

Gender and Intersectional Climate Justice

Sybille Bauriedl

1. Introduction

Climate change affects all people, but to varying degrees. Apart from regional differences, this is mainly due to social structures. Being affected by the consequences of climate change also depends to a relevant extent on gender-conforming behaviour and a gender-unjust distribution of resources. Women and men are affected differently by the effects of climate change. A central reason for this is their social understanding of their roles and role behaviour and the social and economic inequality associated with them. Thus, climate change-induced problems and responses are deeply connected to gender justice.

2. Climate Change Meets Hierarchical Gender Relations

Sea-level rises and extreme weather events are the negative effects of man-made climate change. Loss and damage are the 'externality' of fossil fuels and other polluting industries visited upon the people and communities who have done the least to cause climate change. Tropical regions and especially arid and coastal areas are particularly affected by climate change impacts. There, we meet a large number of people who are particularly vulnerable due to their limited access to global prosperity. Those with the least power and the least resources are the worst impacted. This, of course, means that communities made vulnerable due to gender, sexuality, race, class, age, and legal status are in the worst position to deal with the impacts of climate change (Richards 2018, p. 2). Gender broadly refers to a collection of characteristics. They vary and change over time and context, and are shaped by their intersection with other types of social difference such as race and class, as sexism is entangled with other hierarchies.

When sudden extreme events such as floods, heat waves or hurricanes occur, more women regularly die than men. In a study by the London School of Economics, deaths due to extreme weather events were examined according to gender and social status. Between 1981 and 2002, 4605 catastrophes were recorded in 141 countries. The number of deaths of women after disasters was significantly higher in countries with particularly high inequality in social and economic status between women and men (Neumayer and Plümper 2007). There is no current study with a similar number

of cases. However, it can be assumed that this difference has tended to increase, as the gender-specific household and family-related workload of women increases in regions with strong climate change impacts.

In the Global South, the unequal mortality rate during climate-related natural disasters is more evident than in the Global North. However, gender-specific vulnerability is not a phenomenon limited to developing countries alone. The negative consequences of climate change, e.g., health burdens from heat waves, are also showing a gender-unequal trend in Europe. During the heat wave in southern Europe in the summer of 2003, extreme cardiovascular stress caused 70,000 additional deaths, so-called "heat deaths", in the affected countries. The elderly and people with weakened health were particularly affected. Throughout the heatwave, the gender ratio of deaths was balanced, but on the hottest days, women were affected in 60 percent of cases (Robine et al. 2007). There are no reliable explanations for this striking phenomenon either. One relevant factor is probably that older women in particular are more likely to live in neighbourhoods with higher heat stress due to their income. They cannot afford more climate change-resistant residential areas with better ventilation, cooling architecture and lower building density, which are among the most expensive residential areas in all cities. On hot days with daytime temperatures above 30 °C, the temperature in densely built-up districts with heavy traffic is regularly 5 °C higher than, for example, in residential areas near a city park. In addition, old women much more frequently live alone and thus without rapid healthcare in acute heat stress (WEN 2010, p. 11f). The European Parliament has now recognised the relevance of the problem and stated, in a report on 16 January 2018, that "women are many times more likely to die in natural disasters than men" (EP 2017, p. 5).

Even consequences of climate change that are not directly life-threatening have an unequal impact on men and women. Diseases spread faster due to higher temperatures or floods. Since, in many societies, it is mainly women who provide nursing care, their (unpaid) workload increases. During prolonged heat waves in dry areas, it can be observed that women and girls have to cope with a much higher additional workload for the energy and water supply of their families and have to walk long distances to water points and firewood sources (Dankelmann 2010). In Africa, women produce more than 90 percent of the food supply. However, they often do not have the financial opportunity to react to climate change and adapt production to changing environmental conditions (EP 2017). Why women are more vulnerable to climate change than men has hardly been systematically researched. However, observations suggest the relevance of the gendered division of labour and

gender-unequal access to resources. Gender norms are, thus, a decisive vulnerability factor, as is the need to adapt to climate change. Women's empowerment at household and community levels is an excellent strategy for more effective and equitable disaster preparedness (Terry 2009, p. 170).

3. Men Adopt to Climate-Related Natural Disasters Differently Than Women

Migration is a form of adaptation to the consequences of climate change. However, not all people can benefit from this form of adaptation in the same way. When migration takes place in response to sudden climate change-induced extreme events, firstly, access to means of transport plays a major role, then, secondly, the consideration of the dangers during flight and, thirdly, the responsibility to care for relatives. All these aspects are very strongly gendered. For example, the particularly high death toll of women in flood disasters in Pakistan, India and Bangladesh is explained by the fact that women in these flood-prone countries have less mobility opportunities: they have neither learned to swim nor do they own motorised vehicles. They have less access to relevant risk information and they are responsible for protecting their children. Almost everywhere in the world, family care work is done more often by women than by men. As a result, women are more tied to persons in need of care and assistance in the household and are excluded from safety nets and information for coping with climate change. Thus, they are also less likely than men to succeed in fleeing as a result of suddenly occurring extreme events and to find a safe place. However, even refugee camps bear the risk of sexual violence and the struggle for limited food.

There are two crucial questions to explain climate vulnerability and climate change-induced migration: the first is the question of vulnerability due to caring responsibilities (Who is responsible for housekeeping, childcare, and the care of sick and elderly family members?). Secondly, there is the question of vulnerability due to mobility restrictions (Who has access to transport? Who can move around in public and in what manner?). As a rule, both questions affect women who live in gender-conforming families and on low incomes to a particularly high degree.

The gender-related studies on climate vulnerability and adaptation show a stereotypical gender representation. Women only become visible in their reproductive phase of life and in their function as mothers in household and childcare work. Men are depicted as absent from the family community. These gender representations eliminate gender diversity and transitions of gender norms, and non-gender-conforming or non-heteronormative role behaviour (Hawkins and Ojeda 2011, p. 241).

Furthermore, an over-reliance on the discourses of care, mothering, and subsistence labour can have negative strategic consequences. Feminist scholars take into account the cultural baggage of the ethics of care discourse. In "the context of a white male-dominated society that constructs and enforces women's capacity to care, ecofeminism should not romanticize but politicize this capacity. Ecofeminist arguments that celebrate women's caring for people and the planet without condemning its implication in oppressive political economic systems risk affirming sexist notions about women's place in society" (MacGregor 2010a, p. 22).

4. Climate Change as an Amplifier of Existing Social Inequalities

The decisive factor for gender-specific climate vulnerability and migration opportunities is not biological gender, but social gender. Social gender expresses the socially determined understanding of gender roles and role behaviour that is associated with structural inequality, e.g., when women are seldom appointed to management positions or have more difficult access to financial resources due to the more passive, emotional behaviour attributed to them. Due to patriarchal gender norms in family and household care, an individual flight from extreme events seems less legitimate for women. These forms of structural inequality become even more evident in regions with frequent extreme events caused by climate change, since it is precisely there that the follow-up costs (e.g., care of the injured, family care under difficult conditions, the search for scarce food) are borne by women.

However, there is no mono-causal link between social gender and climate vulnerability—not all women are fundamentally more affected by climate change than men. Climate vulnerability is a multi-causal phenomenon. A lack of property rights, income poverty, a lack of school education and public healthcare and low social rights also play a role and affect other social groups. In studies on gender-specific climate vulnerability, for example, social differences within countries and regions remain unquestioned. However, it would be important to take this into account in order to be able to recognise the entanglement of gender relations with class relations and social relations based on racist hierarchies, which also regulate access to work, income, land ownership, technology, loans and political decision-making processes (Bauriedl and Hackfort 2016).

5. Gender (In)Justice in International Climate Policy

The different impacts of climate change on men and women are internationally recognised, but they are not a top issue in international climate policy. The international negotiations for climate agreements are conducted by the United

Nations—an intergovernmental organisation of 193 states with decisions by consensus and without legally binding force. As a result, the national economic interests of the participating countries (the parties of the UN Framework Convention on Climate Chance) mostly come first. Even though the United Nations Women's Organisation (UN Women) stated as early as 2009 that the risks of climate change are not gender-neutral (UNWW 2009, p. 8), this has so far had no consequences for binding agreements or even gender-related financial compensation.

In 2005, the International Union for Conservation of Nature (IUCN) and Women's Environment and Development Organization (WEDO) decided that a coordinated global strategy on the issue of gender and climate change was needed. IUCN and WEDO, together with the UN Development Programme and the UN Environment Programme and more than 25 other UN agencies and civil society institutions, co-founded, in 2007, the Global Gender and Climate Alliance (GGCA) at the UN Climate Summit in Bali and made the following demand: "No climate justice without gender justice". The primary goal of the GGCA is to ensure that climate change policies, decision making, and initiatives at the global, regional and national levels are gender-responsive and that financing mechanisms on mitigation and adaptation address the needs of poor women and men equitably. The alliance considered the Lima Work Programme on Gender as outcome of the UN Climate Summit in 2014 (decision 18/CP.20) a great success. It called on all state parties of the UN Climate Programme to take gender aspects into account in their annual report on the implementation of national climate targets to ensure that climate actions are gender-responsive and promote women's participation in decision making. However, as with all gender policy agreements of the UN contracting states, no sanctions are provided in the event of non-implementation of the programme. Its impact, therefore, remains limited (GenderCC 2019). At the UN Climate Summit in Marrakesh, 2016 (Conference of the Parties, COP22), a "Gender Action Plan" was agreed upon under the Lima Work Programme to bolster the role of women in climate action. The Gender Action Plan sets out activities that will help achieve this objective. "These range from increasing knowledge and capacities of women and men through workshops and information exchanges, so that they can systematically integrate gender considerations in all areas of their work, to pursuing the full, equal and meaningful participation of women in national delegations, including women from grassroots organisations, local and indigenous peoples and women from Small Island Developing States." (UN Women 2017, p. 1). Delegations of international, feminist non-governmental organisations are also very present at public framework events of climate summits, such as the People's Climate Summit in Bonn, 2017 (Figure 1).

This is about the representation and participation of women in negotiations, in order to support the implementation of gender-related decisions and mandates in the United Nations Framework Convention on Climate Change (UNFCCC) process, following from the idea that the increasing participation of women promotes gender-responsive climate policy and the mainstreaming of a gender perspective (UNFCCC 2017). While the numbers of women on UNFCCC boards, bodies and government delegations have improved slightly in recent years, women continue to be underrepresented, particularly in high-level positions. In national delegations, nearly 30 percent were women at UN Climate Summit / Conference of the Parties (COP25) in Madrid in 2019, with 20 percent being heads of delegations (GenderCC 2019).



Figure 1. Gender justice protest group GenderCC at the climate summit in Bonn (COP23) on 4 November 2017. Credit: © S. Bauriedl.

Climate justice and gender justice have always been closely linked struggles of environmental movements in India, Brazil, Kenya, Germany and many other countries. At the alternative climate summits of the international climate movement and the accompanying demonstrations, there are always protests for gender justice. Furthermore, the young protest groups of the Fridays for Future movements were

led by women as speakers from the very beginning in order to make gender positionality visible.

6. Market-Based, Globalised Mitigation Strategies Are Deepening Gender Inequality

The valorisation of nature and the valorisation of women's labour are controlled by the same mechanisms. In climate policy, this valorisation can be observed in the mechanism of emission certificate trading. This trade is based on the idea of offsetting carbon emissions and was the focus of negotiations at the Climate Summit in 2019 in Madrid (COP25). The Secretariat of the United Nations Framework Convention on Climate Change (UNFCCC) as well as other international development organisations and private companies in the voluntary emission certificate trade have also been using the unpaid reproductive work of women for several years by investing in the distribution of energy-efficient stoves in so-called developing countries (UNFCCC 2012). Since 2007, energy-efficient stoves have also been accepted as a measure in international emissions certificate trading (Clean Development Mechanism). These stoves reduce the use of fuel (wood and charcoal) and its emissions. For the use of an energy-efficient stove in a so-called developing country, a so-called industrialised country can be compensated by one ton of carbon emissions per year. The spread of efficient stoves has reached enormous proportions in East Africa and South Asia. The German Agency for International Cooperation (GIZ) distributed 1.45 million energy-efficient stoves in Kenya alone between 2006 and 2014. This means that more than one million tons of carbon emissions have been offset for the national emissions budget of Germany by the unpaid reproductive work of Kenyans (which is almost exclusively done by women there). The emission certificates for the use of efficient stoves receive the additional certificate "Empowerment of Women".

As long as the use of efficient stoves is linked to gender stereotypical roles in reproductive work, the positive effect within patriarchal family structures is not automatically fulfilled. Stoves with less unhealthy smoke development are undoubtedly preferred, and, yes, it is a good idea to secure the energy supply at household level. However, why is the empowerment of women limited to access to pre-industrial technologies that reproduce and legitimise their role as unpaid care workers? Poor women in the Global South are obviously only meant to participate in the new world of green growth as unpaid care workers and with very modest production resources. Efficient stoves are, therefore, unsuitable for the structural empowerment of women.

A second example of the unpaid work of women for climate mitigation strategies is the growing agriculture bioeconomy. In the Paris Agreement of the UN Climate Summit 2015 (COP21), a long-term strategy for a prosperous and climate neutral economy, named a "bioeconomy", is a key solution. The goal of a bioeconomy is to present a vision that can lead to achieving net-zero greenhouse gas emissions by 2050 through a fair and cost-efficient transition. At first glance, the term "bioeconomy" sounds marginally innovative, since the production of bio-based goods and the consumption of renewable resources has been practiced since the birth of agriculture. With this term, international chemical and agricultural corporations promise nothing less than food security and energy security with the simultaneous substitution of fossil resources at a global scale. Bioeconomy is about increasing production (in absolute terms) and increasing productivity (per area and per plant) through genetically optimised biomass production (also known as synthetic biology) to meet the forecasted, skyrocketing demand for food and post-fossil resources. The rapid expansion of biofuels and biomass production as resource for a decarbonised, so-called green economy creates gendered risks in food insecurity, pressure on resource access and biodiversity, and employment discrimination (Nelson and Stathers 2009, p. 82).

This modernisation of agriculture has massive second-order effects like green grabbing, the transformation of traditional farming in Africa (Newell and Paterson 2010), and gendered labour division in small farming. In particular, the spread of contract farming is associated with negative consequences for women in small farming areas in Africa. In the system of contract farming, farmers are provided with optimised seed if they commit themselves to producing a certain quantity of a crop. The purchase price of the yields is fixed by the agricultural enterprises just at the time of harvest. The risk of price fluctuations and crop failures, therefore, lies solely with the small farmer. Contractors are almost exclusively men. Women farmers are regarded merely as unpaid family helpers. Since, due to the expansion of large farms, less land is available for subsistence farming, farmers in many areas are dependent on income from contract farming and women no longer have the opportunity to secure basic needs through subsistence farming (De Schutter 2011).

The impacts of climate-mitigation activities are widely felt, but the empirical evidence is limited. The use of climate protection technologies already shows that the global and gendered division of labour is being used to place greater burdens on women in the Global South. United Nations forest protection programmes also often have a negative impact on the security of supply and food sovereignity for women, who are dependent on collecting roots and fruit on common land. Thus, if a forest area serves to reduce carbon in the atmosphere (carbon sink), it must

no longer be used for multiple purposes. In many regions, women in the Global South are more affected by the consequences of global climate protection than by climate change. Feminist critics warn against the privatisation and feminisation of environmental responsibility (MacGregor 2010b). The end-of-pipeline strategy (i.e., carbon sequestration from the atmosphere instead of reducing emissions from industrial production) of environmental politics usually represents more work for women since they are responsible for reproductive labour.

7. A Sustainable Planet Needs Intersectional Climate Justice

In 2019, millions of young people held demonstrations and global climate strikes all over the world. The so-called Fridays for Future protests "were the result of decades of mounting, tangible evidence of environmental collapse, strong scientific research and longstanding grassroots movement-building for just and sustainable alternatives by frontline communities." (AWID 2019, p. 1). In the Anthropocene (the geological era of industrial mass production), the interrelation of the ongoing daily violence of state and corporate extraction, exploitation and colonisation became more and more obvious. However, young people, with young women at the forefront, are not only protesting for generational justice, but global justice. They collaborate with the movements of Black and People of Color, environmental and climate justice collectives and indigenous people, the formerly enslaved, and anti-colonial movements. They direct people's attention to the conditions of the climate crisis.

"Forced resource extraction for profit [...] has led to our current climate crisis. [...] The climate crisis is caused and exacerbated by a capitalist model of development that prioritises [profit at the expense of people and the planet]" (AWID 2019). Movements like Fridays for Future are creating an intersectional climate movement and demanding a climate policy including decolonial, queer feminist and ecological perspectives. Social injustice and environmental degradation are both consequences of the same entangled structures of oppression and exploitation. Indigenous and black people, those living in the Global South and "racialised communities have continuously fought for land rights against large-scale deforestation and resource overexploitation, with [women at the forefront]" (AWID 2019).

As long as patriarchal and imperial lifestyles are not an international issue, the responsibility for climate change and the burden of climate protection will remain unequally distributed. Moreover, this inequality runs along (neo-)colonial boundaries, along normative gender roles and along economic power relations. Women are not naturally more concerned about the consequences of climate change, but their allocation and readiness for domestic and emotional care work is functionalised in the

climate policy debate. In order to be able to recognise this patriarchal practice more clearly, the feminist discussion on the connection between the imperial, patriarchal and heteronormative division of labour in capitalism should be taken seriously.

Conflicts of Interest: The author declares no conflict of interest.

References

- AWID. 2019. We Need an Anti-Colonial, Intersectional Feminist Climate Justice Movement. Available online: https://www.awid.org/news-and-analysis/we-need-anti-colonial-intersectional-feminist-climate-justice-movement (accessed on 20 December 2019).
- Bauriedl, Sybille, and Sarah Hackfort. 2016. Geschlechtsspezifische Verwundbarkeit. In Wörterbuch Klimadebatte. Edited by Sybille Bauriedl. Bielefeld: Transcript, pp. 95–100.
- Dankelmann, Irene. 2010. Gender and Climate Change. London: Routledge.
- De Schutter, Olivier. 2011. How not to Think of Land-grabbing: Three Critiques of Large-scale Investments in Farmland. *Journal of Peasant Studies* 38: 249–79. [CrossRef]
- EP—European Parliament. 2017. Report on Women, Gender Equality and Climate Justice. Available online: http://www.europarl.europa.eu/doceo/document/A-8-2017-0403_EN. html (accessed on 17 September 2019).
- GenderCC. 2019. A Discreet Start on Gender Issues. Available online: https://gendercc.net/genderunfccc.html (accessed on 20 December 2019).
- Hawkins, Roberta, and Diana Ojeda. 2011. Gender and Environment: Critical Tradition and New Challenges. *Environment and Planning D: Society and Space* 29: 237–53. [CrossRef]
- MacGregor, Sherlyn. 2010a. Earthcare or Feminist Ecological Citizenship? *Femina Politica* 14: 22–31.
- MacGregor, Sherlyn, ed. 2010b. Routledge Handbook of Gender and Environment. London: Routledge.
- Nelson, Valerie, and Tania Stathers. 2009. Resilience, power, culture, and climate: A case study from semi-arid Tanzania, and new research directions. *Gender and Development* 17: 81–94. [CrossRef]
- Neumayer, Eric, and Thomas Plümper. 2007. The gendered nature of natural disasters. The impact of catastrophic events on the gender gap in life expectancy, 1981–2002. *Annals of the Association of American Geographers* 97: 551–66. [CrossRef]
- Newell, Peter, and Matthew Paterson. 2010. *Climate Capitalism: Global Warming and the Transformation of the Global Economy*. Cambridge: Cambridge UP.
- Richards, Julie-Anne. 2018. Climate and Gender Justice. What's Needed to Finance Loss and Damage? Berlin: Rosa Luxemburg Stiftung. Available online: https://www.rosalux.de/en/publication/id/39802/climate-and-gender-justice (accessed on 18 October 2020).

- Robine, Jean-Marie, Siu Lan Cheung, Sophie Le Roy, Herman Van Oyen, and François R. Herrmann. 2007. Report on Excess Mortality in Europe during Summer 2003. Available online: http://www.theurbanclimatologist.com/uploads/4/4/2/5/44250401/mortalityheatwave2003.pdf (accessed on 20 December 2019).
- Terry, Geraldine. 2009. Conclusion. In *Climate Change and Gender Justice*. Edited by Geraldine Terry. Warccxwickshire: Oxfam, pp. 169–76.
- UN Women. 2017. First-Ever Gender Action Plan to Support Gender-Responsive Climate Action Adopted. November 14. Available online: https://www.unwomen.org/en/news/stories/2017/11/announcement-first-ever-gender-action-plan-on-climate-action-adopted (accessed on 20 July 2020).
- UNFCCC. 2012. Global Alliance for Clean Cookstoves. Available online: http://unfccc.int/secretariat/momentum_for_change/items/6632.php (accessed on 20 December 2019).
- UNFCCC. 2017. Establishment of a gender action plan. Paper presented at UNFCCC: Report of the Conference of the Parties on Its Twenty-Third Session, Bonn, Germany, November 6–18; Available online: https://unfccc.int/resource/docs/2017/cop23/eng/11a01.pdf#page=13 (accessed on 20 December 2019).
- UNWW—United Nations Women Watch. 2009. Women, Gender Equality and Climate Change. Available online: http://www.wocan.org/resources/women-gender-equality-and-climate-change-un-women-watch-fact-sheet# (accessed on 20 December 2019).
- WEN—Women's Environmental Network. 2010. The Impacts of Climate Change on Women and Public Policy. Available online: https://www.gdnonline.org/resources/Gender% 20and%20the%20climate%20change%20agenda%2021.pdf (accessed on 20 July 2020).
 - © 2021 by the author. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (http://creativecommons.org/licenses/by/4.0/).