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## The impact of climate change mitigation on gender equality

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International Studies

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CEI-Iscte – Centre for International Studies

October, 2024



SOCIOLOGIA  
E POLÍTICAS PÚBLICAS

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Department of History

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## RESUMO

As políticas de mitigação das mudanças climáticas ignoram frequentemente a forma como os desafios ambientais se cruzam com as desigualdades sociais, em particular as de género. Ao abordar a questão de investigação “Como é que as políticas de mitigação das mudanças climáticas afectam a desigualdade de género”, esta tese examina criticamente o “Programa de Ação Climática 2023” da Alemanha (CAP23), centrando-se no seu impacto na igualdade de género e em factores sociais interseccionais. Utilizando um quadro de Ecologia Política Feminista (FPE) interseccional, a análise explora quatro áreas principais: acesso a recursos, re/produtividade, produção de conhecimento e relações de poder entre géneros. As conclusões revelam que o programa para o clima, em direção à transição socialmente justa, não aborda adequadamente as dinâmicas de género e de poder profundamente enraizadas, reforçando, em última análise, os quadros dominados pelos homens no âmbito da governação climática. Esta tese defende que uma política climática sustentável e eficaz deve ir além das soluções baseadas no mercado, incluindo um financiamento justo em termos de género, o reconhecimento do trabalho reprodutivo não remunerado e a integração de diversos sistemas de conhecimento. Ao fazê-lo, o estudo sublinha que a justiça de género não só é essencial para a equidade, como também é fundamental para alcançar uma sustentabilidade ambiental abrangente.

**Palavras-chave:** Mitigação das Mudanças Climáticas, Igualdade de Género, Ecologia Política Feminista, Política Climática, Alemanha

## ABSTRACT

Climate change mitigation policies often overlook how environmental challenges intersect with social inequalities, particularly gender. By addressing the research question, "How do climate change mitigation policies impact gender inequality, this thesis critically examines Germany's "2023 Climate Action Programme" (CAP23), focusing on its impact on gender equality and intersecting social factors. Using an intersectional Feminist Political Ecology (FPE) framework, the analysis explores four core areas: resource access, re/productivity, knowledge production, and gendered power relations. The findings reveal that the climate program, while making strides toward socially just transitions, does not adequately address deeply ingrained gender and power dynamics, ultimately reinforcing male-dominated frameworks within climate governance. This thesis argues that sustainable and effective climate policy must go beyond market-based solutions, including gender-just financing, acknowledgment of unpaid reproductive labor, and integration of diverse knowledge systems. In doing so, the study underscores that gender justice is not only essential for equity but is also central to achieving comprehensive environmental sustainability.

**Keywords:** Climate Change Mitigation, Gender Equality, Feminist Political Ecology, Climate Policy, Germany

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# Introduction

Climate change impacts the world in complex and unequal ways, with consequences distributed unevenly across societal groups. Environmental degradation and policies to mitigate its effects impose varied burdens, particularly concerning gender, race, class, and socio-economic status. This intersection, often referred to as the “gender-environment nexus,” reveals how climate policies and environmental harm disproportionately affect women, especially those from marginalized communities, exposing entrenched inequalities and overlooked vulnerabilities (Calléja, 2022, p. 58-59).

Historically, however, climate change has been considered gender neutral. Yet, in recent years, international climate policy has increasingly recognized the importance of gender perspectives in climate policy. The United Nations climate negotiations have integrated gender and climate as regular agenda items, promoting gender-responsive approaches and advancing mandates on gender parity, women in leadership, and implementing knowledge exchange, monitoring, and reporting systems (Röhr, 2018, p.113). These frameworks underscore the need for gender considerations to achieve climate justice worldwide, particularly relevant to industrialized nations.

While many countries in the Global North have been slow to incorporate gender and other social factors into their climate strategies, often overlooking crucial dimensions (Magnusdottir & Kronsell, 2023, p. 361), Germany’s climate policy has begun to acknowledge gender-differentiated impacts at both national and local levels (Röhr, 2018, p.113). However, feminist critiques of mainstream climate action argue that climate change mitigation is frequently framed as a purely technical challenge, focusing on technological solutions that reflect a traditionally masculine perspective (MacGregor, 2010, p. 113). While crucial to the process of climate mitigation, such approaches frequently adopt a gender-blind stance, neglecting the socio-political structures that perpetuate systems of inequality and exclusion (Wilson & Chu, p. 2).

Building on this background, Germany’s advanced climate agenda presents a timely opportunity to examine how its climate policies address or perhaps perpetuate gender inequalities. Therefore, this thesis poses the question: How do climate change mitigation measures impact gender equality?

By analyzing the Federal Governments “2023 Climate Action Programme” through a Feminist Political Ecology perspective, this work seeks to provide insights into the socio-economic implications of climate action for gender equality and to determine whether Germany’s climate policies address or inadvertently reinforce gender inequalities. This study offers a critical perspective for the Global North, where gender-responsive climate policies are often underdeveloped. By highlighting the importance of integrating gender perspectives into climate governance, this thesis argues that sustainable climate action must promote equitable benefits for all citizens. As Germany advances toward climate goals, these findings aim to support a fairer, more inclusive approach to policymaking.



This thesis is structured to guide the reader through a comprehensive analysis of gender dynamics in climate policy. Chapter 1 introduces key concepts and theoretical foundations, establishing Feminist Political Ecology (FPE) as the analytical framework. Chapter 2's literature review on the gender-environment nexus examines how gender intersects with climate issues in energy, transportation, and agriculture, highlighting systemic barriers and the need for gendered policies. Chapter 3 provides an overview of Germany's climate policy landscape and institutional context, examining how gender equality considerations are integrated across relevant ministries and policies. Chapter 4 details the research design, a mixed-methods approach that combines quantitative gender-disaggregated data with qualitative content analysis of the CAP23. This chapter also introduces the FPE framework, which was used to analyze gendered impacts across both data sources. Chapter 5 presents the analysis, applying the framework to assess CAP23's impacts on gender equality. Finally, Chapter 6 synthesizes the findings, reflecting on the gendered effects of Germany's climate policies and suggesting pathways for more inclusive, equitable climate action.

## **Chapter 1: Theories of Gender, Power, and the Environment**

This chapter establishes the foundational concepts and theoretical frameworks essential to analyzing gender dynamics in climate policy. It begins by defining and contextualizing key terms, such as gender and gender equality, and introduces androcentrism for understanding the systemic prioritization of male perspectives in society and policy. This initial conceptualization offers a lens for examining how gender shapes access to resources, responsibilities, and decision-making in environmental contexts.

The chapter then moves into exploring how feminist theoretical developments, including ecofeminism, materialist feminism, queer theories, and poststructuralism, have contributed to Feminist Political Ecology (FPE), the primary analytical framework of this thesis.

Finally, the chapter concludes with a look at intersectionality, broadening the FPE approach to consider how overlapping identities shape individuals' experiences of environmental policies. Together, these foundational theories and concepts create a comprehensive framework for analyzing how climate policies in Germany impact diverse populations.

### **1.1 Conceptualizing Gender**

#### **Gender**

It is essential to distinguish between the concepts of sex and gender from the outset. While *sex* is typically assigned at birth based on physical characteristics, such as genitals, *gender* refers to the complex interplay between an individual's body, gender identity, and societal roles and expectations. Gender is not limited to a binary framework (male-female) but is fluid and can evolve over time, shaped by context and culture (WECF, 2021, p.17).

The European Institute for Gender Equality further defines gender as the “social attributes and opportunities associated with being female and male and to the relationships between women and men and girls and boys, as well as the relations between women and those between men” (EIGE). These attributes, opportunities, and relationships are socially constructed, shaped by socialization processes, and specific to various contexts and time periods. Gender thus dictates societal expectations, norms, and values for women and men within specific settings. Gender operates within a larger sociocultural framework, intersecting with class, race, poverty, ethnicity, and age. These assumptions often place women at a disadvantage, limiting their substantive rights, such as the ability to act independently and participate equally in social, economic, and political life (ibid).

Feminist research and gender studies view gender as a structural category that organizes people within hierarchies shaped by gender relations (Spitzner et al., 2020, p. 48). Social norms further reinforce these hierarchies, positioning the “white, heterosexual, middle-class man” as the “neutral and objective” standard. This notion of the male as the ‘neutral’ standard is known as androcentrism and confronts all genders with this ‘normality’ in their actions (ibid.).

### **Androcentrism**

Androcentrism describes the tendency to prioritize men as the default or “neutral” standard, while women are viewed as gender-specific. For instance, androcentrism is evident in many languages that use terms like “man” or “mankind” to refer to all people. This form of gender bias differs from overt sexism or beliefs in male superiority (Bailey et al., 2020, p. 1). The equation of “human” with “man” and masculinity with “normality” remains largely unchallenged across various fields, institutions, and policy areas, even as they claim ‘scientific objectivity’ and ‘universal applicability.’ Androcentrism, therefore, subtly reinforces gender hierarchies by presenting male-centered perspectives as neutral or universal truths. This bias is often so deeply internalized that it becomes a self-evident norm, distorting perceptions and making it difficult to recognize the lack of true gender neutrality in what is assumed to be an objective viewpoint (Spitzner et al., 2020, p. 50).

### **Gender equality**

The EIGE defines gender equality as equal rights, opportunities, and responsibilities for women, men, girls, and boys (EIGE). This does not imply that women and men will become the same, but their rights and opportunities should not be determined by gender. Achieving gender equality requires addressing the interests, needs, and priorities of both women and men acknowledging the diversity within these groups. It is not exclusively a women's issue; men must be equally engaged. Gender equality is viewed as a human rights issue and a vital prerequisite for and indicator of sustainable, people-centered development (ibid.).

While this definition aligns closely with the focus of this thesis, especially in recognizing gender equality as a key measure for sustainable development, this work intends to expand it by moving beyond "the diversity of different groups of women and men" (EIGE). In line with the previously mentioned definition of gender, the thesis adopts a more inclusive perspective that considers the broader spectrum of gender identities beyond the binary understanding of women and men. This approach recognizes that gender is not limited to these categories and that true equality must account for the diverse experiences and needs of all gender identities.

### **Beyond Binary**

As this thesis focuses on gender equality, it is important to clarify that, while "women" is often referenced as a collective term, this is primarily due to limitations in gender-disaggregated data and the literature's predominant focus on binary gender categories. However, this work does not imply that all women share the same experiences. Although this focus reflects the constraints of available data, throughout the analysis, findings, and conclusions, any reference to "gender" goes beyond "women," and any reference to "women" is intended to include women in all their diversity. This thesis advocates for the inclusion of all marginalized groups in climate policy, promoting a more inclusive society.

Furthermore, in engaging with queer theory and intersectionality, it is essential to recognize that these frameworks originated in activist movements challenging binary and dominant narratives. This thesis does not claim to represent the perspectives of those directly affected by these issues. Instead, it seeks to amplify the insights of these frameworks, contributing to a gender-just approach that respects the rights and unique experiences of all marginalized groups.

## **1.2 Theoretical Background**

Ideas about gender and sex have evolved across different cultures and historical periods. In Western thought, biological essentialism once dominated as the explanation for gender and sex. However, in the 20th century, feminist scholars began distinguishing between sex (as the biological body) and gender (as socially constructed roles and behaviors related to, but not defined by, the body). While this was a significant breakthrough for that time, poststructuralist and queer theorists later challenged essentialist associations between women and nature and questioned rigid binaries (Fletcher, 2018, p. 8). Amid these theoretical developments, ecofeminism established links between the exploitation of women and nature, critiquing patriarchal and colonial systems that subjugate both. Building on ecofeminist insights, Feminist Political Ecology (FPE) emerged, offering a nuanced analysis of gendered power dynamics in relation to ecological resources (Bauhardt, 2019). This section traces several theoretical developments concerning gender, power, and environmental exploitation, leading to FPE, the theoretical basis for this work's analysis.

### 1.2.1 The Ecofeminist Evolution

Françoise d'Eaubonne first coined the term "ecofeminism" in the early 1970s, emphasizing the need for a movement to protect both nature and women (Öztürk, 2020, p.707). The historical foundation from which ecofeminism emerged is rooted in the French feminist movement of the latter half of the 20th century (Valera, 2018, p.11). In the mid-20th century, Simone de Beauvoir emphasized that, under the patriarchal system, women and nature are linked, both being perceived as the 'Other' in contrast to men.

It is male activity that, in creating values, has made of existence itself a value; this activity has prevailed over the confused forces of life; it has subdued Nature and Woman. We must now see how this situation has been perpetuated and how it has evolved through the ages. What place has humanity made for this portion of itself, which, while included within it, is defined as the Other? What rights have been conceded to it? How have men defined it? (de Beauvoir 1956, 98)

Ecofeminism, by emphasizing the Self-Other relationship, where the 'self' dominates and oppresses the 'other', challenges the binary categories that form the foundation of Western philosophy, colonialism, and patriarchy. The theory argues that white Western patriarchal societies create a male-centered culture that imposes social hierarchies and dualities, elevating men above others and marginalizing non-male others. For instance, dualities such as men/women, white/black, culture/nature, strong/weak, soul/body, and mind/emotion are used to reinforce hierarchies in these societies, contributing to an unequal social order and fostering relationships of superiority and inferiority. Therefore, the hierarchical orders that generalize binary concepts enable men to be "the primary sex" while making women "the second sex." (Öztürk, 2020, p. 707).

Similarly, this order also causes culture to overpower nature. The nature-culture dichotomy and the hierarchy between both have been historically intertwined with the binary and hierarchical gender order. Women, due to their reproductive potential, have been perceived as closer to nature, while men are considered more aligned with culture. Since the European Enlightenment, men have been seen as more distanced from nature and, therefore, more connected to culture. This symbolic order, which juxtaposes masculinity with femininity and culture with nature, has become deeply ingrained in Western thought. It legitimizes domination, forming the foundation for developing capitalism in Europe and colonialism (Bauhardt, 2019, p. 5-6).

Since its origin, ecofeminism has been considered in various contexts and expanded upon, encompassing multiple currents of thought that explore the relationship between humans and nature from a feminist perspective. Certain branches of ecofeminism idealize women's perceived connection to nature and use this to support ecological and feminist perspectives (WECF, 2021, p.19). Scholars like Vandana Shiva (1988) argued that women possess an inherent affinity with nature based on their biological roles as nurturers and caregivers (Shiva, 1988, cited in Nightingale, 2006, p. 4). In her book "Staying Alive: Women, Ecology and Development", Shiva suggests that women's environmental

knowledge could transcend cultural divides and foster global unity, as women naturally protect nature. This essentialist framework portrayed women's closeness to nature as endowing them with a unique understanding of environmental issues, positioning their environmental engagement as a natural extension of their societal roles (ibid.). Women are often seen as more involved in life creation and caregiving due to their potential to bear children, which makes them more directly impacted by environmental degradation. Their responsibility for social reproduction increases their vulnerability to ecological issues, adding unpaid labor and emotional strain. This caregiving role is also linked to women's ecological expertise, leading to an ethics of environmental care. However, this perspective sometimes overlooks the systemic causes of exploitation, such as capitalism and male-dominated power structures, and the connection between women and nature remains controversial in feminist debates (Bauhardt, 2019). As such, ecofeminist approaches have been criticized for promoting an essentialist view of gender. Linking women to nature and men to culture perpetuated a dualistic, oversimplified view of gender relations and environmental issues. Essentialist ecofeminism therefore risks portraying women as inherently emotional and nurturing while ignoring the diversity of women's experiences and their roles in broader social structures (Fletcher, 2018, p. 4).

Materialist feminism emerged as a response to these essentialist views, offering a more nuanced analysis of the relationship between women and the environment. Rather than focusing on biological or spiritual connections, materialist feminism centered on material realities and labor conditions that shape women's environmental involvement. For example, Bina Agarwal (1992) demonstrated that women's engagement with environmental issues stems not from an inherent connection to nature but from their daily labor and survival needs. Her study of women's fuelwood collection in the Himalayas emphasized that ecological knowledge is developed through practical experiences shaped by gender roles, economic structures, and material practices (Agarwal, 1994, cited in Nightingale, 2006). Although materialist feminists have made significant strides in acknowledging women's experiences of oppression, they are often criticized for focusing too heavily on structural factors. By emphasizing relatively stable systems of material power, such as gender and economic structures, this approach can risk creating a universalizing narrative that portrays women primarily as victims of these systems (Fletcher, 2018, p. 5).

Building on the challenges raised by materialist feminism, the dual dichotomy of sex as physical and gender as social has been significantly challenged by more recent poststructuralist and queer theories on gender (Fletcher, 2018, p.3). Ecofeminism has faced criticism for concentrating solely on "nature" and "women," partly because of its roots in second-wave feminism, which has been criticized for its limited focus on cisgender, heterosexual, white women (WECF, 2021, p.19). In contrast to materialist feminism, poststructuralist perspectives reject the search for the origins of gender and gender-based inequality (Fletcher, 2018, p.6) and have produced unease in feminist debates around questions of

nature, the nature of sex and any analogy between the re/productivity<sup>1</sup> of nature and the re/productivity of the female body (Bauhardt, 2019, p.32). Feminist poststructuralists focus on language and representation, exploring the relationship between discourse, power, gender, and subjectivity. Through deconstruction, they challenge fixed meanings, stable histories, and binary thinking to reveal the power relations that shape representation and construct gendered subjectivity (Fletcher, 2018, p.6).

Building on the theoretical foundations laid by earlier ecofeminists, Greta Gaard introduced the term "queer ecofeminism," arguing for the liberation of all oppressed groups in alignment with the environmental movement, with a particular focus on the historical oppression of queer groups (Gaard, 1997, p. 117). Gaard's analysis highlights how the Self-Other relationship in Western philosophy has often centered on the straight "self" oppressing the queer "other." Furthermore, individuals outside the gender binary face additional oppression, as the binary concept of "men" and "women" is a Western construct that was reinforced under colonialism. She argues that gender itself is a system built on perceived differences, and the assumed natural connection between certain genders and bodies must be deconstructed (ibid.). Breaking down this binary understanding of gender is linked to the environmental movement, as both challenge the same oppressive structures (WECF, 2021, p.21). Gaard (2017) has furthered her work on queer ecofeminism by adopting and advancing the term "critical ecofeminism," initially developed by Val Plumwood, an influential scholar in the field of ecofeminism. Critical ecofeminism draws from lessons on gender and racial essentialism while incorporating contemporary perspectives from economic, posthumanist, and postcolonial analysis. It offers crucial critiques and insights into environmental justice and sustainability studies, engaging with queer ecologies and recognizing the ecofeminist roots of critical animal studies (Gaard, 2017, p. xxiii).

LGBTIQ and Black, Indigenous, and People of Color (BIPOC) activists have further expanded the narrow conceptions of essentialist ecofeminism by applying an intersectional approach. For ecofeminism to be truly effective, it must embrace intersectionality and move beyond binary frameworks (WECF, 2021, p. 19).

Asmae Ourkiya makes a powerful statement:

Sexism, racism, homophobia, and transphobia are systemic forms of oppression that shape our relationships with each other by designing a hierarchical pyramid. If you are a white, cisgender, straight male there is a high chance you are on top of that pyramid. This pyramid defines a person's rights, freedom of movement, and access to resources. This translates into how natural spaces are accessed and exploited. (Ourkiya, 2020)

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<sup>1</sup> To bridge the conceptual divide between the so-called productive sphere (the market economy) and the reproductive sphere (private households), the term re/productivity was introduced. This concept unites these two artificially separated realms, highlighting their interdependence (Bauhardt, 2019, p. 20).

Since ecofeminism aims to dismantle the binary Self-Other relationships within hierarchical structures, only by adopting an intersectional approach that considers the experiences of all oppressed "others" can we fully grasp the patriarchal and colonial systems of oppression that fuel inequality and obstruct a green transition (WECF, 2021, p.19).

Despite valid criticisms, ecofeminism is defensible for its sharp critique of capitalism, as it highlights the exploitation of both nature and women's labor, treating them as natural resources. Like Marxist critiques, ecofeminism examines social reproduction and care as forms of exploitation and appropriation of women's labor (Bauhardt, 2019, p. 24). In the 1960s and 70s, materialist feminists expanded on Marxist theory to address women's inequality under capitalism by focusing on the distinction between sex and gender (Fletcher, 2018, p.4). They examined gender roles within households and their broader economic significance, particularly around whether unpaid domestic labor could be considered "productive" under capitalism. The concept of "social reproduction," a concept that remains relevant in feminist political economy, though it is now applied at scales far beyond the household, became central and explains how domestic work not only sustains labor but also maintains political and economic systems. Materialist feminists argued that political-economic conditions, not biology, shape gender and that women's oppression is linked to the division of labor. Social reproduction, extended to gendered work and the environment, highlights how environmental resources are used, and environmental knowledge is passed down across generations. While environmental degradation affects reproductive activities, social reproduction could also foster a recognition of the need for environmental protection (ibid.).

However, the accusation of essentialism, a view that attributes fixed traits to women, remains a significant criticism. The idea that women are inherently closer to nature stems from patriarchal beliefs that women are less rational, overly emotional, and subject to nature's whims. By incorporating queer ecologies, we can deconstruct the connections between nature, heterosexuality, reproduction, and care. This feminist environmental approach allows for recognizing social reproduction beyond heteronormative ideas of motherhood and family structures. Queer ecologies enable a broader understanding of care, emotionality, and responsibility for both human and non-human life without tying these qualities solely to the female body. In both ecofeminism and queer ecologies, social reproduction is not inherently or "naturally" a woman's role but is understood as a form of labor, exploitation, and a source for forming connections with the material basis of life (Bauhardt, 2019, p. 32).

Given the variety of ecofeminist perspectives, the shift from essentialist to materialist views, combined with the influence of poststructuralist theories, laid the groundwork for developing Feminist Political Ecology (FPE). FPE builds on both materialist feminism's focus on labor and structural power and poststructuralist critiques of fixed identities, thereby addressing the limitations of essentialist frameworks. By expanding these perspectives, FPE explores how political economy, gender, and class determine access to environmental resources and knowledge, offering a deeper and more holistic understanding of the relationships between gender, environment, and power (Fletcher, 2018, p. 5). In

the following chapter, FPE will be presented in more detail, tracing its emergence in the 1990s and its application to environmental issues.

### **1.2.2 Feminist Political Ecology**

Feminist Political Ecology emerged in the 1990s as a framework that applies a gendered lens to environmental issues, analyzing how material conditions and ideological factors shape power dynamics, resource access, and environmental knowledge. It is a subfield that merges feminist theory with political ecology, an analytical approach that argues ecological issues must be examined in the context of political economy and vice versa (Fletcher, 2018, p. 8). Through integrating political-economic perspectives with feminist insights, FPE explores how inequalities are reinforced through value dualisms such as productive versus reproductive labor and public versus private spheres (Yeigh, 2024). In this context, the term re/productivity is beneficial for an FPE framework, as it highlights how the so-called reproductive spheres of nature and female labor are, in fact, foundational to the so-called productive sphere. By merging these artificially separated realms, re/productivity underscores their mutual interdependence (Bauhardt, 2019, p. 20).

Feminist political ecologists contend that gender, alongside other axes of power, such as class and race, plays a critical role in determining access to and control over natural resources. By doing so, FPE shows how social identities are shaped through interactions with nature and material practices in everyday life (Sundberg, 2015). Furthermore, FPE incorporates ideas from both ecofeminism and queer ecologies. Ecofeminism critiques capitalism as an intersectional system involving race, class, patriarchy, and environmental exploitation, offering a dual critique of both capitalism and patriarchy by linking the domination of nature with the oppression of women. It addresses ecological, economic, and feminist issues, focusing on the relationship between women and nature. In doing so, ecofeminism highlights how women and the environment are marginalized and undervalued in Western capitalist systems (Bauhardt, 2019, p. 23). FPE builds on this by unpacking how cultural and economic power dynamics affect natural resource use, access, and control. From this standpoint, political agendas based on human rights and gender perspectives go beyond simply incorporating these concepts. They require a critical engagement with these agendas, challenging the dominant views that prioritize production and growth (Agostino, 2019, p. 278). Queer ecologies add to this framework by introducing poststructuralist perspectives, emphasizing the role of language in shaping social and cultural realities (Bauhardt, 2019, p. 32).

FPE also addresses the connections between ecology, economy, and society, the cultural and knowledge-based influences on sustainable practices, and the production of knowledge about nature, noting how dominant perspectives may render some knowledge irrelevant, constituting epistemic violence (Agostino, 2019, p.278). It has been shaped by feminist critiques of science and epistemology, which argue that patriarchal norms influence who is recognized as a knowledge producer, what qualifies



as knowledge, and how it is generated. Conventional scientific practices often marginalize women and other disadvantaged groups, rendering their experiences invisible and calling into question the notion of objectivity. Instead of viewing objectivity as a detached, neutral stance, it emphasizes how knowledge production is influenced by social and geopolitical contexts (Sunberg, 2015). Additionally, it emphasizes women's role as political actors who contribute valuable knowledge, foster creative and sustainable interactions with nature, and challenge power relations that perpetuate gender inequalities in environmental decision-making. It advocates for a holistic approach to human-nature relationships, prioritizing subsistence and sufficiency (Agostino, 2019, p.278).

FPE, therefore, bridges traditionally separate sectors, academia, policymaking, and activism, by connecting theory with practice (Sundberg, 2015). It raises critical questions about who is recognized as an environmental actor and how ecological knowledge is constituted. By linking personal experiences to broader political issues, FPE critiques the exclusion of marginalized groups and develops alternative frameworks that account for their roles and experiences. This approach has significantly contributed to political ecology, environmental studies, and gender studies by offering a deeper understanding of the connections between oppression and environmental degradation, such as species extinction, industrial pollution, and toxic contamination. Through its substantive, epistemological, and methodological interventions, FPE continues to influence both scholarship and activism (ibid.).

While many authors emphasize gender in relation to sustainability, FPE does not need to adhere to a fixed focus solely on women and gender. Feminism in this strand of thought is not just about women but also about various 'Others', including sexual, cultural, class, ethnic, and Indigenous identities, whose perspectives are crucial for engaging with diverse ontologies and decolonizing knowledge (Bauhardt and Harcourt, 2019, p. 10). Rocheleau highlights this critical shift by describing FPE as an ongoing exploration and construction of a "network of learners" rather than a "fixed approach focused exclusively on women and gender" (Rocheleau 2015, p. 57). This brings us to the concept of intersectionality, incorporated in this work to enrich the FPE framework with a diverse perspective. By considering how overlapping social identities influence environmental outcomes, intersectionality supports a more nuanced and inclusive analysis, revealing the complex interplay of factors that shape diverse experiences in environmental contexts.

### **1.2.3 Broadening the Lens: Intersectionality in Feminist Political Ecology**

Feminist movements of the 1960s and 1970s often focused on expanding women's rights. Still, they tended to sideline the voices of women of color, queer, and trans women, failing to account for the ways these individuals experienced overlapping forms of discrimination (Thomas, 2022, p. 21). Intersectionality, a concept introduced by Kimberlé Crenshaw (1991), resulted from these critiques to examine how multiple axes of identity, such as gender, race, class, and ethnicity, interact to shape experiences of privilege and oppression.

Intersectionality challenges such essentialism, ensuring that the unique struggles faced by marginalized groups are considered, particularly within feminist and environmental movements. Crenshaw (1991) and subsequent intersectional scholars have critiqued not only predominantly white feminist movements but also Black movements that failed to address the unique challenges faced by Black women at the intersection of sexism and racism (Crenshaw, 1991, p. 1241-1242). The “universal women’s experience” that is often referenced in mainstream feminist discourse reflects the realities of privileged groups, neglecting how other forms of oppression shape different women’s experiences (Thomas, 2022, p. 22).

Intersectionality thus provides a critical framework for understanding how climate policies affect individuals based on the intersections of various social identities, ensuring that marginalized voices are not further silenced in environmental justice efforts (Amorim-Maia et al., 2021, p. 3). Since Crenshaw’s foundational work, intersectionality has been applied across disciplines, influencing debates on law, policy, and activism (Castán Broto & Neves Alves, 2018, p. 9). Intersectional analyses have proven crucial in addressing structural inequalities that shape environmental justice and climate change policies. This thesis will apply an intersectional FPE framework to analyze German climate policies, ensuring a more comprehensive understanding of how these policies impact diverse populations and highlighting the voices of those often marginalized in the discourse.

## **Chapter 2: The gender-environment nexus**

This chapter reviews literature on the intersection of gender and environmental issues, specifically within the context of industrialized nations and Germany. The chapter begins with an overview of the gender-environment nexus, focusing on the dual perspectives of gendered vulnerability and the need for diverse representation in environmental decision-making. It then examines a feminist perspective on climate change mitigation, revealing how gender-blind policies can inadvertently deepen gender inequalities.

In the following sections, specific climate-relevant fields are analyzed: labor dynamics (paid and unpaid), energy poverty, energy sector disparities, infrastructure, transport, and agriculture. Each section presents findings from studies that illustrate the nuanced ways gender affects individuals’ experiences and contributions within these fields, emphasizing the systemic barriers that restrict women’s participation in climate action. This review aims to contextualize the need for a gender-sensitive approach to climate policy, providing a foundation for the subsequent analysis of Germany’s climate action strategies.

## 2.1 The Vulnerable Actors of Change

The gender-environment nexus reveals how climate change and environmental degradation impact individuals differently based on gender (Calléja, 2022). This nexus can be explored from two critical perspectives: first, the gender-differentiated vulnerability, which examines how men and women experience environmental challenges in distinct ways, and second, the imperative to integrate women, in all their diversity, into environmental policymaking and decision-making processes (OECD, 2021). Understanding these dual aspects is essential for understanding both the challenges and opportunities women face in addressing climate change. Historically, human activities such as industrialization, urbanization, and the expansion of capitalist economies have intensified environmental degradation. (Morrow, 2021, p. 211). These developments have led to a global ecological imbalance, marked by deforestation, resource extraction, and increased carbon emissions, which have disrupted ecosystems and increasingly threaten global security and human well-being. The effects of these crises are not uniform across populations; instead, they have gender-specific consequences, disproportionately impacting women and girls (UN Women, 2020).

Women, particularly in marginalized communities, are often more vulnerable to the direct impacts of climate change due to a range of socio-economic and structural factors. As a result, women account for 75% of those displaced by the impacts of climate change and environmental degradation (OECD, 2021). Globally, women have less access to essential resources like land, education, health services, and political decision-making, further increasing their exposure to climate risks (Amorim-Maia et al., 2021, p.5). This vulnerability is compounded by traditional social norms that place women's primary responsibility on household and caregiving tasks, making them more susceptible to water and food scarcity, energy poverty, and other environmental challenges. Additionally, during natural disasters, women face heightened risks of mortality and gender-based violence (UN Women, 2016).

Despite these vulnerabilities, women are not merely victims of climate change. Women, particularly in local and marginalized communities, frequently lead sustainable practices and develop innovative solutions to environmental challenges (Senja, 2021, p. 90). For example, Bangladesh's Grameen Shakti program, which trains women as solar energy technicians, illustrates the transformative potential of empowering women through environmental initiatives. Such programs not only enhance women's livelihoods but also contribute to broader climate resilience by promoting renewable energy and sustainable practices (ibid).

Furthermore, research has shown that countries with higher levels of female representation in leadership positions tend to ratify more environmental treaties, suggesting a positive relationship between female leadership and improved environmental outcomes (Norgaard & York, 2005). Altunbas et al. (2021) explore the impact of female managers on firms' carbon emissions and find that increasing the percentage of female managers leads to measurable reductions in CO<sub>2</sub> emissions. Specifically, a one percentage point increase in female managers correlates with a 0.5% decrease in emissions. This effect

is even more pronounced in countries where women are well-represented in political institutions and civil society groups, demonstrating that broader gender representation amplifies environmental benefits within organizations (Altunbas, 2021).

However, women's contributions to environmental governance and decision-making still need to be recognized and represented. Even though they play significant roles in household and community-level climate adaptation strategies, women are often excluded from leadership positions in disaster risk reduction and environmental decision-making processes (UN Women, 2016). Furthermore, systemic barriers to women's participation in leadership persist, particularly in sectors such as energy, where patriarchal structures and gender stereotypes limit their access to technical roles and decision-making positions (PWC, 2022). Educational disparities, limited access to technical roles, and persistent stereotypes often discourage women from pursuing careers in male-dominated field (WECF, 2021).

While integrating gender perspectives into climate policies is crucial to overcome these disparities, it shouldn't however be done superficially. As gender mainstreaming has become widely adopted, it often reduces gender considerations to a box-checking exercise rather than fostering meaningful change (Pachauri et al. 2023, p.5). This approach fails to address more profound systemic barriers that limit women's participation in environmental governance. Pachauri et al. (2023) caution against the assumption that simply increasing women's participation in decision-making will automatically lead to better environmental outcomes. Their mixed-methods study, combining gender equality indices and environmental sustainability measures, reveals that while countries with higher gender equality often perform better environmentally, the relationship varies by income level. Additionally, their interviews with gender and climate experts suggest that increasing women's participation alone is insufficient to address climate issues fully, arguing for a more transformative approach that acknowledges the inequalities across race, class, and gender (Pachauri et al. 2023).

In summary, the gender-environment nexus underscores both women's heightened vulnerability to climate change and their critical role as agents of change. While women's contributions to climate resilience are increasingly recognized, systemic barriers continue to limit their participation in climate-relevant decision-making processes. Addressing these challenges requires a transformative approach that goes beyond tokenistic gender mainstreaming and tackles more profound inequalities across race, class, and gender. With this understanding of women's dual roles in the climate crisis, the next chapter will explore a feminist perspective on climate change mitigation measures, focusing on how feminist approaches can reshape strategies for more equitable and effective climate action.

## **2.2 A Feminist Perspective on Climate Change Mitigation Measures**

Climate change mitigation efforts frequently reinforce existing gender inequalities when they overlook the different ways men and women experience climate policies. Research on the gendered dimensions

of climate change mitigation in the Global North remains sparse, though significant contributions have emerged from Germany and Canada. Kuschan et al. (2022) investigate how the German energy transition is perceived from the perspective of gender and social justice, focusing on how different social groups, especially women, marginalized communities, and lower-income groups, experience the transition. The results indicate that the participants see the transition as unjust regarding opportunities available to different genders, income levels, and educational backgrounds. Women, in particular, face significant underrepresentation in decision-making roles within the energy sector, often due to stereotypes about their technical competence and interests. Furthermore, regarding intersectional aspects, participants emphasized that people with a migration background, people with disabilities, and young people have less access to information about the energy transition, thus facing more barriers, possibly constituted by language or bureaucratic obstacles. Those actively involved in energy initiatives were more critical of the transition, pointing out the discrepancies between government policies and societal realities (Kuschan et al., 2022).

Further expanding, Röhr (2021) provides a detailed gender-based analysis of Germany's CO<sub>2</sub> pricing system introduced in 2021 (Röhr, 2021). This system, applied to fossil fuels such as coal, gasoline, and natural gas, was intended to reduce greenhouse gas emissions and contribute to climate goals. However, the analysis shows that the policy disproportionately affects women, particularly those from low-income and single-parent households. Due to the Gender Pay Gap and the Gender Pension Gap, women have less economic flexibility to absorb these rising costs. As a result, women, particularly those from single-parent households, face greater financial strain due to the price increase associated with CO<sub>2</sub> emissions. The analysis also highlights that women are less likely to own property and are more likely to live in rented housing. This makes them more vulnerable to rising heating costs, as renters must bear the entire financial burden of CO<sub>2</sub>-related price increases without the ability to make energy-saving upgrades in their homes. Meanwhile, subsidies for energy-efficient renovations primarily benefit homeowners, a group dominated by men. In mobility, women tend to drive less and own fewer cars than men, and they often use smaller and older vehicles with lower emissions. However, the paper points out that policies promoting electric vehicles and infrastructure tend to benefit wealthier, predominantly male households. Moreover, tax incentives like the commuter allowance, which primarily supports long-distance commuters, disproportionately benefit men. This is because women, who are more likely to work closer to home and are less represented among long-distance commuters, receive less financial relief from this measure (Röhr, 2021).

In a Canadian context, Chalifour (2010) focuses on carbon taxation in British Columbia and Quebec, exploring how such policies disproportionately impact women. She introduces a gender analysis framework, revealing that women, who are more likely to live in poverty, have less economic flexibility to absorb rising costs associated with carbon taxes. Furthermore, tax cuts or credits often fail to address the unequal distribution of economic benefits within households where, for example, women

depend on a male partner's income. This disparity leads to a disproportionate financial burden on women, particularly those responsible for unpaid carwork (Chalifour, 2010).

Furthermore, Rochette (2016) critiques the gender-blindness of the country's climate policies, particularly in Quebec, despite frameworks for gender-based analysis. Women and marginalized communities in Canada are disproportionately affected by climate change, yet their voices are often sidelined in policymaking. Rochette notes that technological solutions dominate the global climate discourse, often sidelining gender and social justice issues. This exclusion, referred to as the "masculinization" of environmental politics, perpetuates a system where women's needs and perspectives are underrepresented, further entrenching gender inequalities in climate mitigation strategies (Rochette, 2016).

The studies propose various recommendations, to address these inequalities. Kuschan et al. (2022) advocate for Germany's energy policies to adopt an intersectional framework that accounts for the diverse experiences of women, migrants, and low-income households and emphasize the need for more inclusive citizen energy projects and financial incentives to alleviate economic barriers for lower-income households (Kuschan, et. al, 2022, p.22). Rochette (2016) advocates for a feminist rethinking of climate policies in Canada, urging that social justice and gender equality should be placed at the core of climate mitigation strategies. She calls for policies that move beyond technological fixes and address the root causes of both environmental degradation and social inequality (Rochette, 2016). Chalifour (2010) similarly argues for climate policies that promote gender equality. She argues for targeted rebates or credits for female primary earners, as well as broader policies that address structural gender inequalities (Chalifour, 2010, p. 45).

## **2.3 Gender in Climate-Relevant Fields**

The literature review on the gender-environment nexus revealed recurring themes, particularly in areas like the market economy, care work, energy, mobility, and agriculture. The following sections will present key findings from these areas.

### **2.3.1 Gender and (Un)Paid Labor**

Climate change mitigation intersects with gender dynamics, particularly in paid and unpaid labor. While many climate policies prioritize technological advancements and market-based solutions, such as creating 'green jobs,' they often overlook unpaid labor, notably care work, which is predominantly performed by women. These 'green jobs' tend to be concentrated in male-dominated fields like science, technology, engineering, and mathematics, where women remain underrepresented (Kuschan et al., 2022, p.17). Furthermore, in Germany, where the energy production industries are proliferating, existing

gender equality laws, such as the Pay Transparency Act and the Leadership Position Act, only apply to larger companies, giving the impression that pay equality and mandatory gender quotas in leadership roles are only crucial in bigger firms, creating the risk of women being underrepresented across all levels in the expanding fields of "green jobs" and "green technology," where gender balance is crucial for sustainable development (Deutscher Frauenrat, 2023, p.11).

While creating "good jobs" is vital for addressing climate change, they often sideline unpaid reproductive labor (Wilson & Chu, 2019, 10). This labor, like managing household energy use, recycling, or caring for children and the elderly, is essential for supporting climate mitigation measures at the household level. The increased emphasis on sustainability, such as sorting recyclables or managing energy consumption, often adds to the unpaid workload of women. As a result, women face a double burden, as they are responsible for both formal employment and an increasing share of unpaid household labor linked to climate initiatives (ibid.). This structural undervaluation of care work reflects broader economic models prioritizing productivity and market participation while ignoring unpaid work. "Green Economy" strategies tend to conceptualize labor narrowly, focusing on paid work and excluding the substantial contributions of unpaid care work (Gottschlich et al., 2014, p.8)

However, research by Smetschka et al. (2023) demonstrates that unpaid care work, such as child care or elder care, has a significantly lower carbon footprint than many consumption-driven activities. In their study based on data from Austria, the authors argue that caring activities, primarily unpaid and performed by women, offer a viable pathway for climate mitigation and gender equality. They propose that policies promoting reduced working hours and better work-life balance could facilitate a more equitable distribution of care responsibilities between men and women. This shift would lower resource consumption and promote more sustainable lifestyles, aligning environmental goals with social justice (Smetschka et al., 2023, p. 4).

A common feature of the prevailing concepts of the "Green Economy" is their adherence to the capitalist logic of commodification and the growth imperative. Even initiatives like the Green New Deal, which advocates for "environmentally friendly growth" with better health, education, and skilled jobs, still focus on profit margins and growth forecasts rather than meeting human needs. Prosperity in this framework is equated with material wealth, implying that growth is inherently positive. As a result, the economy is reduced to a market-based system, sidelining more holistic considerations of social and ecological well-being (Gottschlich et al., 2014, p.9). Feminist economic critiques highlight that these models also exploit natural resources, often treating them as unlimited, much like how unpaid care work is treated. This dual exploitation of nature and unpaid labor must be addressed for climate policies to be genuinely sustainable. Just as nature's limits must be recognized to avoid ecological collapse, the limits of unpaid care work must be acknowledged to prevent the perpetuation of social inequalities (ibid.). When valued and redistributed more equally, care work can support climate and gender equality goals by reducing carbon footprints and promoting more sustainable ways of living (Smetschka et al., 2023, p. 4).

### **2.3.2 Gender and Energy Poverty**

Energy poverty disproportionately affects women, particularly those from disadvantaged groups. Female-headed households are more likely to experience energy poverty than male-headed households, partly due to the higher prevalence of single-parent households led by women (Bleckmann et al., 2016, p. 125). This issue is compounded by socio-structural factors such as age and migration background, which lead to further discrimination in housing markets and women's occupation of less energy-efficient homes (Großmann, 2017, p. 60). Energy poverty is typically understood through two main lenses: access to energy and affordability. Access refers to the availability of essential energy services, such as heating and electricity, while affordability concerns whether households can meet their energy needs financially. Geographic, financial, technical, and social factors all contribute to energy poverty, with women more vulnerable due to intersecting issues like lower income levels, unpaid care responsibilities, and distinct energy consumption patterns. Women who spend more time in under-heated or energy-deprived homes, due to their higher involvement in unpaid domestic labor, face increased health risks, including respiratory infections caused by cold and damp living conditions (Matzinger & Berger, 2020, p.1-2).

Income disparities exacerbate energy poverty, as higher-income households have greater access to renewable energy technologies, such as solar panels, while lower-income groups face rising energy costs. This inequality can also extend to age and education, with older, more educated individuals, typically men, dominating citizen energy projects that promote decentralized energy production. These projects often lack inclusivity, excluding women, migrants, and low-income households from participating in the energy transition (Kuschan et al. 2022, p.21). Energy policies often treat households as a unit of analysis, a useful approach for technical assessments but one that overlooks internal gender dynamics. This method can mask the unequal distribution of resources and decision-making power within households (Matzinger & Berger, 2020, p.2). To address these disparities, researchers advocate for reforms that adopt an intersectional approach, increasing inclusivity in citizen energy projects, particularly through education, awareness, and financial incentives for marginalized groups (Kuschan et al., 2022, p.21).

### **2.3.3 Gender and The Energy Sector**

Gender disparities are pronounced in the energy sector, where women are significantly underrepresented across leadership, technical roles, and decision-making structures. Leadership roles in both the broader energy sector and local energy communities are primarily held by those with technical expertise, a field with notably low female participation (Deutscher Frauenrat, 2023). Instead, women are more commonly found in administrative positions, reinforcing the male-dominated nature of the sector (Kuschan et al., 2022, p. 20). This lack of female representation in key decision-making roles limits the diversity of



perspectives in energy policy and the design of energy solutions, resulting in policies less responsive to gender-specific needs (WECF, 2021, p. 27).

In Germany, the energy transition is a crucial process for climate protection, with electricity demand expected to rise drastically in the coming years. Increased support for local and regional renewable energy communities owned by citizens plays a crucial role in making energy more sustainable and accessible. Energy sharing could reduce CO<sub>2</sub> emissions in Germany by up to 35%, and the German government has announced plans to accelerate the expansion of renewable energy, including improving the framework for citizen energy (Deutscher Frauenrat, 2023, p. 19). However, the same leadership barriers seen in the broader sector are also present in these communities, where decision-making structures often disadvantage women. Women's exclusion from these roles in energy communities and private energy projects further perpetuates their underrepresentation, limiting their influence on energy policies and practices. A significant gender gap also exists in entrepreneurial activities and innovation within the energy sector. Women are less likely to be involved as investors in patent applications or to engage in energy-related entrepreneurship, reflecting broader economic inequalities (Kuschan et al., 2022, p. 6). The reasons for this underrepresentation are linked to several factors. One major issue is the low participation of women in technical degree programs, which perpetuates the gender gap in fields like engineering and energy management.

Additionally, patriarchal structures in male-dominated work environments, a lack of work-life balance, and traditional gender roles discourage women from pursuing careers in the energy sector (Deutscher Frauenrat, 2023, p. 20). This systemic underrepresentation in leadership and decision-making roles not only deepens gender inequalities but also leads to energy policies that are less responsive to issues such as equitable access to energy, land rights, and the fair distribution of resources, which disproportionately affect women. Women's limited land rights and access to public resources further hinder their participation in energy projects, which often target property owners and community leaders, roles predominantly occupied by men (Kuschan et al., 2022, p. 6).

#### **2.3.4 Gender and Infrastructure**

In Danish households, energy consumption, and renovation decisions are significantly shaped by gender roles. A study by Lise Tjørring (2016), titled "We forgot half the population! The significance of gender in Danish energy renovation projects," highlights the differences in how men and women engage with energy renovations due to their distinct everyday practices and responsibilities (Tjørring, 2016). The study observed that family members performed different activities within the home, which led to variations in how they consumed energy and their views on energy renovations. Family members' preferences for renovations were tied to how they used the house and their individual routines. The study also revealed a clear gender division in household roles. While men were typically responsible for maintenance tasks such as fixing things, managing heating systems, and maintaining appliances, women

were mainly responsible for reproductive activities like cooking, cleaning, and laundry. This division of labor reflects broader social expectations, where individual preferences are not purely personal but are influenced by cultural norms and traditional gender roles. The study confirms the persistence of a marked gender division in household work, even in modern families, and suggests that these roles shape how individuals participate in and perceive energy renovation projects. This gendered division of labor has significant implications for energy policy. Traditional approaches to encouraging energy renovations have focused on financial incentives and technical solutions, often overlooking the human dimensions of energy consumption. The Danish study suggests that such initiatives fail to address the different needs and priorities of men and women, mainly since women are responsible for many energy-consuming tasks in the household. As a result, these initiatives may not fully engage women despite their crucial role in household energy management (ibid.).

A positive approach to this shows a paper on gender mainstreaming in regional planning processes, which underscores the importance of incorporating gender perspectives into infrastructure development (Stiewe, 2015). In the Ruhr region of Germany, spatial planning has begun to integrate gender mainstreaming as a core principle, acknowledging that men and women experience public spaces and infrastructure differently. Gender mainstreaming in this context is not merely a legal requirement but a strategic approach to ensure that infrastructure planning is inclusive and equitable. The study highlights that gender mainstreaming must be implemented at multiple levels: structurally, through laws and policies that ensure equal representation; procedurally, by involving women and marginalized groups in planning processes from the outset; and in terms of content, by addressing gendered needs in the design and use of infrastructure (ibid). This presents a crucial approach, as low-income women in Germany face specific challenges related to energy consumption and living conditions. Many women, single parents, and retirees live in buildings with poor energy standards, which increases their exposure to unhealthy conditions like air pollution and noise. Women generally require higher "comfort temperatures" for heating in winter and cooling in summer, and for those performing care work at home, energy needs are even greater (Deutscher Frauenrat, 2023, p. 15-16). With CO<sub>2</sub> pricing on fossil fuels for heating and transport and rising energy costs due to the war in Ukraine, heating expenses have surged. While the Federal Government introduced measures to compensate the costs, it provided the same amount to both low- and high-income individuals, leaving the most vulnerable, particularly low-income women, single parents, and female retirees, still struggling with rising costs (ibid.).

### **2.3.5 Gender and Transport**

Research indicates that, on average, women engage in transportation behaviors with significantly lower CO<sub>2</sub> emissions than men, as they are more likely to use public transport, walk, or adopt other sustainable mobility options. In contrast, men typically drive longer distances by car, contributing to higher emissions. This difference suggests that adopting women's travel patterns could lead to substantial CO<sub>2</sub>

reductions (Kronsell, 2016, p. 25). Despite these more environmentally friendly travel patterns, transportation policies often prioritize masculine norms that emphasize car use and long-distance commuting, marginalizing women's needs. Infrastructure investments frequently favor road expansion and car travel, even though women rely more on public transportation and walking (WECF, 2021, p. 111). The perception of masculinity as the "natural" standard in transportation policies reinforces this prioritization. For example, Swedish transport policy sets a target to "respond equally to women's and men's transport needs." This phrasing has been criticized for implying that women's transport needs are inherently different from men's, framing these differences as natural and given rather than as products of social structures and power dynamics. Such a perspective ignores how gendered needs arise from structural inequalities. By assuming that equality would mean aligning women's needs with men's, this framing risks making male transport patterns the standard and limiting progress toward a sustainable system (Kronsell, 2016, p.13).

Furthermore, women experience public transportation differently than men. Safety concerns, especially on public transit, frequently limit women's mobility, constraining their access to essential opportunities such as education and employment and impacting their long-term well-being. The fear of harassment or assault leads women to take extra precautions in choosing routes and travel times (WECF, 2021, p. 111.). For example, a survey by the French National Federation of Transport Users revealed that 90% of female respondents experienced sexual harassment on public transit. This harassment significantly affected women's daily routines, professional lives, and mobility, highlighting a gap in gender equality. In response, 80% of women altered their travel habits, 48% adjusted their clothing choices, 34% opted for alternative transport methods, and 9% refrained from traveling alone (UN Women, 2020).

Beyond public transportation, Germany's current policies, particularly around the adoption of electric vehicles (EVs), present further barriers for women. Replacing a combustion engine car with a climate-friendly electric vehicle is often unaffordable for many due to gender pay and pension gaps. Low-income women, in particular, do not benefit as much from the innovation premium, with which the Federal Government has subsidized the purchase of electric cars, especially as these subsidies are gradually being reduced and phased out over time. This policy shift leaves many women disadvantaged in accessing climate-friendly mobility options (Deutscher Frauenrat, 2023, p. 7). This pattern of prioritizing masculine norms and overlooking the specific needs of women in transport policies highlights a broader issue: the lack of gender perspectives that are essential for meaningful change. However, increasing female participation in the transport sector is not enough (Kronsell, 2017, p. 24). Kronsell argues, that Effective change requires challenging dominant masculine norms, reshaping power dynamics, and fostering sustainable practices by integrating gender perspectives through tools like gender-balanced decision-making, gender mainstreaming, and gender budgeting. As masculinity remains the accepted norm within the transport sector, without a gender perspective, existing structures

are likely to be reproduced, reinforcing the sector's emphasis on increased mobility and car use, which risks sustaining an unsustainable transport system (Kronsell, 2017, p. 24).

### **2.3.6 Gender and Agriculture**

In Germany, the Pilot project: "Gender and mobilization of wood reserves in private forests" provides a view of how climate policies intersect with gender dynamics in agriculture and land management (Lewark et al., 2010). The project focused on women who own small private forests and their involvement in sustainable forest management. The insights show that women are often excluded from formal forestry decision-making processes despite owning significant portions of forest land. This exclusion is rooted in cultural and institutional biases that perceive forest management as male dominated. For example, forestry services and consultations are traditionally tailored to men, leaving women forest owners without the necessary support to manage their lands sustainably. As a result, many women forest owners feel disconnected from the decision-making networks that could help them adapt to climate change policies, such as incentives for sustainable timber production and carbon sequestration. Moreover, the study shows that women who seek to manage their forests actively often face skepticism from male forestry professionals, reinforcing a perception that forestry is not "women's work." The project also reveals a divide between women's motivations for forest ownership and the expectations placed on them by the forestry industry. Many women interviewed expressed a strong connection to sustainability and conservation, viewing their forests as a legacy for future generations. However, they face significant barriers in accessing technical knowledge and resources, which limits their ability to engage in climate-resilient forest management fully (ibid.).

The study "The Living Situation of Women on Agricultural Farms in Germany" explored women's varied roles in farming. Participants included all female farm managers, family farm workers, and farm employees, who shared insights on workload, family life, and volunteer commitments, identifying sources of joy and concern (Bundesinformationszentrum Landwirtschaft, 2024). Through workshops, an online survey, and qualitative interviews, it investigated women's current circumstances and their importance in rural social cohesion. The project revealed that farm succession is more challenging for women than men, as property rights remain patriarchal. Traditions often favor male succession, limiting women's inherited access to farms. Many women only gain farm access through entrepreneurship, non-family takeovers, or marriage. Some women reported they only inherited a farm due to a brother's unavailability, although they often drive innovation on these farms. Women lack social and legal security, especially in ownership rights. Many "married-in" women view themselves as co-owners, yet this is not often recognized legally, leaving them vulnerable in cases of separation or inheritance. Women working off-farm usually find more balance, yet some experience overload when returning to work without support for their previous roles. Many also voiced concerns over changing policies and

rising societal demands on agriculture, as they often manage the farm's bookkeeping and have insights into the business's financial health (ibid).

## **2.4 Advancing Equality through Gender-Just Climate Policy**

The literature review emphasizes the importance of incorporating gender into climate change policy by highlighting the unequal impacts of climate change across different groups and the gendered dynamics in climate-related fields. Simplistic portrayals of women as either victims or inherently more environmentally aware overlook the complex interplay of gender, power, and the environment. Climate change affects men and women differently, with women, particularly those in low-income households, being more vulnerable to issues like energy poverty and natural disasters due to limited access to resources.

In the energy sector, women's underrepresentation in leadership and technical roles restricts diverse perspectives in policy-making. Studies from Denmark and Germany reveal that men often dominate technical energy decisions, while women manage household energy consumption, leading to policies that overlook their crucial roles. Climate policies have exposed the gendered power imbalances within farm families and land management practices in agriculture. While women take on increasing roles in sustaining family farms and managing private forests, their participation in decision-making processes remains limited, often due to entrenched cultural and institutional biases. Similarly, in the transport sector, gender norms dictate different travel behaviors, with women more likely to use sustainable transport options. Nevertheless, transport policies often prioritize car use and road infrastructure, marginalizing the needs of women.

These findings underscore that intersectional gendered approaches are essential for understanding how climate change affects different groups. The data reveals that women's roles, practices, and vulnerabilities in climate-related sectors must be recognized to develop equitable and effective climate policies. Gendered disparities in access to resources, decision-making, and participation must be addressed to ensure that climate policies reflect the needs of all individuals rather than perpetuating existing inequalities.

## **Chapter 3: The Case of Germany**

Germany has long positioned itself as a global leader in climate policy, advocating ambitious goals at both the European Union and international levels. The country's "Energiewende" (energy transformation) is a notable example of this leadership, particularly in promoting renewable energy.

However, despite these efforts, Germany faces challenges in fully integrating social justice concerns into its climate agenda, especially in addressing the intersection of gender and climate change.

Although gendered approaches have gained some traction, significant gaps remain in aligning these policies with broader environmental justice frameworks (Grieving & Fleischhauer, 2020). Entrenched gender stereotypes continue to limit the full integration of gender perspectives in climate policies (Lau et al., 2021, p.186 ). Moreover, recent international frameworks, such as those under the UNFCCC, have pushed for more gender-responsive policies, but the application of these frameworks in national policy has been uneven. Germany continues to face resistance to making gender equality a central element of its climate agenda. Despite these challenges, there has been progress, particularly within certain ministries and through initiatives to embed gender into climate policy.

In the following sections, an overview of Germany's national climate policies will be provided, as well as an assessment of how gender considerations have been adopted by relevant ministries and in selected climate policies.

### **3.1 National Climate Policies**

Germany's national climate policy has evolved significantly since it first established emissions reduction targets in the 1990s, using 1990 as a baseline year, a reference point that still shapes current and future climate goals (IEA, 2020). Following the adoption of the Kyoto Protocol in 1997, Germany committed to reducing greenhouse gas (GHG) emissions in line with international standards. A key milestone in this journey came in 2000 with the introduction of the “Renewable Energy Sources Act”, which aimed to promote renewable energy and marked a critical step toward the country's long-term energy transition (Heering, 2021, p.49). After the 2011 Fukushima nuclear disaster, Germany accelerated its nuclear phase-out plan, aiming to close all reactors by 2022 and placing greater reliance on renewable energy sources (Edo, 2023, p.23).

In 2016, Germany adopted the “Climate Action Plan 2050”, aligning its long-term climate strategy with the Paris Agreement (BMUB, 2016). The plan provides broad guidance to stakeholders across various sectors, such as the economy, science, and society, emphasizing a collaborative and evolving approach to climate action. Rather than being a fixed roadmap, the plan is designed as a flexible and adaptive process, allowing for continuous learning and improvement based on emerging developments and new insights (German Federal Government, 2019). Over the following years, a series of programs and measures were developed to implement the plan. A significant policy shift occurred in 2019, introducing the Climate Change Act (CCA), which established legally binding emissions reduction targets across all sectors. The Act set a goal of a 55% reduction in GHGs by 2030 and aimed for net-zero emissions by 2050 (German Federal Government, 2019). To further support the CCA and the CAP 2050, the government introduced the “Climate Action Programme 2030”, which implemented a national

emissions trading system for the transport and heating sectors. Additionally, the program allocated substantial investments toward energy efficiency, renewable energy expansion, and low-carbon transport infrastructure (German Federal Government, 2019).

Germany's climate ambitions were further reinforced in 2021 following a ruling by the Constitutional Court, which found that the original CCA did not sufficiently safeguard the rights of future generations, particularly with respect to post-2030 climate goals. In response, the government amended the CCA, making climate neutrality by 2045 a binding requirement and raising the 2030 emissions reduction target from 55% to 65% compared to 1990 levels (Black, 2021, p. 4). To align with these enhanced goals, Germany introduced the “2023 Climate Action Programme” (CAP23) in October 2023. This updated program is designed to ensure compliance with the revised CCA targets, supporting the 2030 and 2045 objectives. CAP23 strengthens measures across key sectors such as energy, transport, and industry, with notable initiatives including accelerated deployment of renewable energy, decarbonization of industry through carbon contracts for difference, and improved energy efficiency in buildings.

While these advancements reflect Germany's commitment to achieving climate neutrality by 2045, the country faces considerable challenges in realizing these goals. Achieving climate neutrality will demand a comprehensive transformation of Germany's energy system, requiring technical innovations as well as addressing entrenched social and cultural issues. As seen in the literature review, the energy sector remains hierarchical, male-dominated, and marked by economic power imbalances, creating additional barriers to inclusivity and equality. The following section will explore how Germany's climate policies address these challenges by incorporating gender considerations and promoting a just transition that tackles social inequities.

### **3.2 Gender Integration in German Climate Policy**

German constitutional law has long emphasized men's and women's equality and committed to active gender equality policies. Article 3(2) of the 1949 Basic Law asserts that all people are equal before the law and mandates gender equality, requiring the state to enforce this principle and eliminate disadvantages (EIGE, 2022). The push to integrate gender into German climate policy began in 1995 at COP1 in Berlin, chaired by Angela Merkel, then the environment minister and former Minister for Women's Affairs (Alber, 2021, p. 53). In 1999, the Federal Government adopted gender mainstreaming as a guiding principle for all ministries, which was further formalized in the 2000 Joint Rules of Procedure (EIGE, 2022), though these efforts saw limited success within the Federal Ministry for the Environment. Gender-responsive climate policy remained peripheral over the following two decades, but with support from the UNFCCC, including conventions referencing gender, the topic gained more attention (Sauer, 2021, p. 262). In the 2018 Coalition Treaty, the Federal Government aimed to address

these challenges by developing a cross-sectoral equality strategy, but no overarching national action plan was produced. Significant progress was made during Svenja Schulze's tenure as Environment Minister from 2017 to 2021. Schulze prioritized gender equality by initiating staff training, establishing a department focused on gender aspects of environmental policy, and developing a gender strategy for climate policy. She also regularly met with female leaders from environmental NGOs to address gender challenges and discuss advancements (Alber, 2021, p.54). The 2019 UNFCCC Gender Action Plan further accelerated these efforts, underscoring the importance of gender equality mandates for industrialized countries.

The current German government, which has been in office since late 2021, states that it strongly advocates for equal participation by all people in social, political, and economic life, irrespective of gender, gender identity, sexual orientation, disability, or other characteristics. As part of this, the Federal Ministry for Economic Cooperation and Development (BMZ) is pursuing a feminist development policy (BMZ, 2023). The BMZ acknowledges the disproportionate impact of climate change on women and marginalized groups and promotes a feminist climate policy framework, positioning women as key actors in climate adaptation and mitigation efforts while demonstrating Germany's commitment to addressing gender inequality on a global scale through programs like gender-responsive climate financing and support for women's leadership in climate governance (BMZ, 2023). However, BMZ's primary focus is international cooperation, particularly in the Global South, rather than national climate policies. As such, BMZ's relevance to this study, which focuses on domestic climate policies, is limited. The following section will, therefore, concentrate on ministries with a more direct role in shaping Germany's national climate agenda, such as the Federal Ministry for Economic Affairs and Climate Action (BMWK) and the Federal Ministry for the Environment Nature Conservation, Nuclear Safety, and Consumer Protection (BMUV).

### **3.2.1 Representation of Women in selected Climate Relevant Ministries**

#### **Gender in The Federal Ministry for Economic Affairs and Climate Action**

The Federal Ministry for Economic Affairs and Climate Action (BMWK) of Germany has made significant strides in promoting gender equality and diversity within the energy sector, aligning with the goals of SDG 5. The BMWK has committed to addressing gender disparities, aiming to increase the representation of women in leadership positions and to promote inclusion across the ministry and the broader energy sector. As part of this commitment, BMWK has set a target of filling 50% of its management positions with women by 2025 (BMWK, 2022). The share of women in leadership positions has seen a steady improvement, with a steady increase from 32% in 2016 to 46% in 2023 (Destatis, 2024). This commitment is also reflected in the inclusion of gender equality as a welfare indicator in Germany's "Annual Economic Report", underlining the importance of gender parity as a



key factor in economic success (BMWK, 2022). To further promote workplace diversity, the ministry tracks various diversity indicators, including the employment rate of people with severe disabilities, to ensure that women make up a significant portion of both staff and senior management (ibid).

Despite progress in some areas, women remain underrepresented in leadership roles within the energy sector, particularly in fields like STEM (Science, Technology, Engineering, and Mathematics). In 2019, only 12% of executive positions in the renewable energy sector were held by women, highlighting the persistent gender employment gap of 74.6% in the sector. The ministry recognizes these challenges and has launched several initiatives aimed at fostering greater gender equality and supporting women in energy-related careers. One of the key initiatives is the “Women Energize Women” Program, launched in 2022, which provides a platform for networking and professional development for women in the energy sector.

The BMWK also engages in global partnerships to advance gender equality in the energy sector. Through collaboration with the “Global Women’s Network for the Energy Transition,” the ministry has established a mentoring program to promote gender balance in leadership roles in the energy transition. In addition, Germany actively participates in the “Equal by 30” Campaign, part of the “Equality in Energy Transitions” initiative. This campaign seeks to achieve equal pay, leadership opportunities, and participation for women in the energy sector by 2030, encouraging governments and companies to make concrete commitments toward closing the gender gap (BMWK, 2022).

### **Gender in The Federal Ministry for the Environment, Nature Conservation, Nuclear Safety, and Consumer Protection**

The Federal Ministry for the Environment, Nature Conservation, Nuclear Safety, and Consumer Protection (BMUV) of Germany actively promotes gender equality within the framework of SDG 5. Within the ministry, the share of women in leadership positions has steadily increased from 36% in 2016 to 47% in 2023 (Destatis, 2024). According to the BMUV, gender equality is a core principle embedded in German environmental policy and influences the design, implementation, and communication of all measures undertaken by the ministry. To systematically integrate gender equality into environmental policy, the ministry established a dedicated unit in February 2019 to address gender-related environmental issues, reflecting its commitment to ensuring gender is considered in environmental decision-making. The ministry's public relations activities are instrumental in promoting gender equality. These efforts include raising awareness about initiatives through annual events such as “Diversity Day” and “Girls’ and Boys’ Day,” which encourage gender-neutral career guidance (BMUV).

Regarding research, the BMUV has funded a critical study published by the German Environmental Protection Agency (UBA) in February 2020, which examined how gender justice can contribute to successful climate policy. This interdisciplinary research focused on the role of gender in climate

protection and adaptation policies, deriving key principles for integrating gender equality into climate action and provided specific policy recommendations to improve gender inclusion in climate initiatives. One of the most important outcomes was developing a Gender Impact Assessment tool specifically adapted to the climate sector, helping policymakers assess the gender impacts of climate-related measures. The study also highlighted key research gaps and offered recommendations for funding, capacity-building, and knowledge dissemination, emphasizing the need for gendered approaches in environmental policies (Spitzner et al., 2020).

Furthermore, the BMUV hosted the “Women Leaders Breakfast” at the international level during the United Nations High-Level Political Forum in 2019. This event provided a platform to share diverse perspectives from women across various sectors, foster networking opportunities, and raise awareness on gender-specific issues. Additionally, the BMUV supports various projects and networks that foster gendered climate policies through the International Climate Initiative. These projects promote gender equality at both local and global levels, ensuring that women's voices are integral to the fight against climate change (BMUV).

### **3.2.2 Gender in German Climate Policies**

This section outlines the integration of gender considerations within selected climate policies, examining the presence and treatment of gender in these frameworks. Where relevant information was available, it also highlights processes and structures within government that have shaped the formation and implementation of these policies. Each policy was reviewed for explicit mentions of "gender" to assess the extent of gender-responsive language and commitments.

#### **Climate Change Act (CCA)**

The Climate Change Act reflects some attention to gender inclusion, particularly through its requirement for gender parity in the Council of Experts on Climate Change. This council, made up of five experts from diverse fields, mandates equal representation of women and men, underscoring a commitment to gender-balanced governance in climate decision-making processes (German Federal Government, 2021).

However, despite this structure, the Act itself downplays the likelihood of its broader climate measures significantly impacting gender equality stating that "gender equality impacts or effects on demographic change are not to be expected from this law."<sup>2</sup> (German Federal Government, 2019, p. 16). The Act does not further address gender within its provisions.

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<sup>2</sup> Translated from German: „Gleichstellungspolitische Auswirkungen oder Auswirkungen auf den demografischen Wandel sind durch dieses Gesetz nicht zu erwarten.“

### **Climate Action Program 2030 (CAP30)**

The Federal Government adopts a climate action program at least after each update of the Climate Action Plan. These programs incorporate scientific assessments that cover economic, social, and ecological consequences alongside greenhouse gas reduction measures. These updating of these programs involve consultations with various stakeholders, such as states, municipalities, civil society associations, and scientific advisory bodies (German Federal Government, 2019).

The Climate Action Program 2030, introduced in 2019, states, that as a leading industrial nation, Germany aims to ensure that its climate actions preserve natural resources while addressing social justice, affordability, economic viability, and public participation (German Federal Government, 2019). The principle of “socially responsible” measures is emphasized throughout the program. However, despite the strong emphasis on social justice, gender equality is notably absent from the framework. Chapter 5.2 will provide a deeper insights of this issue, by examining the 2023 Climate Action Program from a feminist perspective to go into deeper analysis of the gender implications in climate action programs.

### **Germany’s National Energy and Climate Plan (NECP)**

The German National Energy and Climate Plan, updated and published in August 2024, was developed through extensive participation processes with stakeholders, civil society, and the public, with multiple dialogues and consultations taking place before the draft was finalized. However, there is no indication in the report that these processes, included any focus on gender equality (BMWK, 2024). This absence was highlighted during a subsequent online consultation, where participants, mainly from civil society, criticized the omission and called for a stronger integration of gender equality.

The report itself makes no mention of gender considerations. While the NECP could be viewed as a predominantly technical document, other EU countries have successfully integrated gender equality and mainstreaming into their plans. For instance, Spain’s NECP demonstrates a clear commitment to gender equality, aiming to increase women’s participation in the renewable energy sector, mentioning particular attention to women, especially in rural areas, and disadvantaged groups (Directorate-General for Communication, 2023, p.108).

## **Nationally Determined Contributions (NDC)**

In 2019, the Global NDC Conference in Berlin, organized by NDC Assist (BMZ) and the Support Project for the Implementation of the Paris Agreement (BMU<sup>3</sup>), aimed to accelerate the implementation of NDCs. The conference included over 40 breakout sessions focused on transparency, governance, and financing, with gender integration as a cross-cutting issue. A comprehensive Gender Strategy was introduced, comprising three key elements: (1) a broader gender narrative as the overarching policy, (2) the inclusion of "Gender Voices" in each session to ensure gender linkages were addressed, and (3) an anti-harassment policy to create a safe, inclusive environment for all participants. This strategy not only fostered gender-related discussions but also actively addressed Sexual Exploitation, Abuse, and Harassment. The Anti-Harassment Policy, distributed to all attendees, provided clear guidelines on reporting and managing harassment, contributing to a heightened awareness of gender issues. One harassment case was reported during the conference, a testament to the policy's effectiveness in addressing issues that might otherwise have gone unnoticed (GIZ).

The impact of these efforts is reflected in the European Union's updated NDC, submitted in October 2023, where a gender-responsive approach is explicitly mentioned. Section 27 of the "Additional Elements Related to the EU's Overall Efforts on Climate Action" states:

27. The EU is committed to promoting a human rights-based and gender-responsive approach to climate action, promoting social justice, fairness, and inclusiveness in the global transition towards climate neutrality, full, equal, and meaningful participation and engagement of women in climate-related decision-making and fully meeting our human rights obligations when taking action to address climate change (European Union and its Member States, 2023).

## **Germany's Gender-Blind Climate Policies**

Germany's climate policies emphasize principles of social justice and equality, yet they fall short in explicitly mentioning gender or addressing gender-specific impacts within climate adaptation and mitigation measures. The review of key documents reveals a general absence of gender-responsive language, with the EU-level NDC being a notable exception for its commitment to integrating gender equality in climate action. This discrepancy between Germany's international commitments and domestic practices underscores a need for a more robust inclusion of gender perspectives to ensure that national climate policies support both environmental sustainability and social equity.

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<sup>3</sup> The BMU, was the former BMUV, renamed in 2021 under the new government to reflect its expanded focus on consumer policy. <https://www.bmu.de/en/ministry/tasks-and-structure>

## Chapter 4: Methodology

To have justice, it becomes imperative first to identify existing injustices and then address underlying causes. Climate justice is, in many ways, inherently about praxis. Praxis means theoretically informed practice with reflection, one where there is continual feedback and integration (Sultana, 2022, p. 119).

This work aims to contribute to this praxis by analyzing gender-disaggregated data to establish the status quo in Germany and examining how the "2023 Climate Action Programme" (CAP23) may either address or reinforce these disparities. Through a mixed-methods approach, combining quantitative analysis of gender equality statistics with qualitative policy analysis, this study utilizes an integrative framework grounded in Feminist Political Ecology. The framework provides a nuanced perspective by addressing intersecting inequalities and structural power dynamics that influence environmental and social outcomes. This framework thus reflects on current inequalities and assesses the potential of climate policy to promote gender justice.

### 4.1 Research Design

Mixed-methods research combines qualitative and quantitative elements within a single study to offer a richer and more nuanced analysis of complex research problems (Schoonenboom & Johnson, 2017). This study's quantitative component analyzes gender equality statistics, while the qualitative component uses content analysis of the "2023 Climate Action Programme" (CAP23). This methodological combination enables an integrative view, addressing both statistical trends and policy frameworks, to enhance the depth and validity of findings (Knappertsbusch et al., 2021). Through this approach, the study aims to answer two central research questions related to the impact of climate policy on gender equality, using both data types to complement each other and corroborate insights for a comprehensive understanding:

1. What is the current state of gender equality in Germany in fields relevant to the climate-environment nexus?
2. What is the impact of CAP23s climate change mitigations measures on gender equality?

This study adopts an equal-status, sequential mixed-method design to balance quantitative and qualitative approaches throughout the research process, ensuring both methods contribute equally to answering the research questions (Schoonenboom & Johnson, 2017, p. 113; Knappertsbusch et al., 2021, p. 264). The quantitative analysis of gender inequality statistics is conducted first, followed by qualitative content analysis of CAP23, allowing for initiation, where contradictions between methods

can be explored, and expansion, where findings clarify and broaden the scope of the research by encompassing both statistical trends and policy content (Schoonenboom & Johnson, 2017, p. 110-112; Knappertsbusch et al., 2021, p. 264).

This complementarity enables quantitative data to provide generalizable trends while qualitative analysis adds contextual depth, allowing each component to refine and enhance the other. During the qualitative analysis phase, results are synthesized to examine whether policy goals align with gender disparities in Germany, creating a balanced and integrated approach. This facilitates triangulation to confirm findings, clarifies quantitative results through qualitative insights, and addresses contradictions through theoretical integration (Schoonenboom & Johnson, 2017, p. 115-117; Knappertsbusch et al., 2021, p. 266-267). Literature review references further support this integration by providing evidence and context, ultimately enabling a nuanced understanding of the gender-climate nexus.

Given the study's focus on gender equality and its use of a feminist framework, this research follows a transformative design. This approach is guided by theoretical frameworks that seek to address power imbalances and promote the interests of marginalized groups (Schoonenboom & Johnson, 2017, p. 118). In this study, the feminist framework ensures that the research critically examines how climate policies affect gender equality, advocating for social justice in climate-related decision-making. The goal is to contribute to meaningful social change by providing evidence-based recommendations on how climate policies can better address gender inequality (Knappertsbusch et al., 2021, p. 264).

## **4.2 Data Collection**

This section outlines the quantitative and qualitative data sources selected to support the analysis. Each data type plays a distinct role: quantitative data provides a measurable foundation for analyzing gender disparities across various socio-economic dimensions, while qualitative data offers insights into the policy framework governing Germany's climate action goals. Together, they inform the analytical framework, facilitating a comprehensive approach to evaluating the gender inclusivity of climate policies.

### **4.2.1 Quantitative Data Selection**

To establish a foundation for understanding gender-disaggregated indicators relevant to climate change mitigation, this analysis incorporates a variety of data sources. Key indicators include the Gender Pay, Care, and Pension Gaps, primarily from Destatis, Germany's Federal Statistical office, along with sector-specific data from transportation and agriculture, providing recent figures that contextualize gender disparities within these areas.

Additionally, data from the Gender Equality Index (GEI) 2023, published by the European Institute for Gender Equality (EIGE), enriches this analysis. The GEI tracks progress in gender equality across six domains: work, money, knowledge, time, power, and health, and addresses intersecting inequalities by considering age, disability, family type, and migrant background. This combination of sources allows for a comprehensive, data-driven foundation to assess gender-based disparities within climate-relevant sectors.

#### **4.2.2 Qualitative Data Selection**

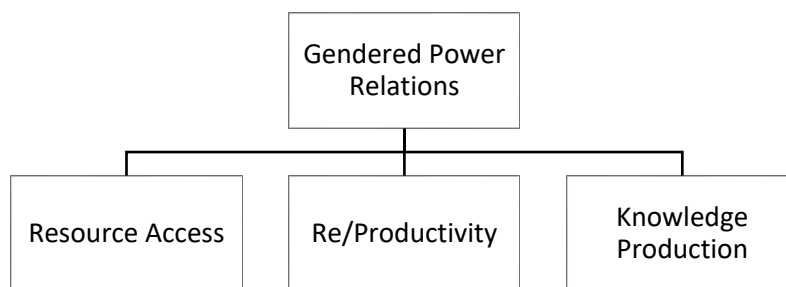
For the qualitative component, this study examines the “2023 German Climate Action Programme” (CAP23), the latest federal initiative aimed at achieving climate neutrality by 2045. The program addresses greenhouse gas reduction across key sectors, such as energy, transport, industry, buildings, agriculture, and land use, which are critical for the decarbonization of the German economy, making it central to the country’s climate strategy. It is particularly relevant for this work, as it reflects current policy directions and provides a timely opportunity to evaluate the extent to which gender considerations are embedded within climate policy.

### **4.3 Creating the Framework: Feminist Political Ecology in Praxis**

Gender frameworks serve as foundational tools for organizing gender analysis, allowing for the systematic exploration of core aspects of gender relations and enabling researchers to uncover and address structural gender inequities within specific contexts (WHO, 2020). To assess the gendered impacts of the “2023 German Climate Action Programme,” this study employs a gender framework developed through the lens of Feminist Political Ecology. This framework draws inspiration from the development of Gender Impact Assessment (GIA) tools, which have evolved from initial liberal feminist models to incorporate poststructuralist and intersectional approaches, broadening the capacity to examine complex socio-environmental dynamics (Sauer & Stieß, 2021; Hankivsky et al., 2019).

Four primary analytical categories, “Gendered Power Relations,” “Resource Access,” “Re/Productivity,” and “Knowledge Production”, were developed based on recurring themes from the theoretical foundation and literature review (see Figure 3.2). These categories serve as analytical tools, functioning as distinct “filters” through which to examine the data. “Gendered Power Relations” serves as a meta-level category, acting as an overarching lens across the entire program. Unlike other categories, which focus on specific sectors, such as energy, transport, buildings, industry, land use, and cross-cutting measures, “Gendered Power Relations” captures the broader, systemic power hierarchies that subtly influence gender dynamics across all policy areas.

Through the FPE lens, this framework integrates a feminist approach to examine the intersections of gender, environmental issues, and power structures within CAP23. By combining qualitative and quantitative data, it aims to determine whether these policies advance gender equality or reinforce systemic gender disparities.



*Figure 3.1: Feminist Political Ecology Framework*

Both quantitative and qualitative analyses are systematically structured around the categories of the framework, with each category applied as an analytical lens to examine the data. For the quantitative component, much of the data was pre-categorized by the source, facilitating straightforward alignment with the framework’s categories. Specific indicators, such as representation ratios and wage disparities, were mapped to relevant categories (e.g., wage gaps under “Resource Access,” leadership roles under “Knowledge Production”).

In the qualitative component, coding and thematic analysis techniques were used to identify and classify relevant sections within the policy document according to each category. For instance, measures involving subsidies or discounts were categorized under “Resource Access,” while statements on economic participation were placed within “Re/Productivity.” This structured alignment enabled each data point to be integrated cohesively within the framework, facilitating a unified interpretation of quantitative findings in the context of qualitative insights.

Intersectionality was not applied as a separate category but was embedded in the analysis of gendered impacts within each framework category. At each step, the analysis considers whether impacts seen in the CAP23 might differ for individuals with intersecting identities and how gendered impacts may interact with other social dynamics. This integrated approach ensures a holistic consideration of social justice concerns alongside gender equality, aligning with the FPE emphasis on structural critique.



### **Gendered Power Relations**

guides the analysis in identifying power dynamics within climate policies that affect men, women, and marginalized groups differently, helping to uncover a symbolic order that underpins gender hierarchies. By applying this lens, the analysis examines whether climate policies challenge or reinforce these hierarchies and assesses the inclusivity of climate governance structures.

**Resource Access** guides the analysis of how climate policies address access to critical resources, considering how power dynamics and structural factors may influence who benefits from these. It focuses on identifying disparities in access based on gender and assessing whether policies address the needs of marginalized groups. By applying this filter, the analysis examines how policy choices reinforce or challenge existing resource distribution and inclusivity inequities.

**Re/ Productivity** focuses on the balance between productive and reproductive spheres, examining whether policies reinforce or bridge gendered divides in labor recognition and economic opportunities. By applying this category, the analysis considers how policy choices impact gender equality, particularly regarding reproductive responsibilities.

**Knowledge Production** guides the analysis of whose knowledge is prioritized in climate policy and how power dynamics shape the inclusion of diverse perspectives. It focuses on the (lack of) representation of gendered viewpoints and considers how policy choices may reinforce or challenge existing social hierarchies in environmental governance. By applying this category, the analysis pays close attention to potential barriers restricting marginalized groups' contributions and evaluates how policy design may influence knowledge production hierarchies.

*Figure 3.2: Feminist Political Ecology Framework Categories*

## Chapter 5: The Analysis

This chapter presents a comprehensive mixed-methods analysis combining gender-disaggregated data (section 5.1) and a content analysis of the “2023 Climate Action Programme” (section 5.2) to address the question of how German climate change mitigation measures impact gender equality. Utilizing an intersectional Feminist Political Ecology framework, the analysis is structured around four key categories: Gendered Power Relations, Re/Productivity, Resource Access, and Knowledge Production. By examining the interconnections among disparities, this chapter reveals dynamics that either reinforce or challenge existing gender inequalities within Germany’s climate initiatives.

### 5.1 Quantitative Analysis

The economic and social inequalities observed in Germany reveal gendered power relations that underpin economic and environmental structures. Feminist Political Ecology highlights that these inequalities are not isolated but intersect with capitalist and patriarchal systems, positioning men in dominant roles while confining women, particularly those from marginalized groups to dependent or secondary positions.

This quantitative analysis explores how wage disparities, caregiving responsibilities, access to resources, and representation in decision-making converge to sustain and reinforce structural inequalities, with intersecting factors like migration status, disability, and age further intensifying these imbalances.

#### 5.1.1 Re/Productivity: Bridging Economic and Care Responsibilities

The economic dependency of women in Germany and their constrained participation in the labor market highlight the interdependence between the productive (market) and reproductive (household) spheres. The concept of *re/productivity* bridges this divide, revealing how the labor performed within households is inseparably linked to and supports the formal economy.

The gender pay gap in Germany, measured at 6% in 2023 (Destatis, 2023), highlights only part of the structural disparities between men's and women's earnings. Focusing on gross hourly wage differences, this figure does not capture the more profound, cumulative effects of part-time work and career interruptions, disproportionately affecting women. The broader gender overall earnings gap, including hours worked and employment rates, was reported at 39% in 2023 (ibid.), underscoring women's compounded economic limitations due to caregiving responsibilities and part-time employment. This disparity reflects FPE's critique of how capitalist structures rely on undervalued

reproductive labor to sustain the productive economy, reinforcing a hierarchy where men's work is more fully compensated.

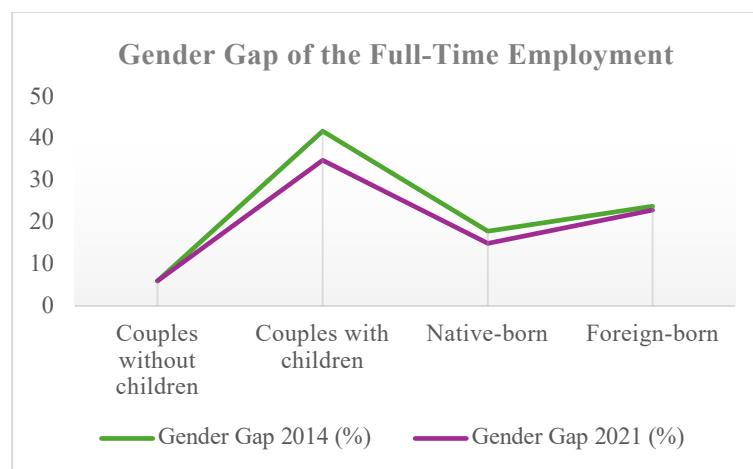


Figure 4.1; Source: Gender Equality Index 2023

The Gender Employment Index (GEI) data also highlights persistent employment inequalities. Among couples without children, 40% of women work full-time compared to 46% of men. This gap widens significantly in households with children, where 55% of women work full-time compared to 90% of men, a 35-percentage-point disparity. Although this gap has narrowed from 42 points in 2014, it reflects the systemic limitations on women's labor market participation due to caregiving responsibilities. Foreign-born women face additional layers of discrimination, with an employment rate of 39% compared to 62% for foreign-born men, a gap that has only slightly improved since 2014 (EIGE, 2023). These intersecting identities of gender, migration, and caregiving roles reveal how structural inequalities restrict access to full employment, thereby curtailing women's economic independence and reinforcing financial dependency.

The gender care gap further illustrates these disparities, with women performing 44.3% more unpaid care work than men, averaging 79 additional minutes per day dedicated to caregiving tasks. This unpaid labor encompasses childcare, elder care, household responsibilities, and time that is unavailable for paid employment and directly impacts economic autonomy. For instance, among couples without children, 8% of women provide daily care compared to 3% of men, while among couples with children, 45% of women provide daily care in contrast to 25% of men (ibid.). This imbalance in caregiving responsibilities constrains women's career advancement and earning potential.

Moreover, disability status introduces additional complexity. Among individuals with disabilities, 23% of women provide daily care versus 19% of men (ibid.). These gendered expectations surrounding care work limit women's economic participation, reinforcing structural dependencies within the household and impacting long-term financial security.

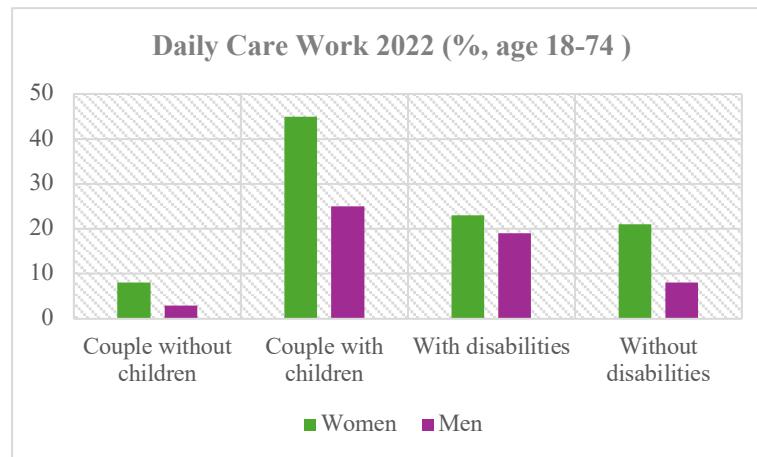


Figure 4.2; Source: Gender Equality Index 2023

The cumulative effect of these economic and caregiving responsibilities is especially apparent in retirement. The gender pension gap reveals how a lifetime of wage disparities and caregiving roles impacts financial security for women in old age. Women aged 65 and older receive an average annual pension of €18,700 compared to €25,600 for men, translating to a pension gap of 27.1% (Destatis, 2023). This gap is due to factors like lower pay, more frequent career breaks, and part-time employment, leaving 20.8% of women aged 65+ at risk of poverty compared to 15.9% of men at the same age (ibid.). The analysis, through the lens of re/productivity, reveals the critical role that caregiving labor plays in sustaining market productivity and reinforcing economic hierarchies. The accumulation of these “gender gaps” over a lifetime underscores how caregiving roles, predominantly borne by women, shape long-term financial dependency.

### 5.1.2 Resource Access and Limitations

Women’s restricted access to essential resources, such as land and sustainable transportation, highlights structural inequalities that limit their participation in economic and environmental spheres. Ecofeminist critiques have long argued that patriarchal systems reinforce male control over resources, often linking these dynamics to historical frameworks that place men in alignment with culture and women with nature.

This perspective resonates with the data showing that in 2020, only 10% of agricultural landholders in Germany are women, limiting their influence over land-based decision-making crucial for agriculture and renewable energy (Eurostat, 2024). Although women comprise 35% of agricultural workers, they occupy predominantly lower-status roles, with 32% in family or permanent positions and 44% as seasonal workers, but only 11% hold managerial roles (Bundesinformationszentrum Landwirtschaft, 2024). These patterns align with ecofeminist perspectives on the gendered control of resources, emphasizing women's barriers to attaining equal influence over land and resource governance.

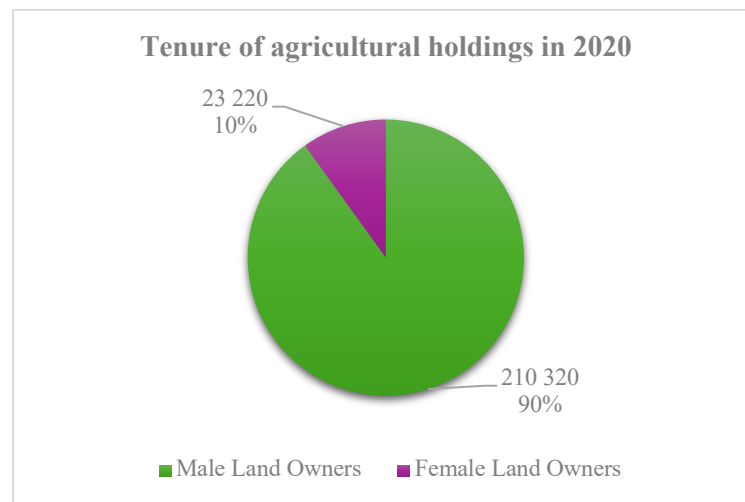


Figure 4.3; Source: Eurostat 2024

Transportation data also underscores gendered disparities in access to high-cost, sustainable resources. Electric cars, with prices starting around €45,000, remain relatively expensive. This likely contributes to the lower proportion of women purchasing new electric cars, just under 28%, compared to their 36% share of all registered vehicles (Deutscher Frauenrat, 2023, p. 8). These gaps suggest structural limitations that restrict women's mobility and reinforce a hierarchy where men can access more sustainable, higher-cost resources. According to FPE, such disparities in resource access perpetuate gendered power dynamics by limiting women's autonomy in environmental and economic spheres, confining them to roles where they have less control over resource-based decisions and sustainability options.

Furthermore, housing costs add a significant financial burden that disproportionately impacts women, reflecting vulnerabilities tied to lower participation in the formal labor market and unpaid caregiving responsibilities. In 2023, approximately 14.6% of women in Germany lived in households where over 40% of disposable income was spent on housing, compared to 12.7% of men (Statista, 2023). For over 13 years, women have consistently faced higher housing cost burdens. The housing cost overburden rate measures the percentage of households where total housing costs, factoring in net rent, ancillary costs, energy, water, property maintenance, and loan interest, exceed 40% of net disposable income (after subtracting housing benefits) (ibid.). This financial strain limits women's disposable income for other essentials and intensifies their economic vulnerability. Compounded by wage gaps, caregiving duties, and restricted career advancement, these housing costs create a layered disadvantage that hinders women from securing stable, affordable living conditions.

### 5.1.3 Knowledge Production and Marginalized Perspectives

In governmental leadership, recent data shows positive progress in women's representation. Within the BMUV, the share of women in leadership positions was 47% in 2023. Similarly, the BMWK had a representation of women in leadership positions of 46% in 2023 (BMWK, 2022). The correlation between BMWK's leadership diversity and its growing influence on Germany's climate change agenda suggests that gender equality measures are increasingly integrated into the ministry's broader strategic objectives. However, even in this case, the more technical the department, the lower the representation of women, reflecting the broader trend of gender inequality in the energy sector (Deutscher Frauenrat, 2023). Despite these improvements in government leadership, women's representation remains limited in other important sectors, such as energy and transport, restricting their contributions to environmental governance and sustainable climate solutions. For instance, in the energy sector, only 15.5% of executives are women, and 6% hold CEO roles (PwC, 2022), while women comprise just 26% of the workforce overall (EIGE, 2023). The transport sector reveals similar disparities, with men comprising 76% of the workforce, leaving women significantly underrepresented at just 24% (ibid.). This structural underrepresentation highlights how traditional power structures limit women's influence on climate policy decisions, often excluding their perspectives from crucial areas of policy and innovation.

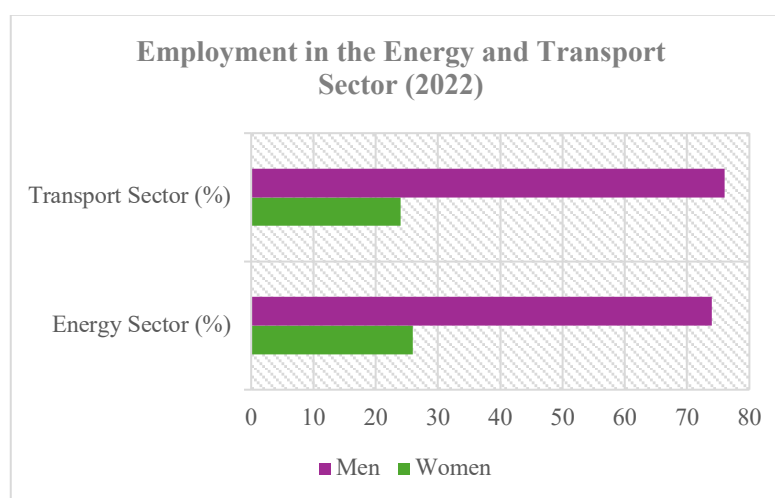


Figure 4.4 Source: Gender Equality Index 2023

These exclusions reveal how dominant patriarchal norms shape knowledge production, determining whose contributions are deemed credible and which perspectives are prioritized. By marginalizing women's insights to informal or undervalued spheres, this framework preserves male-dominated decision-making structures. This dynamic is particularly evident in energy technology, where women's underrepresentation as inventors in patent applications further restricts their influence on the development of emerging energy solutions (Kuschan et al., 2022). Such a male-dominated model restricts diversity in knowledge creation, maintaining an energy paradigm that sidelines women's

contributions and perspectives and, by extension, perpetuating environmental policies that may lack inclusivity and effectiveness. Despite limited formal influence, women demonstrate higher engagement in environmentally responsible behaviors, with 34% regularly avoiding animal products compared to 22% of men and 49% avoiding single-use plastics versus 43% of men (EIGE, 2023), underscoring the need to recognize and integrate these perspectives into formal environmental governance, challenging the established frameworks that overlook valuable contributions.

#### **5.1.4 Revealing the Underlying Structural Hierarchy**

The data on economic dependency, caregiving expectations, restricted resource access, and exclusion from decision-making processes reveal a deeply entrenched system of gendered power relations that sustains male dominance across both economic and environmental spheres.

Through the lens of Feminist Political Ecology, it becomes evident that these disparities, whether in income, resource access, or leadership representation, are interconnected elements of a broader structural hierarchy. This system reinforces patriarchal and capitalist values that position men's labor, perspectives, and contributions as central while confining women, especially those from marginalized groups, to dependent or secondary roles.

FPE critiques this hierarchy as both structural and institutionalized, perpetuating gendered separations between the productive and reproductive spheres and reinforcing barriers to equality in resource access and governance. Addressing these systemic inequalities requires not only targeted policy reforms but also a reimagining of who holds power and whose contributions are recognized in shaping the future of climate and environmental governance.

### **5.2 Qualitative Analysis**

As outlined in Chapter 3, despite initiatives aimed at gender mainstreaming and parity within German ministries, climate policies largely adopt a gender-neutral or even gender-blind approach, prioritizing technological innovation and economic growth while overlooking explicitly gendered impacts. This neutrality risks overlooking how climate policies affect people differently.

The qualitative analysis in this chapter employs an FPE framework to explore how CAP23's measures intersect with complex social dynamics. Through the feminist lens, the analysis uncovers patterns in gendered power relations, resource access, re/productivity, and knowledge production, illuminating how seemingly neutral policies may perpetuate or amplify existing inequalities.

### **5.2.1 Gendered Power Relations**

The "2023 Climate Action Programme" adopts a broad, technologically driven approach to climate mitigation that lacks explicit gender-transformative measures. By centering on technical solutions, CAP23's gender-neutral stance risks overlooking how different groups experience climate policies, potentially reinforcing existing power dynamics and inequalities. Viewed through the lens of Feminist Political Ecology (FPE), this approach can marginalize those impacted by socioeconomic and gendered disparities.

While CAP23 articulates a goal of a "socially just" transition, stating that "climate change mitigation, economic policy, and social equilibrium need to be considered in a more integrated way than in the past" (CAP23, p. 1), its technocratic focus frames climate change as a technical challenge, downplaying the social dimensions essential for equitable action. Prioritizing productivity and expertise in male-dominated sectors like energy, industry, and STEM reinforces existing hierarchies, assuming universal benefit. This "masculinization" of environmental policies sidelines socio-cultural needs and narrows the framework for a genuinely inclusive transition.

Though CAP23 includes "Cross-Cutting Measures" aimed at promoting a "socially just transition" (CAP23, p. 27), these remain primarily gender-neutral, overlooking intersectional factors that shape inequities. Without gender-specific measures, CAP23 risks excluding women from marginalized backgrounds who may face compounded vulnerabilities, reinforcing socio-political hierarchies within climate governance. The program's inclusion of youth in decision-making (CAP23, p. 29) is a positive step. Still, it lacks explicit provisions for gender-balanced representation, underscoring broader critiques within FPE: climate policies frequently omit diverse, intersectional perspectives necessary for inclusive governance. By not directly addressing gendered disparities or intersectional needs, CAP23 inadvertently sustains a governance structure favoring male-dominated fields, limiting the influence of marginalized groups.

The following sections further explore the embedded power dynamics within CAP23, illustrating how they shape each sector's approach to climate action and use the previously analyzed data on gender disparities in income, land ownership, and mobility to examine CAP23's impact.

### **5.2.2 Resource Access and Gendered Barriers in CAP23**

#### **Energy Sector: Barriers to Equitable Access**

The CAP23 aims to expand renewable energy by revising multiple critical policies, such as the Renewable Energy Sources Act (CAP23, p. 4), setting ambitious goals for renewable energy production. However, these initiatives often require significant upfront investment, limiting access for lower-income households, many of whom are female-led. Female-headed households are more likely to experience



energy poverty, constrained by lower income levels and unpaid caregiving responsibilities that restrict their ability to invest in capital-intensive renewable energy systems (Bleckmann et al., 2016; Großmann, 2017). The gender overall earnings gap of 39% (Destatis, 2023) highlights economic disparities that inhibit women's ability to invest in high-cost initiatives like rooftop solar or electric vehicle charging infrastructure.

Although the CAP23's "solar package" (CAP23, p. 5) facilitates the installation of photovoltaic systems on residential buildings, it lacks specific provisions addressing the affordability of solar power for low-income households, which often includes female renters or single mothers. Women are less likely to own property (see Chapter 2.2) and thus benefit from ownership-based incentives. This reinforces a structural exclusion, privileging capital-rich demographics while marginalizing those with fewer assets.

The proposed reform of taxes and levies in the energy sector to align with greenhouse gas neutrality, which "will take into account the social acceptability for low-income households and the competitiveness of companies" (CAP23, p. 28), is a positive step. However, without targeted support for female-led low-income households disproportionately affected by rising energy prices, this reform risks perpetuating economic inequalities rather than alleviating them.

### **Buildings Sector: Ownership-Centric Funding and Its Limitations**

The CAP23 emphasizes "ensuring housing remains affordable for owner-occupiers and tenants" when implementing climate measures in the buildings sector (CAP23, p. 6). While this commitment signals an inclusive approach, the program's climate goals in the buildings sector also primarily focus on energy efficiency improvements that benefit property owners. Subsidies and financial support for retrofitting and heating upgrades are designed to incentivize owners to invest in energy-efficient measures. However, women, who are statistically more likely to rent than own property, are excluded from these ownership-focused incentives, facing structural barriers that limit their access to energy savings.

The "Federal Funding for Efficient Buildings" (BEG) exemplifies this ownership bias. Though intended to prevent households from being "overburdened with new investments" (CAP23, p. 7), BEG subsidies are directed predominantly toward owner-occupiers, leaving female renters, particularly older women, with a 21% at-risk-of-poverty rate (EIGE 2023), without access to direct energy efficiency benefits. Adding to this economic strain, housing costs significantly burden women in private households, linked to lower formal labor market participation and caregiving responsibilities (see Chapter 5.1.2). While the "CO2 Cost Sharing Act" (CAP23, p. 6) aims to alleviate heating costs by distributing them between landlords and tenants, it does not resolve renters' lack of access to energy-saving upgrades, underscoring a gendered economic disadvantage that CAP23's current structure fails to address.

## **Transport Sector: Gendered Barriers in Access and Mobility**

The Federal Government outlines its vision for the transport sector, committing to "ensure mobility for society, provide for affordable, demand-driven, sustainable, efficient, barrier-free, intelligent, innovative and socially just mobility [...]" while ensuring affordability "especially for disadvantaged social groups" (CAP23, p. 13). While these aims suggest an inclusive approach to mobility, a closer analysis of CAP23's measures reveals gaps in addressing the gender-specific needs and barriers that persist within the transport sector.

CAP23 emphasizes incentives for private vehicle ownership and improvements to public transportation infrastructure, aiming to place 15 million battery-electric vehicles (BEVs) on German roads by 2030 (CAP23, p. 13). The program's collaboration with car manufacturers and trade unions to achieve this target is supported by the European Commission's "Fit for 55" package, including proposals for tax reductions on renewable fuels like biofuels and e-fuels and a targeted tax structure for climate-neutral technologies. While these incentives largely support the shift to climate-neutral vehicles, they primarily benefit individuals with the financial capacity to invest in these high-cost options, inadvertently disadvantaging lower-income groups, including women. Considering the gender overall earnings gap of 39%, women face heightened financial constraints, limiting their ability to afford these climate-neutral vehicles, typically costing €45,000 or more. Although electric vehicle adoption is rising, only 28% of new electric car buyers are women. Additionally, since 60% of newly registered electric cars are company-owned, these vehicles remain mainly inaccessible to women, who are less frequently employed in roles offering company cars. Therefore, women account for just 3.2% of company car users (Deutscher Frauenrat, 2023, p. 8). The program's focus on private vehicle incentives thus aligns more closely with masculine commuting patterns while failing to address the practical transportation needs of women and other low-income groups relying heavily on public transportation.

Public transportation measures within CAP23, such as the €49 "Deutschlandticket", a nation wide public transport ticket introduced in 2023, aim to make local and regional transit more affordable. However, rising ticket costs and the "possibility of a discount for employers as a job ticket" (CAP23, p. 14) could limit accessibility for women, who may have less access to employer-provided discounts due to lower full-time employment rates and a higher likelihood of part-time work. Financial constraints and caregiving responsibilities shape women's reliance on public transit, as women are more likely to use public transit options than men, often taking multiple trips to fulfill daily household needs (Kronsell, 2016, p. 25).

Safety concerns further highlight gaps in CAP23's transport approach. CAP23 does not address critical safety concerns on public transit systems, disproportionately affecting women's ability to access essential services and safe, affordable transportation options (WECF, 2021, p. 111). Additionally, vehicle safety standards based on male body norms increase women's risk of injury in traffic accidents

by 47% to 71% (Deutscher Frauenrat, 2023, p. 8), adding to the existing inequities in both vehicle access and safety.

Women also tend to engage in transportation behaviors with lower CO2 emissions, often relying on public transit, walking, and other sustainable alternatives. However, CAP23's transportation policies, overlook the gender-specific reliance on public transport and sustainable mobility patterns that women more frequently follow (WECF, 2021, p. 111).

### **Land Use Sector: Barriers to Sustainable Land Use**

CAP23's land use measures, grounded primarily in property ownership and private capital investment, inadvertently sustain a gendered hierarchy in which access to climate action benefits is limited for women and marginalized groups. The program promotes climate-aligned agriculture and land management through financial incentives and funding primarily for landowners in the land use sector. The measures demonstrate how climate policy can impact access to critical resources, especially when power dynamics and structural inequalities favor certain groups.

For example, CAP23 mentions the further development of funding to increase energy efficiency in agriculture through renewable energy and alternative drive technology adoption (CAP23, p.21). This funding promotes battery-electric drives, fuel cells, and biofuels in agricultural machinery, benefiting landowners who hold the majority of property and resources. Additional financial incentives for biodiversity and climate services in forests (CAP23, p.22) encourage practices that enhance ecosystem health, while the "Sustainable and regional value-added networks for wood as a raw material" initiative (CAP23, p.24) supports regional value chains for climate-friendly wood use through model projects and outreach.

However, structural factors within the land use sector limit who can benefit from these resources. Only 10% of agricultural landholders in Germany are women (Eurostat, 2024), and just 11% of women in agriculture hold managerial roles (Bundesinformationszentrum Landwirtschaft, 2024), significantly restricting their access to the resources CAP23 provides for land-based climate mitigation efforts. With men more represented among landowners, they are disproportionately positioned to benefit from these measures. This concentration of critical resources and decision-making power among certain social groups restricts women's access to these climate benefits, thereby reinforcing historical inequities in resource control.

Thus, CAP23's land use measures, grounded in property ownership and private capital investment, inadvertently sustain a gendered hierarchy in which access to climate action benefits remains limited for women and marginalized groups. This not only aligns with data showing that, although women make up 35% of the agricultural workforce, they largely occupy lower-status roles (see Chapter 2.3.6), but also risks entrenching these patterns by overlooking targeted measures to engage women in climate initiatives.

## **Cross-Cutting Measures: Ensuring an Equitable Transition**

As "phasing out climate-damaging subsidies" (CAP23, p.28) is crucial in combating climate change, incorporating a gendered perspective is essential to avoid reinforcing existing economic disparities. Redirecting funds to sustainable investments could disproportionately impact women, who face greater economic vulnerability; for instance, 20.8% of women aged 65+ are at risk of poverty, compared to 15.9% of men, and women experience an overall earnings gap of 39%. This economic disparity is already evident in the purchase of electric vehicles (EVs), where women make up only 28% of new EV purchases, likely due to high starting prices of around €45,000. Without attention to these gendered economic realities, subsidy reform risks favoring those already positioned to afford sustainable options, while resources that women currently rely on may become more expensive.

### **5.2.3 Re/Productivity and Gendered Barriers in CAP23**

#### **Buildings Sector: Structural Inequities in Energy Efficiency and Technical Training Access**

In the buildings sector, CAP23 promotes energy efficiency improvements primarily through incentives for property owners, reinforcing a productive-sphere focus on investment and infrastructure growth. This market-oriented approach reinforces disparities by privileging property ownership, aligning more with male-dominated sectors in finance and technical decision-making. Meanwhile, CAP23's assertion that "reducing heat demand... contributes significantly to greater comfort, resilience, and security of supply" (CAP23, p.6) remains out of reach for many caregivers, who would benefit most from increased comfort due to their time spent at home.

Furthermore, the programs's "Heat Pump Initiative" (CAP23, p. 9), promotes technical training programs for heat pump installation and maintenance. However, as technical fields remain predominantly male-dominated, and care work impacts women's ability to participate in specialized training programs, particularly in sectors requiring significant time and resources, this initiative risks reinforcing occupational divide. By prioritizing technical skills without addressing structural barriers that limit women's access, CAP23 overlooks opportunities to enhance gender equity in economic participation within the energy sector.

#### **Transport Sector: Balancing Technological Advancement and Inclusive Mobility Solutions**

In the transport sector, CAP23's emphasis on EV incentives and a "Master Plan for Charging Infrastructure" (CAP23, p.17), oriented toward private vehicle ownership, reflects a strong focus on market-driven solutions aligned with a productive-sphere orientation. CAP23 highlights that "the conversion to alternative drive technologies will make affordable individual mobility possible also in

the future and herald a new era for Germany as an automobile nation” (CAP23, p.13). While this shift is essential for climate change mitigation, the re/productivity lens critiques this focus, as it emphasizes climate-neutral economic growth while often overlooking unpaid reproductive labor, such as caregiving trips, essential for household and environmental sustainability. By prioritizing technological and market solutions, CAP23 risks reinforcing the separation between productive and reproductive spheres, ultimately sustaining gendered inequities and limiting a comprehensive, inclusive approach to climate goals. This is especially relevant given the Gender Care Gap, which shows that women bear a disproportionate share of unpaid caregiving responsibilities, which often constrains their mobility options and access to resources.

However, CAP23 also makes positive strides by focusing on public transport improvements, such as “the modernization of the rail network and the necessary expansion of capacities for passengers” (CAP23, p.14). These benefit women who rely on public transit for multi-stop caregiving trips. Additional funding to strengthen local and regional public transport “encourages a shift away from private motorized transport” (CAP23, p.15), aligning with gendered travel patterns and addressing some aspects of reproductive labor. While these public transit improvements align with broader goals of climate and social justice, the lack of gender-transformative measures that bridge productive and reproductive spheres highlights a gap in CAP23’s approach to equitable mobility.

### **Agriculture and Land Use Sector: Recognizing Reproductive Labor in Sustainable Land Management**

In the agriculture and land use sectors, CAP23 promotes sustainable farming practices and land management through subsidies aimed at economic growth and productivity, primarily benefiting predominantly male landowners. While this productive focus addresses ecological goals, it overlooks the essential contributions of unpaid reproductive labor, such as caregiving and household maintenance, which underpin both household and environmental sustainability. CAP23's market-driven approach separates productive and reproductive labor, missing the broader ecological stability that unpaid labor supports.

For example, CAP23's "National Strategy for Food Waste Reduction" aims to halve food waste across sectors by 2030, focusing on households, where around 60% of food waste, approximately 11 million tonnes, is generated. Through the "Too good for the bin!" campaign, CAP23 promotes sustainable behaviors like food waste reduction, often adding to the unpaid domestic labor primarily taken on by women. This reinforces a "double burden" for women who balance formal employment with household tasks that support climate mitigation efforts (see Chapter 2.3.4). In this context, "sustainability jobs" at home, such as managing food waste, recycling, and energy use, all mainly on women, intensifying their unpaid workload.

GEI data shows that women with children, migrant women, and women with disabilities face additional caregiving burdens, limiting their participation in the "green economy." CAP23's agriculture

and land use policies risk reinforcing social inequities and perpetuating gendered labor and resource access divisions within climate initiatives without addressing these disparities.

### **Industry and Cross-Cutting Measures: Gendered Barriers in Green Job Initiatives**

In the industry sector, CAP23 underscores the importance of leveraging “reinvestment windows” to achieve a “climate-friendly transformation and the application of innovative, climate-neutral technologies of the future,” aiming to protect existing jobs and create new ones (CAP23, p.10). This emphasis on climate-neutral technologies and job creation overlooks persistent gender gaps in employment access and pay equality, particularly in high-tech fields. The focus on creating “green jobs” without addressing underlying structural barriers risks leaving these opportunities largely inaccessible to women. Furthermore, CAP23’s narrow focus on market-based productivity often sidelines unpaid care work, an essential but undervalued component of climate action that is primarily performed by women (see Chapter 2.3.1).

The productive impacts of CAP23’s policies extend into green job creation within male-dominated STEM fields in the energy sector. The programs cross-cutting measure to ensure skilled labor for climate change mitigation mentions that the “Alliance for Education and Training” seeks to increase participation in STEM and climate-related professions within Germany’s dual vocational training system (CAP23, p.26). While these measures align with the technical demands of the green economy, they reflect a productive orientation that overlooks gender-specific barriers in accessing green jobs. This omission may inadvertently reinforce the existing gender divide, constraining women’s entry into high-growth sectors like renewable energy and STEM-based climate solutions.

## **5.2.4 Knowledge Production and Gendered Barriers in CAP23**

### **Energy Sector: Reinforcing Knowledge Hierarchies in Renewable Development**

CAP23’s push to expand renewable energy reflects a sector where women’s representation remains notably low, especially in leadership and technical roles. Currently, only 15.5% of executive roles are held by women, and just 6% occupy CEO positions within the energy sector (PwC, 2022).

With CAP23 accelerating “calls for tenders” for offshore wind projects under the revised “Offshore Wind Energy Act” (CAP23, p.5), this existing leadership structure, where over 80% of decision-making positions are male-dominated, may reinforce frameworks that favor male-led perspectives. Such dominance risks marginalizing alternative insights, as the emphasis on technical expertise, without deliberate inclusion of gender-diverse perspectives, perpetuates the exclusion of women’s contributions to sustainable energy development.

Furthermore, the workforce in energy remains skewed, with women comprising only 26% overall (EIGE, 2023). The updated “Energy Research Programme” under the program emphasizes a

rapid scale-up of innovative technologies (CAP23, p.5), yet this prioritization of established industry expertise, which is predominantly male-led, may inadvertently sideline gender-diverse contributions.

Insights from women's lived experiences often incorporate essential social and environmental perspectives, as they tend to incorporate more sustainable behaviours in their everyday lives (see Chapter 5.1.3), yet male-dominated knowledge frameworks frequently overshadow sustainable practices developed and upheld by women, especially in household energy use (see Chapter 2.3.3).

### **Buildings Sector: The Missing Social Dimensions in Energy Policy**

The CAP23's buildings sector measures prioritize technical upgrades such as retrofitting, heating system optimization, and energy efficiency standards to improve building performance. Notable initiatives include the "Buildings Energy Act", which sets energy requirements for property owners; the "Federal Funding for Efficient Buildings", which supports energy renovations; and the "Heat Planning Act", (CAP23, pp.6), which promotes district heating networks. These measures reflect a strong technical focus, primarily addressing structural upgrades and efficiency metrics rather than integrating social and behavioral knowledge that reflects lived experiences in energy use.

While these policies establish frameworks for energy efficiency, there is a notable gap in the inclusion of gendered aspects of energy management. Managing daily energy-intensive tasks, such as cooking and cleaning, significantly impacts household energy consumption. CAP23's focus on structural improvements overlooks these social dimensions, leaving an untapped opportunity to incorporate gendered insights into planning processes. Men and women interact with infrastructure differently, highlighting the importance of gender perspectives in making infrastructure planning more inclusive and equitable (see Chapter 2.3.1). CAP23's current measures, by not addressing these varied experiences, may fall short in accounting for the full range of energy-use patterns across households.

Moreover, measures like the "Timber Construction Initiative" and "Serial Renovation" (CAP23, p.7) emphasize technical knowledge and favor established stakeholders with access to resources and expertise. To broaden inclusivity, CAP23 could benefit from a multi-level gender mainstreaming approach, ensuring that gendered needs and behaviors are systematically considered in infrastructure design and planning (see Chapter 2.3.1). Low-income women, single parents, and retirees, who often face greater energy needs and higher heating costs due to housing inefficiencies, would particularly benefit from such inclusivity in planning (Deutscher Frauenrat, 2023).

### **Industry Sector: Knowledge and Gender Dynamics in Innovation**

In the industry sector, the "Carbon Contract for Difference" (CCfD) (CAP23, p.10) prioritizes technical and economic knowledge, focusing on cost recovery for climate-friendly innovations in high-emission industries. While "companies receiving funding under a carbon contract for difference are generally required to submit a human resources development plan to ensure that the interests of employees are

taken into account in the technological transformation” (CAP23, p.10), the predominance of men in these sectors suggests that these plans, while beneficial in addressing workforce needs, may fall short on gendered aspects. Women comprise for only 26% of the workforce (EIGE, 2023), meaning that gender-specific interests may be overlooked, limiting the scope of inclusivity in workforce development. Without specific mandates for gender inclusivity, these plans risk reinforcing existing gender imbalances and potentially overlooking valuable gendered perspectives that could contribute to more comprehensive climate solutions.

The “EU Innovation Fund” (CAP23, p.11) similarly emphasizes technical innovation within the energy transition. With only 15.5% of women in leadership positions in the energy sectors, this focus risks establishing a knowledge hierarchy that devalues experiential and community-based insights, often contributed by women and marginalized groups, particularly on issues like energy accessibility and community-centered solutions. Lacking explicit measures to support gender-diverse voices, the fund may inadvertently reinforce traditional knowledge hierarchies, reducing policy responsiveness to gender-specific needs in resource distribution (Deutscher Frauenrat, 2023; EIGE, 2021; Kuschán et al., 2022). Moreover, the “excellence” criterion of the EU Fund for selecting projects in renewable energy, hydrogen, and decarbonization (CAP23, p.11) may unintentionally limit access for women and marginalized groups facing systemic entry barriers in technical and leadership roles. By prioritizing conventional notions of “excellence,” these competitive funding models favor established demographics, typically men, over more diverse, community-driven projects. This exclusionary pattern is seen in citizen energy projects, where older, educated individuals (often men) dominate, effectively excluding women, migrants, and low-income groups from active participation in the energy transition (Kuschán et al., 2022, p.21). Consequently, CAP23’s reliance on competitive funding perpetuates structural inequalities, establishing a knowledge hierarchy that privileges traditional, male-dominated perspectives and reinforcing gendered power dynamics in climate innovation.

### **Transport Sector: Navigating Knowledge Gaps in Inclusive Mobility**

The CAP23's transport sector measures emphasize technological solutions for decarbonizing mobility, including rail infrastructure expansion and a target of 15 million battery-electric vehicles by 2030. Additionally, the policy prioritizes e-fuels through an "E-fuels dialogue" (CAP23, p.16), involving industry stakeholders from sectors like automotive and aviation to address regulatory barriers and develop a roadmap for synthetic, climate-neutral fuels. As this dialogue seeks to accelerate e-fuel adoption, it primarily centers on technical expertise from industry, potentially overlooking broader societal and gendered perspectives on sustainable mobility.

With men constituting 76% of the transport workforce (EIGE, 2023), these seemingly gender-neutral measures risk perpetuating a knowledge hierarchy that limits diverse contributions and reinforces a male-dominated framework within the transport sector. By prioritizing industry



perspectives, CAP23 risks creating policies emphasizing market-driven solutions and technological fixes over understanding how different groups experience and contribute to mobility.

Safety remains another critical dimension of transportation policy, particularly impacting women's mobility, as many women adjust their routes, travel times, or transport modes due to safety concerns on public transit (see Chapter 2.3.5). CAP23 includes the "Modernisation of the Road Traffic Law," which "will be adapted to take into account the objectives of climate change mitigation and environmental protection, health, urban development, as well as traffic flow and safety." (CAP23, p. 20). Although the modernization of the road traffic law provides federal states and municipalities with the possibility to adapt traffic regulations, the absence of gender-specific objectives may limit the development of truly inclusive and responsive safety measures. Without a more explicit focus on integrating diverse perspectives, this approach overlooks how different groups experience public spaces and transport systems, ultimately hindering the creation of a socially responsive transport policy that meets the population's varied safety and mobility needs.

### **Land Use: Inclusive Knowledge for Equitable Conservation**

In the regional and land use sectors, CAP23 promotes sustainable practices primarily through targeted funding programs, public-private partnerships, and specialized initiatives. Although these measures are available to all landowners, only 10% of agricultural landholders in Germany are women, meaning the perspectives shaping and benefiting from these policies remain predominantly male. This gender disparity reinforces historical power dynamics in land management and environmental decision-making, often excluding diverse viewpoints that could make land use policy more equitable and inclusive.

For example, "accelerating the rewetting of peatlands" involves a "federal call for tenders for the purchase of specific areas in order to promote rewetting projects" (CAP23, p. 23). This likely addresses established organizations and landowners with the capital and expertise to participate. This approach can reinforce traditional knowledge hierarchies, where male-dominated ownership structures determine land management priorities and methods.

The "protection of old-growth, near-natural beech forests" (CAP23, p. 22) aims to halt deforestation on federally owned land, with plans to extend these efforts through an "alliance of volunteers" among other public forest owners, such as the federal states and municipalities. This voluntary alliance fosters collaboration and thus presents an opportunity for incorporating diverse perspectives. However, its reliance on public land management frameworks potentially limits the diversity of knowledge shaping conservation practices, which may constrain the development of more transformative, gender-inclusive approaches to sustainable land management and impact both equity and ecological resilience.

## **Cross-Cutting-Measures: Inclusive Knowledge for a Socially Just Transition**

CAP23 aims to promote a socially just transition through its cross-cutting measures, emphasizing inclusivity by incorporating youth perspectives, regional voices, skilled labor recruitment, international cooperation, and public information campaigns. While these initiatives broaden the knowledge base contributing to climate policy, closer analysis highlights gaps that could be strengthened to enhance inclusivity and equity.

The "80 Million Together for the Energy Transition" public engagement campaign is a valuable step toward broad-based climate awareness, seeking to inform citizens about energy efficiency and renewable energy. While this centralized approach has the potential to reach a broad audience, ensuring its accessibility in multiple languages and formats for people with disabilities would further its inclusivity, helping to avoid exclusions across different communities.

The "Climate Club" (CAP23, p. 25) reflects CAP23's commitment to global climate collaboration, establishing a platform that invites international cooperation for more ambitious climate action. However, as a G7-led initiative, the Climate Club may inadvertently reinforce a top-down structure, where developed nations set the agenda and risk marginalizing contributions from developing countries and community-based voices. Without specific mechanisms to incorporate local perspectives, the Climate Club could miss insights to make climate solutions more equitable globally.

In its "Skilled Labour Strategy" (CAP23, p.26), the program addresses the growing need for STEM and climate-relevant skills by including international recruitment efforts like the "Make it in Germany" portal. While attracting skilled workers expands technical expertise, the strategy's focus on traditionally male-dominated sectors risks perpetuating gender imbalances. Without dedicated pathways to recruit women and gender-diverse individuals and without addressing barriers faced by migrants already residing in Germany, the strategy may limit the diversity of perspectives contributing to the climate workforce.

Furthermore, the inclusion of youth participation in climate policy will be ensured through "youth advisory councils or other participatory format to ensure regular thematic exchanges at working and political level as well as participation in consultations and hearings on key climate energy decision" (CAP23, p.29). This step brings valuable youth perspectives into climate and energy policy discussions. Yet, the absence of gender-specific guidelines within these councils could inadvertently narrow the range of experiences represented, potentially overlooking how gender shapes youth engagement with climate issues. Explicit provisions to ensure gender diversity in youth forums would deepen the impact of this initiative.

Finally, the "social monitoring system for climate action" (CAP23, p.27) aims to evaluate the social distribution effects of climate policies, marking an important step toward social justice. The fact that this initiative is only now being introduced suggests it was not previously prioritized. As the system is still in development, it could incorporate marginalized and gendered perspectives, which are essential

to capturing the nuanced ways different groups are impacted by climate measures. Without these perspectives, the monitoring system may face challenges in fully supporting inclusive climate governance

### **5.3 Limitations**

This study encountered limitations that shaped the scope and depth of the analysis. A primary limitation was the need for more gender-disaggregated and intersectional data within critical sectors, which constrained the ability to assess climate policy's nuanced, gendered impacts fully. Without data disaggregated by gender and intersecting identities, such as race or socioeconomic status, the analysis was necessarily broader, limiting the exploration of intersectionality in understanding the diverse impacts of climate action. Future research would benefit from more comprehensive, intersectional datasets to better capture these complexities and reveal how climate policies differentially affect various groups.

Furthermore, not all measures within CAP23 were discussed. Many of the measures selected were relevant to one or more categories in the analysis, highlighting their broader impact. The study aimed to capture a more comprehensive view without redundancy by focusing on those aligned with multiple categories. To fully understand the measures outlined in CAP23, it would be essential to delve into their governance processes, as the background operations often remain opaque. For this analysis, however, the focus was placed on examining the overarching language and the explicit inclusion of gendered aspects within the policy framework and analyzing and interpreting the potential impact based on what is currently outlined.

Finally, while the analysis encompasses all sectors mentioned in CAP23 relevant to the gender-environment nexus, other essential aspects, such as health or safety, still need to be fully explored. Expanding future research to include additional areas could provide a fuller understanding of climate policy's broader implications for gender equality and yield valuable insights into the social impacts of climate action.

## **Chapter 6: Discussing Power Dynamics and Structural Inequalities in Climate Change Mitigation**

Women occupy space just as much as men do... They are found almost everywhere that men are found. But almost everywhere women's lives are different in nature to men's; their relations to the earth, to its resources, and to the productive systems that people have evolved for making use of these resources, are not the same as, nor even parallel with, those of men. (Hayford 1974, p. 1)

This observation by Hayford underscores a foundational premise within feminist environmental critiques: women's experiences with natural resources, labor, and space differ profoundly from men's. These distinctions are not merely individual but are structurally embedded within systems that shape resource access, decision-making, and value allocation.

In analyzing the "2023 Climate Action Programme", these differing relationships become evident, as the policies and incentives designed to mitigate climate change reflect and often reinforce existing gendered dynamics. This chapter critically interprets CAP23's impacts on gender equality, examining how its policies uphold or challenge capitalist, patriarchal, and androcentric systems. Concepts like re/productivity, epistemic violence, androcentrism, and the Self/Other dichotomy reveal how seemingly neutral policies can perpetuate unequal power dynamics and limit women's agency. Addressing these disparities requires not only gendered approaches but a transformative climate strategy that values diverse perspectives and acknowledges the structural barriers affecting marginalized groups' access to resources, power, and knowledge.

### **Dominating Structures and Androcentrism**

An analysis of CAP23 reveals how gendered power dynamics, including wage disparities and underrepresentation in leadership, reinforce economic dependency for women. The program's focus on productivity and growth, without explicit gender-sensitive measures, aligns with a patriarchal paradigm that privileges traditionally male-dominated sectors like energy and transport. This structure inherently excludes marginalized voices, as men occupy decision-making positions while women, especially those in caregiving roles, remain peripheral.

Through an FPE lens, the program's failure to challenge androcentric biases within climate policy reflects ecofeminist critiques of Western patriarchal societies, which have historically upheld male-centered, hierarchical structures. This androcentrism positions traditionally masculine traits like productivity and technical expertise as universal standards, reinforcing a Self-Other relationship where the "Self", often aligned with white, Western masculinity, dominates the "Other," including women, non-binary individuals, and marginalized groups. Such binaries, embedded in colonial and patriarchal values, structure environmental policies around rigid categories that assume a natural division between men and women, overlooking the fluid and intersectional identities that shape lived experiences.

In effect, CAP23's framework risks excluding identities and perspectives that fall outside this binary, reinforcing the hierarchy that places caregiving, community engagement, and social reproduction in secondary roles. By embedding "male" values in environmental governance, it narrows the policy's inclusivity and effectiveness, limiting its capacity to address the varied and intersecting needs essential for a sustainable and equitable climate transition.

Building on this examination of power structures, CAP23's approach to resource access further underscores the embedded inequities within climate policy. Policies emphasizing ownership and capital

investment inherently favor individuals with economic power, often affluent property owners, while marginalizing renters, single mothers, and low-income women who lack access to these critical resources.

### **The Capitalist Paradigm and Social Inequities**

Resource access in the program, whether for land, energy, or transportation, emphasizes ownership and capital investment, features inherently tied to capitalist structures prioritizing economic power. The small share of women landholders in Germany underscores systematic barriers to resource control that continue to impact female agricultural workers and limit women's influence over land-based environmental decisions.

FPE, building on ecofeminist critiques, reveals how capitalist and patriarchal systems commodify nature and marginalize women. Ownership-focused models reinforce access inequalities by privileging those with capital, often affluent property owners, while excluding renters, single mothers, and low-income women who lack resources for sustainable investments. By tying resource access to economic power, CAP23 reinforces systemic inequities rooted in race, class, and gender.

Additionally, the critique of the Self/Other dichotomy highlights how the program's approach to resource access reflects colonial and patriarchal tendencies. By prioritizing capital-intensive solutions, technical expertise, and market-driven initiatives, CAP23 upholds a model that values male-associated characteristics, marginalizing the perspectives and needs of women, minorities, and non-binary individuals. Rooted in cultural binaries like culture/nature and male/female, this framework positions men with productivity and women with reproduction, restricting women's influence over resources vital for climate action.

An intersectional FPE lens further exposes these exclusions by examining how overlapping identities, such as gender, race, class, and ability, affect access to resources, policy impacts, and power dynamics. The program's gender-neutral stance on resource access overlooks intersecting oppressions, disproportionately affecting marginalized groups with heightened environmental and economic vulnerabilities. For example, foreign-born women face distinct employment barriers, illustrating how intersecting identities shape access to essential resources.

Adopting an intersectional approach would enable the program to move beyond a capital-centered resource model and address the layered inequities that exclude marginalized "others" from environmental governance. Recognizing diverse needs and contributions within climate policy is crucial to developing a sustainable strategy that grants resource access and agency to a broader population, not just those with wealth and privilege.

Just as resource access remains exclusionary, the program's emphasis on productivity continues to sideline reproductive labor, which remains invisible and uncompensated within CAP23's market-oriented framework. This divide between productive and reproductive spheres reflects broader capitalist

and patriarchal tendencies, where economic policies overlook essential caregiving roles primarily fulfilled by women

### **The Overlooked Value of Social Reproduction**

The concept of re/productivity underscores the essential interdependence between productive (market) and reproductive (household) spheres, challenging CAP23's market-driven solutions that overlook unpaid care work. With its emphasis on economic growth, technological expertise, and green jobs, the program fails to account for the economic dependency created by caregiving roles, primarily borne by women. While women perform, on average, 79 additional minutes of daily care work, the program lacks provisions to support this labor, leaving reproductive responsibilities unrecognized within the climate strategy.

FPE, informed by ecofeminism and queer ecological perspectives, critiques capitalist systems as intersecting structures of oppression, linking the domination of nature with the marginalization of women through race, class, and patriarchy. This framework reveals how capitalism commodifies both nature and women's labor, treating them as exploitable resources while rendering reproductive work invisible and uncompensated. CAP23's ownership-focused policies reflect this structure by prioritizing economic power and capital investment, which excludes those lacking resources for sustainable technologies or technical training. Consequently, caregiving labor, often borne by women, remains undervalued, reinforcing economic divides that limit access to green job opportunities and climate governance.

The program's emphasis on green jobs in STEM and technical fields, without targeted gender measures, privileges productivity and technical expertise. These policies essentially bypass women, who face structural barriers in male-dominated sectors. This exclusion perpetuates gender disparities, favoring those with financial and social capital while limiting economic agency for low-income women, single mothers, and others outside these networks. By narrowly focusing on productivity, the program's approach to sustainability overlooks the critical contributions of reproductive labor. Social reproduction theory emphasizes caregiving, household maintenance, and emotional labor as essential to workforce stability and environmental resilience. However, CAP23's market-driven focus sidelines these contributions, sustaining hierarchies that restrict economic empowerment for marginalized groups. Queer ecological perspectives challenge the view of caregiving as inherently "women's work," instead framing it as foundational to material sustainability. By excluding caregiving from its climate strategy, The program reinforces a capitalist approach that limits green job access and economic agency to those with wealth and technical expertise, leaving those performing reproductive labor without formal recognition.

An inclusive climate strategy that values productive and reproductive labor would enable broader participation in the "green economy," bridging these divides for a more equitable climate transition. The

program could foster a more inclusive climate transition by supporting social reproduction and reducing barriers to technical training, empowering essential labor that sustains economic and environmental resilience, and enabling equitable participation in the green economy.

Extending beyond material access and labor, CAP23's approach to knowledge production reveals a persistent hierarchy that values male-dominated expertise over diverse experiential insights. This epistemic violence not only excludes marginalized voices but also limits the program's capacity to integrate community-rooted knowledge into environmental governance

### **Epistemic Violence and Knowledge Hierarchies**

An analysis of CAP23's approach to knowledge production reveals entrenched exclusions of women and marginalized groups in fields like energy and transport, where male-dominated expertise is considered the primary source of valid knowledge. The program's emphasis on technical and scientific knowledge as "neutral" or objective aligns with patriarchal norms that sideline contributions from women and gender-diverse individuals. This approach exemplifies *epistemic violence*, where dominant knowledge systems silence the experiential insights of marginalized communities, insights often crucial to sustainable environmental practices.

The measures in CAP23 indicate a clear pattern: green job initiatives and technical roles are concentrated in fields like STEM, where women are significantly underrepresented in leadership. Despite promoting green jobs, the program lacks gender-specific provisions to encourage women's engagement in technical training and decision-making, reinforcing a knowledge hierarchy that prioritizes established, male-dominated expertise over community-rooted practices. By omitting policies that acknowledge and support women's experiential insights, often developed through caregiving and social reproductive roles, CAP23 risks limiting its solutions to capital-intensive, productivity-driven frameworks that overlook practices central to ecological resilience.

FPE critiques this structure by questioning the capitalist and patriarchal systems that dictate whose knowledge is valued. Queer ecological perspectives within FPE further challenge CAP23's androcentric norms by emphasizing how these frameworks marginalize contributions that do not align with male-defined standards. The program's reliance on dominant knowledge hierarchies thus reduces the program's inclusivity and adaptability, restricting its potential as a holistic climate strategy.

Incorporating perspectives from women, non-binary individuals, and economically marginalized communities would allow CAP23 to bridge knowledge gaps, fostering inclusive climate policies integrating technical expertise and diverse lived experiences. This inclusive approach would ultimately enhance the program's capacity to address the environmental and social challenges it aims to solve, grounding its solutions in a comprehensive understanding of ecological resilience essential for equitable climate action.

## Conclusion

Ecology and sustainability are not gender neutral; the analysis of gender relations is vital for understanding the relationships between nature and society and for overcoming the environmental crisis; without gender justice there will be no environmental justice, no sustainability nor a good life for all (Wichterich, 2012, p. 9, cited in Agostino, 2019, p. 278).

This perspective resonates deeply with the findings from the “2023 Climate Action Programme analysis,” highlighting that a gender-neutral approach to climate policy can unintentionally reinforce existing inequalities. While CAP23 makes promising strides toward a socially just transition, with measures that include affordable housing, improved mobility, and provisions for disadvantaged groups, its limited focus on gender inclusivity constrains its potential to address gender inequality comprehensively. While recent data indicates progress in women’s representation in leadership position in German Ministries, this representation alone does not automatically translate into gender-just climate policies, as reflected in CAP23. The program’s limited gender focus highlights that even with increased female leadership, structural and androcentric priorities remain dominant, reinforcing a framework that privileges economic growth and technical expertise over inclusivity and intersectional needs in climate policy.

Addressing the research question -How do climate change mitigation policies impact gender inequality in the case of Germany’s climate action program?- the findings reveal that a gender-neutral stance risks reinforcing rather than alleviating existing disparities. Without targeted, gender-just climate financing or an acknowledgment of reproductive labor, the programs limits access to economic opportunities and environmental agency for women and intersecting marginalized groups, exacerbating social and economic divides.

To better support an inclusive climate transition, future climate program should incorporate gender-just climate financing, prioritizing subsidies and incentives for single-parent and low-income households, often facing compounded barriers in accessing sustainable technologies or green job training. Programs to enhance intersectional gender inclusivity within green job sectors like STEM and energy could open pathways for women, non-binary individuals, and other marginalized groups through targeted scholarships, technical training, and mentorship.

Recognizing the importance of social reproductive labor in sustainability metrics, could bridge the productive-reproductive divide through credits or subsidies that support caregiving and community-based work across diverse backgrounds. By integrating experiential and community-rooted knowledge alongside technical expertise, future progrms would benefit from advisory boards or forums that amplify the perspectives of (economically) marginalized and racially diverse communities. Shifting focus from a solely market-driven approach to structural solutions prioritizing resource access over capital



investment requirements could dismantle systemic barriers, supporting a climate agenda rooted in social and environmental justice.

These recommendations must be explicitly reflected in the program's language to ensure they are fully integrated into policy. Poststructuralist perspectives emphasize the role of language in shaping social and cultural realities. While some inclusive efforts may already occur behind the scenes, their absence from the CAP23's language restricts transparency and accountability, ultimately limiting its inclusivity and effectiveness in addressing diverse needs. An intersectional gender-just "Climate Action Programme" that incorporates these measures would transcend a one-dimensional approach, embodying a comprehensive understanding of sustainability. By addressing intersecting needs and advancing equity, it would support a genuinely sustainable climate transition for Germany.

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