climate data are adequate.
- 62% of experts rated existing research on gender-climate intersections in India as insufficient, citing a lack of localized, region-specific studies.
- 57% strongly disagreed that climate change information is accessible to women at the grassroots level.
- Key Barriers Identified:
    - Lack of gender-responsive indicators in climate policies.

- Limited use of traditional knowledge in climate adaptation research.

Policy Implication: Need for a **National Gender-Climate Data Observatory** to bridge data asymmetry and inform **evidence-based policymaking**.

1.2 Institutional Framework & Gender Integration in Climate Governance

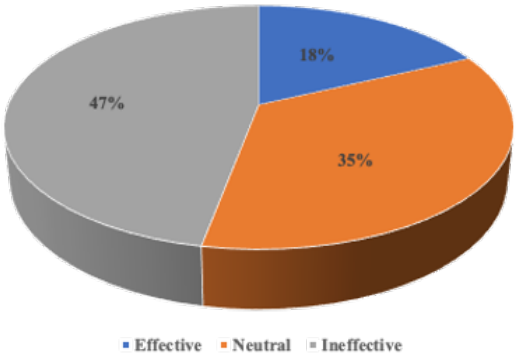

Figure 7.5. Institutional Effectiveness in Gender- Responsive Climate Action

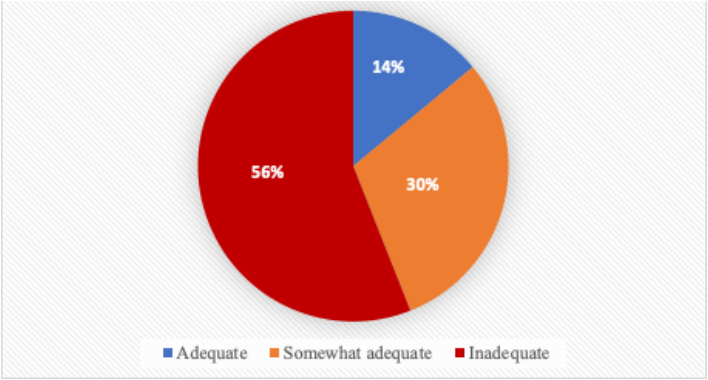

Figure 7.6 Adequacy of Co-ordination between Gender & Climate Institutions

- **Authority and resources of gender focal points in climate institutions:**
  - 65% of respondents stated that gender focal points lack decision-making authority and adequate resources.

Policy Implications:

- Strengthen inter-ministerial coordination by establishing a Gender and Climate Task Force comprising MoEFCC, MWCD, NITI Aayog, and State Climate Authorities.
- Institutionalize gender focal points with clear mandates and budgetary autonomy.

2. Policy and Implementation Gaps

2.1 Gender Integration in Climate Policies (NDCs, NAPCC, SAPCCs)

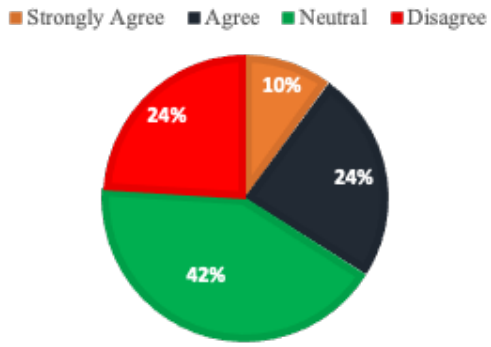

Figure 7.7 India's NDCs Adequately Integrate Gender Considerations

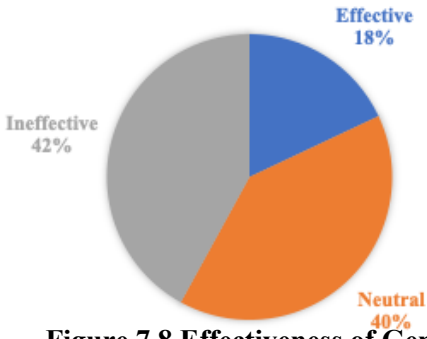

Figure 7.8 Effectiveness of Gender Mainstreaming in SAPCCs

Policy Implications:

- Mandatory gender impact assessments in NDCs and SAPCCs to track progress and strengthen policy coherence.
- Capacity-building programs for state-level climate policymakers to incorporate gender-sensitive frameworks.

2.2 Gender-Responsive Climate Finance

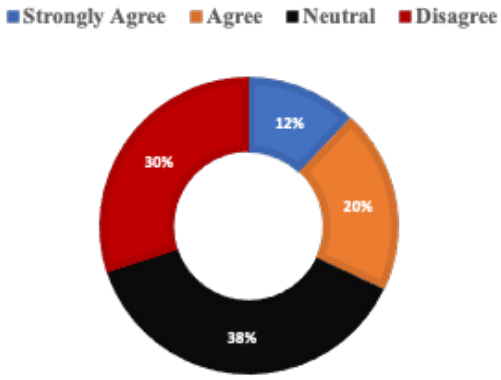

Figure 7.9. Is Current Finance allocation Gender-Responsive?

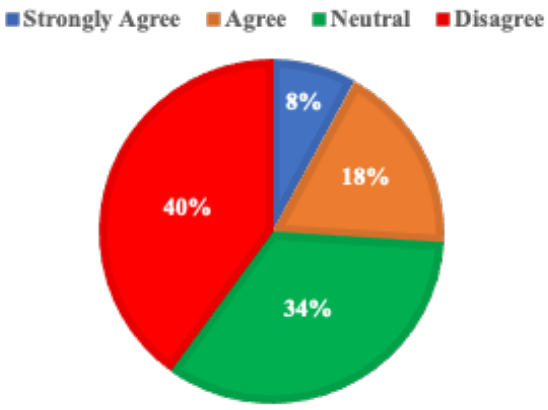

Figure 7.10 Women have Adequate Access to Climate Finance

Key Barriers Identified:

- Lack of women-specific financial instruments within India's green finance mechanisms.
- Low awareness and accessibility of climate finance at the local level.
- Underrepresentation of women in financial decision-making bodies.

Policy Implication:

- Implement gender-responsive budgeting across all climate programs.
- Mandate a minimum allocation of climate funds to women-led projects under the Green Climate Fund (GCF).
- Expand microfinance and credit for women in climate-smart enterprises.

2.3 Effectiveness of Capacity Building for Gender-Responsive Climate Action

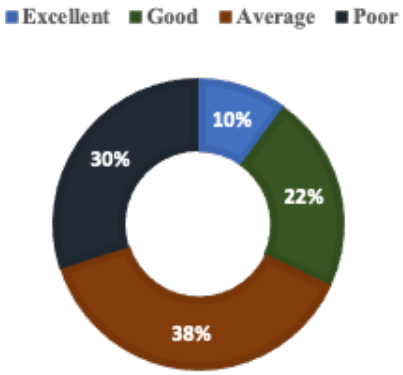

Figure 7.11 Capacity-building efforts for government officials

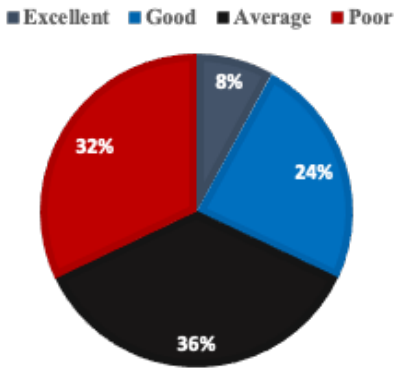

Figure 7.12 Capacity-building for local institutions

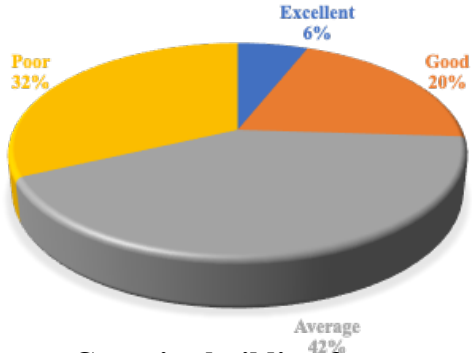

Figure 7.13 Capacity-building for women's groups

Policy Implication

- Integrate gender-climate capacity-building modules within existing government training programs.
- Empower grassroots women's organizations by providing technical training on climate adaptation strategies.

3. Priority Areas for Gender-Responsive Climate Action

Ranked Priorities for Policy Focus (Average Ranking Across Respondents, 1 = Highest Priority)

1. Institutional Strengthening (1.8)
2. Financial Mechanisms (2.1)
3. Policy Integration (2.5)
4. Capacity Building (2.8)
5. Local Implementation (3.1)
6. Data Collection and Monitoring (3.5)
7. Research and Knowledge Management (3.7)
8. International Cooperation (4.2)

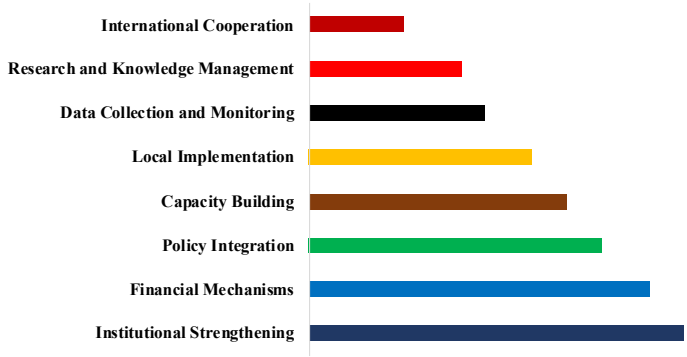

Figure 7.14. Priority Areas

Policy Implications:

- Institutional reform and financial access are the most urgent gaps requiring intervention.
- Capacity-building and local implementation are necessary for policy effectiveness.

4. Key Barriers Identified by Respondents

1. Weak Institutional Coordination: Lack of cross-ministerial integration between MoEFCC, MWCD, and Finance Ministry.
2. Limited Climate Finance Access for Women: No structured gender-responsive financing models.
3. Absence of Gender-Disaggregated Climate Data: Policymakers lack real-time, granular data for targeted interventions.

5. Expert Recommendations for India's Gender-Climate Strategy

5.1 Strengthening Institutional Mechanisms

- Establish a Gender & Climate Task Force with representation from all key ministries.
- Institutionalize gender focal points at national and state levels with dedicated budgets.

5.2 Enhancing Policy Integration

- Amend NAPCC and SAPCCs to include mandatory gender action plans.
- Implement gender-sensitive adaptation frameworks in agriculture, water management, and disaster risk reduction.

5.3 Strengthening Implementation at the Local Level

- Scale-up women-led climate resilience programs (e.g., Mahila Kisan Sashaktikaran Pariyojana).
- Expand community-based adaptation projects with direct funding access for women's groups.

5.4 Advancing Gender-Responsive Climate Finance

- Establish a Women's Green Climate Fund for female entrepreneurs in renewable energy, agroforestry, and climate-smart industries.
- Require climate finance tracking reports to assess gender impact.

CHAPTER - 8

POLICY RECOMMENDATIONS FOR STRENGTHENING GENDER-RESPONSIVE CLIMATE ACTION IN INDIA

India's commitment to climate action must be accompanied by a robust gender-responsive framework to ensure that climate adaptation and mitigation strategies are inclusive, equitable, and effective. Given the disproportionate impacts of climate change on women and marginalized gender groups, a systematic integration of gender considerations into India's climate policies is crucial. The policy recommendations are derived from the results of the Gender & Climate Index including the more detailed recommendations from the analysis of best practices of all 10 countries selected for the study. Secondly, they build on recommendations and comments from gender experts and from participants in the survey questionnaire as amplified above and at Annexures II & III. These recommendations align with the five priority areas of the UNFCCC Gender Action Plan (GAP) and the Gender & Climate Index (GCI), contextualized for India's governance structures, economic landscape, and climate vulnerabilities.

Capacity Building, Knowledge Management, and Communication

Institutionalize Gender-Disaggregated Climate Data Collection and Analysis

- Establish a national gender-climate data observatory under the Ministry of Environment, Forest, and Climate Change (MoEFCC) to collect and analyze gender-disaggregated climate impact data.
- Integrate gender-sensitive climate impact assessments into the National Adaptation Plan (NAP) and Nationally Determined Contributions (NDCs).

- Ensure state and district-level climate reports include gender-disaggregated statistics on resource access, climate vulnerability, and adaptation strategies.

Conduct a National Stock-Taking Exercise on Gender-Responsive Climate Action

- Organize a multi-stakeholder dialogue with government agencies, civil society organizations (CSOs), research institutions, and the private sector to assess the current status of gender integration in climate policies.
- Develop a national roadmap for gender-inclusive climate action, defining clear implementation targets, institutional responsibilities, and funding mechanisms.

Strengthen Awareness Campaigns and Capacity-Building Initiatives

- Expand gender-climate awareness programs in rural and urban areas, targeting women, youth, and marginalized communities to improve climate literacy and engagement.
- Conduct specialized training programs for government officials, climate policymakers, and development practitioners on gender-sensitive adaptation and mitigation strategies.
- Ensure male community leaders and policymakers are actively engaged in gender-focused climate discourse to create institutional support for gender-responsive action.

Leverage Digital Platforms and Media for Gender-Responsive Climate Communication

- Develop an integrated knowledge-sharing platform to document and disseminate best practices on gender-responsive climate action.
- Use social media, mobile-based learning platforms, and AI-driven tools to create localized climate communication strategies that challenge gender stereotypes and highlight women as climate leaders rather than just victims.

Gender Balance, Participation, and Women's Leadership

Institutionalize Quotas for Women's Representation in Climate Governance

- Implement mandatory gender quotas in climate decision-making bodies, including state climate action councils, municipal planning committees, and Gram Panchayats involved in climate adaptation projects.
- Ensure women's representation in India's delegations to international climate negotiations (e.g., COP conferences, UNFCCC working groups).

Establish Dedicated Gender and Climate Focal Points in Government Bodies

- Appoint full-time gender and climate focal persons within MoEFCC, the Ministry of Rural Development, and state-level climate agencies.
- Develop gender-climate training modules to build institutional capacity in gender-sensitive climate policy formulation and program implementation.

Enhance Women's Leadership in Climate-Smart Livelihood Programs

- Expand initiatives like Self-Employed Women's Association (SEWA) to empower women in climate-smart agriculture, renewable energy, and forest conservation.
- Integrate gender considerations into India's Just Transition framework to ensure that women are key stakeholders in the shift to a low-carbon economy.

Coherent Integration of Gender Considerations in Climate Policies

Institutionalize Gender Mainstreaming Across Climate Policies

- Revise the National Action Plan on Climate Change (NAPCC) and State Action Plans (SAPCCs) to mandate gender-responsive planning, budgeting, and monitoring.
- Ensure that all eight missions under NAPCC, particularly the National Mission for Sustainable Agriculture and National Water Mission, integrate gender impact assessments into their strategies.

Strengthen Inter-Ministerial Coordination on Gender and Climate Action

- Establish a Gender and Climate Task Force comprising MoEFCC, the Ministry of Women and Child Development (MWCD), and NITI Aayog to drive coordinated policy implementation.
- Develop cross-sectoral collaborations linking gender-inclusive climate action with biodiversity conservation, water management, and disaster risk reduction.

Align India's Climate Policies with International Gender-Climate Frameworks

- Integrate gender-responsive measures into India's commitments under the Just Transition Work Program and the Global Goal on Adaptation framework (decision 2/CMA.5).
- Align gender-sensitive climate policies with SDG 5 (Gender Equality) and SDG 13 (Climate Action) to ensure coherence between national and global climate governance.

Gender-Responsive Implementation and Climate Finance

Develop a Gender-Responsive Climate Finance Strategy

- Introduce gender budgeting across all climate-related programs to ensure equitable resource allocation for women-led climate initiatives.

- Expand microfinance and credit access for women in climate-resilient enterprises, including agroforestry, sustainable fisheries, and decentralized renewable energy projects.

Mainstream Gender into the Green Climate Fund and Adaptation Finance Mechanisms

- Ensure that all climate finance proposals submitted to the Green Climate Fund (GCF) include gender impact assessments and equity targets.
- Leverage India's G20 presidency to advocate for increased financing for gender-responsive climate adaptation projects.

Expand Women-Led Climate Resilience Programs in Rural and Tribal Areas

- Scale up successful initiatives such as the Mahila Kisan Sashaktikaran Pariyojana (MKSP) to promote women-led agroecological practices.
- Strengthen women's land rights by ensuring gender-equitable access to climate-resilient agricultural schemes.

Monitoring and Accountability for Gender-Responsive Climate Action

Establish Gender-Sensitive Performance Indicators for Climate Action

- Develop standardized gender-climate indicators to track progress in women-led climate initiatives, gender-responsive budget allocations, and women's participation in climate governance.
- Align gender-sensitive monitoring frameworks with India's Environmental, Social, and Governance (ESG) standards for improved corporate accountability.

Implement a National Gender-Climate Data Observatory

- Set up an open-access digital platform to track gender-disaggregated climate impact data at national and state levels.
- Conduct regular gender audits of climate programs to ensure policy implementation aligns with stated objectives.

Integrate Gender-Sensitive Budgeting into India's Climate Expenditure Framework

- Establish a gender-responsive climate budget tracking system to assess the percentage of climate investments benefiting women and marginalized groups.
- Mandate annual reporting on gender and climate finance allocations by the Ministry of Finance and state governments.

By institutionalizing gender-responsive climate policies, strengthening governance frameworks, and ensuring equitable resource allocation, India can bridge the gender-climate gap and enhance the sustainability of its climate action. These recommendations aim to provide a clear roadmap for India to position itself as a global leader in gender-equitable climate governance ahead of COP30 and future NDC updates.

CHAPTER 9

CONCLUSION

This research examined gender-responsive climate action across ten countries from the Global South, with a particular focus on identifying policy recommendations for strengthening India's approach.

The findings of this study reaffirm that the intersection of gender and climate change is a critical yet under-addressed dimension of India’s climate governance framework. While climate change affects all populations, its impacts are not uniform, with women, particularly in the Global South, experiencing disproportionate vulnerability due to entrenched socio-economic, political, and institutional inequities. The research establishes that despite global commitments under the United Nations Framework Convention on Climate Change (UNFCCC), including the Enhanced Lima Work Programme on Gender (LWPG) and the Gender Action Plan (GAP), the mainstreaming of gender considerations in climate policy remains insufficient.

India, as a leading voice in the Global South, has made significant strides in articulating climate commitments through its Nationally Determined Contributions (NDCs), National Action Plan on Climate Change (NAPCC), and State Action Plans on Climate Change (SAPCCs). However, an in-depth analysis reveals that these policy frameworks exhibit a limited institutionalized focus on gender responsiveness. The study’s comparative assessment of India’s climate policies vis-à-vis other developing nations—such as Bangladesh, Kenya, Brazil, and Peru—demonstrates that countries with well-integrated gender-responsive strategies, including gender budgeting, participatory governance, and community-based adaptation models, have achieved more equitable and sustainable climate outcomes. The absence of structured gender-responsive mechanisms in India's climate policy landscape not

only limits the effectiveness of adaptation and mitigation efforts but also exacerbates pre-existing gender disparities.

A core contribution of this research is the development of a **Gender & Climate Index (GCI)** as a standardized framework for evaluating the gender responsiveness of climate policies across five critical dimensions: gender capacity (knowledge management, training, and awareness-building), gender balance (women's representation in decision-making bodies), gender coherence (integration of gender in climate strategies and regulatory frameworks), gender implementation (gender-responsive adaptation and mitigation initiatives), and gender monitoring (tracking and evaluation of gender outcomes in climate policy execution). The application of the GCI to selected Global South countries reveals key insights into India's relative positioning and highlights areas for policy intervention. While India performs relatively well in broad climate commitments, it ranks lower in gender balance within governance structures, access to climate finance for women, and gender-disaggregated policy implementation and monitoring mechanisms.

Several systemic challenges have been identified in India's approach to gender and climate governance. **First, the lack of policy coherence** across climate adaptation and mitigation strategies limits the systematic integration of gender considerations. While individual programs, such as the National Adaptation Fund for Climate Change (NAFCC), acknowledge gender disparities, there is no overarching framework that mandates gender mainstreaming across all national and state climate policies. **Second, institutional capacity constraints** hinder effective gender-responsive implementation. Government agencies and climate governance bodies lack structured guidelines for integrating gender considerations into project planning, execution, and evaluation. Additionally, the absence of dedicated gender focal points within key ministries dealing with climate action results in fragmented and ad-hoc policy

interventions. **Third, inadequate representation of women in climate governance structures** continues to be a major barrier. Despite the critical role women play in sectors such as agriculture, water management, and community resilience-building, they remain underrepresented in policymaking bodies, climate negotiations, and environmental decision-making processes at the national and subnational levels. **Fourth, persistent data asymmetry and lack of gender-disaggregated data** create gaps in understanding the differentiated impacts of climate change on women and men, thereby impeding the design of targeted policy solutions. **Fifth, women's limited access to climate finance and technology** restricts their ability to participate in and benefit from climate adaptation and mitigation initiatives. Gender-biased land tenure systems, financial exclusion, and socio-cultural constraints further marginalize women from accessing critical resources for climate resilience.

SWOT Analysis

Based on the findings, a comprehensive SWOT analysis for India regarding its gender-responsive climate policy, action and adaptation capabilities has been prepared below:

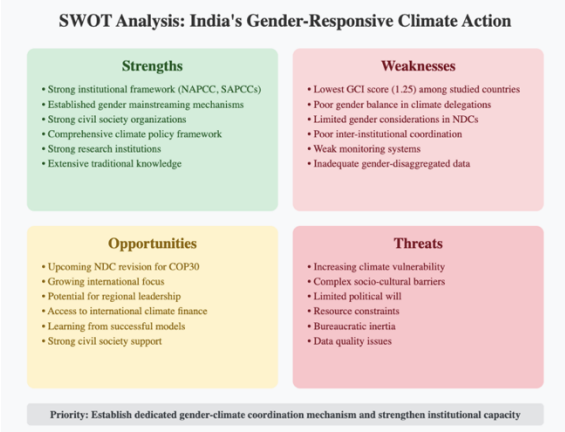

Fig 9.1 SWOT Analysis

Way Forward for India

To address these systemic gaps, this study proposes a multi-tiered policy framework that prioritizes gender integration in climate governance, finance, and adaptation planning. **First, India must institutionalize a gender-responsive climate policy architecture** by embedding gender equity principles within the NAPCC, SAPCCs, and sectoral climate policies. This includes mandating gender impact assessments in all climate-related projects and establishing legal and regulatory mechanisms to ensure compliance with gender mandates under the UNFCCC framework. Additionally, climate policies should explicitly recognize the differential vulnerabilities faced by women and integrate targeted adaptation and mitigation measures that address these challenges. **Second, climate finance mechanisms must be restructured to enhance women's access to funding, technology, and capacity-building resources.** A gender-responsive climate finance framework should be developed to ensure that financial instruments, including green bonds, carbon markets, and adaptation funds, allocate a specific percentage of funding to women-led initiatives. Furthermore, gender budgeting should be adopted at both national and state levels to ensure equitable resource distribution. The implementation of gender-responsive climate finance models, as seen in Morocco and Mexico, provides a viable pathway for India to integrate financial inclusivity into its climate action strategy.

Third, women's representation in climate governance must be strengthened through institutionalized participatory mechanisms. This requires introducing gender quotas in climate-related policymaking bodies, ensuring female representation in local climate councils, and developing leadership programs to train women in climate governance. In parallel, traditional knowledge systems and community-based adaptation practices must be recognized and integrated into formal climate strategies. Indigenous women, in particular, possess valuable

knowledge of ecosystem conservation, agroecological practices, and water resource management, yet their contributions are often overlooked in mainstream policymaking. Incorporating their expertise into national and state-level adaptation frameworks would enhance the effectiveness of localized climate resilience strategies.

Fourth, India must adopt a robust gender-sensitive monitoring and evaluation framework to track progress in gender integration within climate policies. This study's proposed Gender & Climate Index (GCI) provides a structured mechanism for assessing policy performance and identifying gaps in gender responsiveness. Implementing such an index at a national level would facilitate evidence-based policymaking, enhance accountability, and ensure that gender considerations are not merely rhetorical but actively integrated into climate action. Additionally, conducting regular gender audits of climate projects and establishing a central database for gender-disaggregated climate data would enable policymakers to refine and recalibrate strategies based on empirical evidence.

Based on the research findings and best practices observed across countries, the following roadmap is proposed for India:

Immediate Actions (1-2 years)

1. *Institutional Strengthening*

- Establish a dedicated Gender-Climate Cell within MoEFCC
- Appoint and empower gender focal points across relevant ministries
- Create inter-ministerial coordination mechanism

2. *Policy Enhancement*

- Develop comprehensive Climate Change Gender Action Plan (ccGAP)
- Integrate gender considerations in NDC update
- Institute gender-responsive climate budgeting

3. *Capacity Development*

- Train government officials at all levels
- Build capacity of local institutions
- Enhance stakeholder engagement mechanisms

Medium-term Actions (2-5 years)

1. *Implementation Framework*

- Develop detailed implementation guidelines
- Create monitoring and evaluation framework
- Establish gender-responsive climate finance mechanisms

2. *Data Systems*

- Institute gender-disaggregated data collection
- Develop gender-responsive indicators
- Create knowledge management systems

3. *Stakeholder Engagement*

- Strengthen participation of women's organizations
- Enhance role of civil society
- Build public-private partnerships

Long-term Strategic Goals (5+ years)

1. *Policy Integration*

- Mainstream gender across all climate policies
- Align with sustainable development goals
- Develop sector-specific gender strategies

2. *Knowledge Building*

- Establish research programs
- Document best practices
- Build evidence base for interventions

3. *Sustainable Systems*

- Create sustainable financing mechanisms
- Build institutional memory
- Develop continuous improvement processes

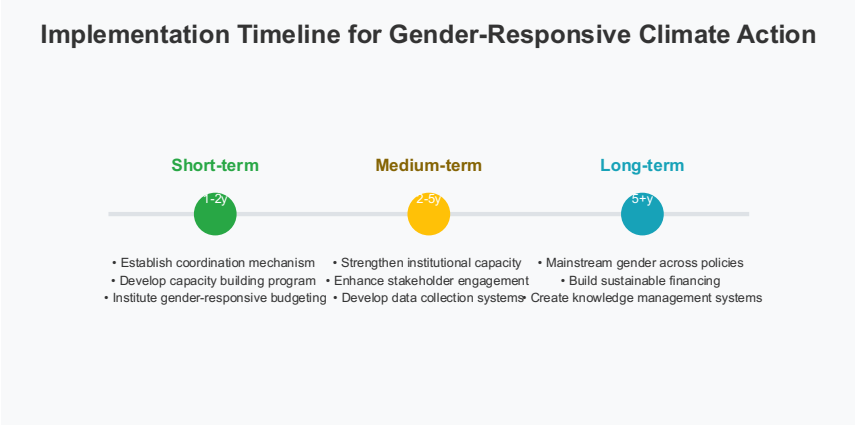

Figure 9.2 Implementation Timelines for Gender Responsive Climate Action

While India currently lags in gender-responsive climate action, the experiences of better-performing countries provide valuable lessons for improvement. The research demonstrates that with targeted interventions and political will, significant progress is possible. The proposed roadmap provides a structured approach to enhancing gender responsiveness in India's climate policies and actions.

Success will require sustained commitment, adequate resources, and effective coordination across stakeholders. By implementing these recommendations, India can strengthen its gender-responsive climate action, ultimately contributing to both climate resilience and gender equality objectives.

The path forward requires immediate action on institutional strengthening and policy enhancement, while building toward comprehensive integration of gender considerations in all climate-related decisions and actions. This approach will not only benefit women but will enhance the effectiveness and sustainability of India's overall climate response.

As India prepares to update its NDCs for COP30 in Brazil, it has a unique opportunity to lead global discourse on gender-equitable climate action. The transition toward a low-carbon and climate-resilient economy cannot be achieved without addressing the gendered dimensions of climate vulnerability and ensuring the equitable distribution of climate benefits. The integration of gender considerations in climate action is not merely a matter of social justice—it is a strategic necessity for enhancing policy effectiveness, resilience, and sustainability. The failure to institutionalize gender-responsive approaches in climate governance risks perpetuating existing inequalities and undermining the long-term success of India’s climate strategies. Conversely, a proactive approach to gender equity in climate policy can yield transformative outcomes, ensuring that India’s climate transition is inclusive, just, and sustainable.

This study underscores that a gender-responsive climate action framework is both an ethical imperative and an operational necessity for India. By adopting the proposed policy interventions—ranging from regulatory reforms and institutional capacity-building to financial inclusion and participatory governance—India can establish itself as a global leader in gender-equitable climate governance. The findings of this research aim to provide a comprehensive roadmap for integrating gender considerations into India's climate policies, ultimately ensuring that the country's climate resilience efforts are inclusive, effective, and aligned with global best practices. As climate action moves to the forefront of policy discourse, ensuring that women are not only protected from climate risks but actively empowered as agents of change will be central to achieving a sustainable and equitable future.

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ANNEXURE - A

GENDER-RESPONSIVE CLIMATE ACTION IN INDIA

EXPERT SURVEY QUESTIONNAIRE

Survey Information

- Purpose: To assess the current state and gather expert recommendations for gender-responsive climate action in India

- Target Respondents: Climate policy experts, gender specialists, academics, NGO leaders, and government officials

- Estimated Time: 20-25 minutes

Section 1: Respondent Information

1. **Professional Background (Select one)**:

□ Government/Policy maker

□ Academic/Researcher

□ NGO/Civil Society

□ International Organization

□ Private Sector

□ Other (please specify): _____

2. **Years of Experience in Climate/Gender field**:

□ 0-5 years

□ 6-10 years

□ 11-15 years

□ More than 15 years

3. **Primary Area of Expertise**:

□ Climate Policy

□ Gender Studies

□ Environmental Science

□ Social Development

□ Other (please specify): _____

Section 2: Assessment of Current Status

Please rate your agreement with the following statements on a scale of 1-5:

(1: Strongly Disagree, 2: Disagree, 3: Neutral, 4: Agree, 5: Strongly Agree)

A. **Data and Information Systems**

4. Current systems for collecting gender-disaggregated data on climate impacts are adequate.

□ 1 □ 2 □ 3 □ 4 □ 5

5. Existing research on gender-climate intersections in India is sufficient.

□ 1 □ 2 □ 3 □ 4 □ 5

6. Information about climate change is accessible to women at grassroots level.

□ 1 □ 2 □ 3 □ 4 □ 5

B. Institutional Framework

7. Current institutional mechanisms for gender-responsive climate action are effective.

□ 1 □ 2 □ 3 □ 4 □ 5

8. There is adequate coordination between gender and climate institutions.

□ 1 □ 2 □ 3 □ 4 □ 5

9. Gender focal points in climate institutions have sufficient authority and resources.

□ 1 □ 2 □ 3 □ 4 □ 5

C. Policy Integration

10. India's NDCs adequately integrate gender considerations.

□ 1 □ 2 □ 3 □ 4 □ 5

11. State Action Plans on Climate Change effectively address gender issues.

□ 1 □ 2 □ 3 □ 4 □ 5

12. Local climate adaptation plans are gender-responsive.

□ 1 □ 2 □ 3 □ 4 □ 5

Section 3: Implementation Assessment

D. Capacity Building

13. Rate the effectiveness of current capacity building efforts for:

a) Government officials

□ Very Poor □ Poor □ Average □ Good □ Excellent

b) Local institutions

□ Very Poor □ Poor □ Average □ Good □ Excellent

c) Women's groups

□ Very Poor □ Poor □ Average □ Good □ Excellent

E. Financial Mechanisms

14. Current climate finance allocation is gender-responsive.

□ 1 □ 2 □ 3 □ 4 □ 5

15. Women have adequate access to climate finance.

□ 1 □ 2 □ 3 □ 4 □ 5

16. Gender budgeting in climate projects is effectively implemented.

□ 1 □ 2 □ 3 □ 4 □ 5

Section 4: Priority Areas

17. Rank the following priorities for strengthening gender-responsive climate action (1 being highest priority):

___ Institutional strengthening

___ Capacity building

___ Policy integration

___ Financial mechanisms

___ Data collection and monitoring

___ Local implementation

___ Research and knowledge management

___ International cooperation

Section 5: Recommendations

18. What are the three most critical barriers to gender-responsive climate action in India?

1. _____

2. _____

3. _____

19. Please provide specific recommendations for:

a) Improving institutional mechanisms:

_____

_____

b) Enhancing policy integration:

_____

_____

c) Strengthening implementation:

_____

_____

20. What best practices from other countries could be adapted for India?

_____

_____

Section 6: Additional Comments

21. Please provide any additional comments or suggestions:

_____

_____

_____

Thank you for your valuable input.

Contact Information (optional):

Name: _____

Organisation: _____

Email: _____

For Office Use Only:

Survey ID: _____Date Received: _____

Processed by: _____

ANNEXURE B - EXPERT SURVEY RESPONSE ANALYSIS

Survey Overview

- **Total Respondents:** 55
- **Professional Breakdown:**
    - Government/Policymakers: 15
    - NGO/Civil Society Representatives: 12
    - Academicians/Researchers: 10
    - Private Sector Representatives: 8
    - Students/Young Professionals: 10
- **Years of Experience in Climate & Gender Fields:**
    - 0–5 years: 20 respondents
    - 6–10 years: 15 respondents
    - 11–15 years: 10 respondents
    - More than 15 years: 10 respondents
- **Primary Areas of Expertise:**
    - Climate Policy: 40%
    - Gender Studies: 25%
    - Environmental Science: 15%
    - Social Development: 20%

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1. Assessment of Current Status

1.1 Gender-Disaggregated Data and Knowledge Gaps

- **70% of respondents disagreed** that **current systems for collecting gender-disaggregated climate data** are adequate.

- **62% of experts rated existing research on gender-climate intersections in India as insufficient**, citing a lack of localized, region-specific studies.
- **57% strongly disagreed** that climate change information is accessible to women at the grassroots level.

1.2 Institutional Framework & Gender Integration in Climate Governance

- **Institutional effectiveness in gender-responsive climate action:**
    - 18%: Effective
    - 35%: Neutral
    - 47%: Ineffective
- **Adequacy of coordination between gender and climate institutions:**
    - 14%: Adequate
    - 30%: Somewhat adequate
    - 56%: Inadequate
- **Authority and resources of gender focal points in climate institutions:**
    - 65% of respondents stated that gender focal points **lack decision-making authority** and adequate resources.

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2. Policy and Implementation Gaps

2.1 Gender Integration in Climate Policies (NDCs, NAPCC, SAPCCs)

- **India's NDCs adequately integrate gender considerations:**
    - 10%: Strongly agree
    - 24%: Agree
    - 42%: Neutral
    - 24%: Disagree

- **Effectiveness of gender mainstreaming in SAPCCs:**
    - 18%: Effective
    - 40%: Neutral
    - 42%: Ineffective

2.2 Gender-Responsive Climate Finance

- **Current climate finance allocation is gender-responsive:**
    - 12%: Strongly agree
    - 20%: Agree
    - 38%: Neutral
    - 30%: Disagree
- **Women have adequate access to climate finance:**
    - 8%: Strongly agree
    - 18%: Agree
    - 34%: Neutral
    - 40%: Disagree

2.3 Effectiveness of Capacity Building for Gender-Responsive Climate Action

- **Capacity-building efforts for government officials:**
    - 10%: Excellent
    - 22%: Good
    - 38%: Average
    - 30%: Poor
- **Capacity-building for local institutions:**
    - 8%: Excellent

- 24%: Good
- 36%: Average
- 32%: Poor

- **Capacity-building for women's groups:**
  - 6%: Excellent
  - 20%: Good
  - 42%: Average
  - 32%: Poor

---

3. Priority Areas for Gender-Responsive Climate Action

Ranked Priorities for Policy Focus (Average Ranking Across Respondents, 1 = Highest Priority)

1. **Institutional Strengthening** (1.8)
2. **Financial Mechanisms** (2.1)
3. **Policy Integration** (2.5)
4. **Capacity Building** (2.8)
5. **Local Implementation** (3.1)
6. **Data Collection and Monitoring** (3.5)
7. **Research and Knowledge Management** (3.7)
8. **International Cooperation** (4.2)