



How can gender equality and its interdependencies with other social categories contribute to a successful climate policy? A research project about interdependent options for the improved design of climate change mitigation and adaptation measures in Germany

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Initial considerations

For a long time climate change policy was seen as gender neutral. Only recently has international climate change policy recognised gender dimensions of climate change, which were subsequently reflected in the Doha Gender Decision (UNFCCC COP 18)¹ and in the Lima Work Programme on Gender (UNFCCC COP 20)² as well as in its update at COP 22 in Marrakech³. The gender references in these official negotiation texts, however, are mainly limited to gender balance and gender awareness. The intended Gender Action Plan, proposed in the update of the Lima Work Programme on Gender, may make it possible to move beyond these limitations and might introduce a more hands-on, transformative perspective. The same applies to the UNFCCC Paris Agreement, in which gender equality is positioned in liminal ways. The agreement mentions gender equality only in the (non-binding) preamble and in paragraphs on adaptation and capacity building. Whether and how gender dimensions will be considered in the future climate regime are issues that will have to be negotiated in the coming years. In the German political arena, as well as in other European member states and in the EU itself, these agreements are mainly perceived in relation to adaptation and as particularly pertinent to the situation in developing countries. In

¹ United Nations Framework Convention on Climate Change (UNFCCC) and Conference of the Parties (COP), see <http://unfccc.int/resource/docs/2012/cop18/eng/08a03.pdf#page=47> (accessed 26.01.2017)

² <http://unfccc.int/resource/docs/2014/cop20/eng/10a03.pdf#page=35> (accessed 26.01.2017)

³ <http://unfccc.int/resource/docs/2016/sbi/eng/l37.pdf> (accessed 26.01.2017)

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fact, however, gender dimensions in climate change policy receive much more attention in some of the developing countries than in most countries of the Global North.

While the role of international climate policy is to define overall emission reduction targets, provide the schedule and budgets for the most affected developing countries and evaluate the progress made, concrete measures to mitigate climate change and to adapt to the impacts need to be developed and implemented on national as well as on local levels – also in the Global North. Furthermore, many climate change policies require a change in everyday life routines and everyday life management and therefore imply an intervention in social-economic processes, relations and structures. In doing so, they consistently affect gender relations. *How* these measures impact gender relations has not yet been adequately researched. One of the fundamental challenges we are facing at national levels is the possible contradiction between the goals of climate change policy on the one hand and the goals of sectoral policies on the other. For example, transport policy aims to provide the infrastructure for mobility. In order to incorporate climate change mitigation (and adaptation) as well as gender equality requirements, these goals and the current priorities might need to be modified, and at the very least they have to be (re-)negotiated with other policy sectors (cross-mainstreaming). Can intersectional approaches support these complex processes, for instance by generating more acceptance, or will they contribute to even more confusion and resistance?

A recently published report (GGCA 2016) provides an assessment of the current evidence base in the research field of gender and climate change adaptation. It clearly demonstrates that most of the research undertaken focuses on the situation in countries situated in the Global South. Moreover, it indicates that most of the research looks at gender differences. For example, in disaster recovery, it is evident that women both in developed and in developing countries face additional burdens as primary caregivers and a higher chance of losses in jobs and earnings than men (Willinger and Knight 2012, Zottarelli 2008). Furthermore, research available from Australia, the United States and New Zealand reports the increase of gender-based violence in post-disaster environments (Fothergill 2008, Whittenbury 2013, Houghton 2009). A bulk of data is available related to gendered health impacts and increased mortality of (elderly) women during

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heat waves (D'Ippoliti et.al. 2010; Filleul, Larrieu, and Lefranc 2011; Pirard et.al. 2005). While these data may help to improve initial recognition of or sensitivity for gendered impacts of climate change, the report reveals that the current gender-responsive climate change adaptation research offers almost no analysis of the intersecting and interdependent effects of social categories.

In the field of climate change mitigation, there is no up-to-date systematic research review available, besides a study published by the European Institute for Gender Equality (EIGE 2012), which compiled knowledge available in the EU member states. The 5th Assessment Report of the Intergovernmental Panel on Climate Change (IPCC) confirmed the lack of knowledge about how climate change mitigation policy might influence gender relations: A simple word count shows that in the Working Group I (Physical Science Basis), neither the term gender, nor women nor men is used; in Working Group II (Impacts, Adaptation and Vulnerability), the term gender is used 321 times, women 215 and men 48 times; in Working Group III (Mitigation of Climate Change), gender occurs 36 times, women 31 and men 2 times (Alber 2015). With regard to gender approaches in mitigation research, the situation is quite similar to the one in the field of adaptation, in that it mainly addresses gender differentials: Based on population surveys, there are data available from various countries in the Global North, e.g. from USA, Canada, Australia, and Europe, that provide evidence for gender differentials in perceptions and attitudes towards climate change (McCright 2010; Davidson and Haan 2012; The Climate Institute 2015; Ines Weller et.al. 2010), or the willingness to pay for climate change mitigation, e.g. higher prices for products or services (Achnicht 2012; Devkota et.al. 2014; Saphores et.al. 2007). Some data also indicates that women's carbon footprints are lower than men's (Räty and Carlsson-Kanyama 2010) or that energy poverty hits women harder than men (Strünck et.al. 2016). Without an analysis of the underlying structural causes of inequality and their interdependencies, however, deductive suggestions and recommendations for overcoming gender inequality only address symptoms of inequality instead of tackling the systems that produce it.

Feminist scholars have researched in depth some of the action areas of climate change mitigation, such as transport systems and mobility or urban planning. The lack of an integrated analysis of the consequences of and requirements for gender-responsive climate change

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mitigation and adaptation policies remains a major gap in our knowledge. Moreover, current research provides little evidence about how the integration of gender dimensions affects climate change policy, or, vice versa, how climate change policy is impacting gender relations.

Intersectionality, conceptualised as interdependency

The understanding of sex and gender⁴ as social categories that deeply underpin relations, behavior and structures led to the main research question in this research project, instigated and funded by the German Environment Agency: how do sex and gender influence climate policy in an industrialised nation such as Germany, and how can a gender equality perspective contribute to more effective climate policies, better mitigation and adaptation measures? In response to current debates in gender studies as well as to the demonstrated need for more precise data, this project also takes a gender perspective as the starting point for a more differentiated analysis of climate policies. Other intersectional (Cho et al. 2013) or interdependent (Walgenbach 2007, Hornscheidt 2009) categories with regard to climate impact come into focus, such as – but not limited to – education, income, culture or location.

Intersectional approaches or approaches addressing the interdependency of various socio-economic and cultural categories are only recently and very slowly entering the climate change adaptation and mitigation research arena. The research project presented here aims to begin filling this gap by identifying interdependencies of the categories of sex and gender with other categories and by exploring methodological aspects, as well as adapting the tool Gender Impact Assessment to this more complex approach. In doing so, the project utilises many different methods of critical engagement with the integral complexity of all of these categories. Intersectionality, by now a well-known, international buzz word and potentially open-ended concept (Davis 2008), refers to the intersection of different categories such as race and class, intersections that alter and increase the experience of structural as well as individual discrimination, oppression and the position in societal power structures. For instance, the

⁴ In order to simplify our language, we will speak from here on of a „gender perspective“ or „gender dimensions“ with the interdependent understanding of multiplicity of sex and gender, as well as of the many complicated ways of interaction between sex, gender and other social categories with each other.

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experience of poverty (perhaps due to insufficient educational options) can be exacerbated when a person bears the sole responsibility for dependents, for example, when one is a caretaker of children (i.e. as a single mother) or of elderly relations. Migration status might aggravate a lack of savings and income possibilities even further. Such a status could lead to less carbon emissions due to reduced working hours (and reduced commuting?) as well as reduced financial capital to partake in consumption and mobility. A distinctly German tradition also exists, however, which speaks of interdependency when intra-categorical effects are addressed. Simply stated, the experience of race as a woman is fundamentally different from a racialised position within a Western, white society as a black male. Additionally, being black in Germany (with its particular national-socialist past and history of anti-Jewish racism) or being a woman (within different social, culturally charged structures) is also different from being black and/or being female in the United States. Conceptualised in this way, sex and gender are in and of themselves already interdependent categories, because no single, genuine gendered experience exists.

The theoretical underpinning of interdependency thus demands the assessment of any category as well as the process of categorisation as interdependent from and with other categories (Walgenbach et al. 2007). Inherent in the interdependency concept is, therefore, a general critique of categories, which always serve as artificially compounded constructs (Hornscheidt 2011: 176). At the same time, the concept of intersectionality challenges the hierarchy of sex and gender as master categories and the main foci and concern of research. While “normal” social science is mostly occupied with (re-) affirming such categories by (over-)stating differences, a critical, interdependent sex and gender analysis offers an effective alternative for evidence and policy making. These mostly theoretical debates, though essential, do not answer the question of how to operationalise such high standards of doing sex/gender in research.

Initial attempts to operationalise interdependent sex and gender categories can be found in the long-term study of the German Federal Environment Agency on environmental awareness. Conducted through a series of surveys, the longitudinal study shows that women, particularly those responsible for care work, as well as economically well-off parts of the population, demonstrate the highest degree of environmental awareness (UBA 2015). Women in general,

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and across all educational and income levels, seem to be more alert to environmental risk-taking than men; however, it is yet unclear how this awareness translates into behaviour and what the driving factors are behind their risk awareness (Olofsson and Rashid 2011). Reduction of carbon emissions is not only a matter of technological solutions, but also of behavioural change, appropriate services and infrastructures, and necessary economic and societal transformation – which again are influenced by many factors, including gender identities, social positions and power dynamics of people and groups (Djoudi et.al. 2016, 248). The transition towards clean and sustainable energy production implies direct and indirect effects, for instance, on investments and land use. The transition will affect livelihoods and challenge existing (unequal) power relations in energy and planning institutions (Kaijser and Kronsell 2014, 427). Furthermore, a transformation in energy use needs to be accompanied by a social transformation. All of these issues are profoundly complex, and an intersectional or interdependent approach to engaging with them will increase their complexity. This research project sets out to test it as a prerequisite to a successful and sustainable transformation. The research team faces many decision-making challenges regarding the categorisation of the main drivers and their intersecting, amplifying or reductive ways of producing climate change and adaptation effects. What are the main interdependent drivers with regard to sex and gender in climate change mitigation and adaptation and how do they interact? How can they be identified, considering the highly categorised and insufficient data base available?

Project goals and components

Over the course of the next two years, the research project will explore how an intersectional sex and gender perspective could help climate policies and measures find more acceptance, and will thereby also determine the benefits of integrating sex and gender dimensions into research. Does a consideration of possible sex and gender differences enable a better understanding of interdependent changes in society that impact the climate, or are other factors more determining in a particular context? Would climate policy in the global North become more effective when the different socialisation, ways of life, and psychological tendencies of men and women, their structural embeddedness in gendered concepts and perceptions of themselves, in gendered

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institutions and a gendered society at large, are considered? The German Federal Environment Agency wants to know: Can a better target group orientation improve climate policy, while ensuring that the structural perspective is not abandoned? And the final question: How can more gender-aware climate policies also contribute to gender equality?

As a first step, the research team will execute a review of international agreements and their gender references and implications for national climate policy, as well as the existing academic, scientific literature concerning the central areas of action and neighbouring policy fields (such as building and city planning, traffic infrastructure and mobility, water management, energy consumption or environmental health). Part of this systematic literature review involves framing the relevant sex, gender and intersectional dimensions in the aforementioned areas and action fields of climate change mitigation and adaptation. Furthermore, an analytical framework will be developed and applied to a review of national climate protection and adaptation programs, their priorities and gaps, and their portfolios regarding gender-sensitivity.

In a second step, the literature review will be extended to look at existing gender impact assessment (or gender analysis) instruments and how they could be applied as part of environmental and climate assessments. Currently, a wealth of gender as well as environmental impact assessment instruments and integration strategies exist, but — especially with regard to gender— a dearth of practice. In the future, in order to be applied early in the process, existing gender impact instruments must clearly demonstrate a better implementation fitness, be better streamlined in impact assessment (IA) processes and have a better practitioner-to-instrument as well as science-to-policy fit (including gender studies knowledge) (Sauer 2017, in press).

Most gender impact assessment tools were developed in the late 1990s to early 2000s. Independent of the issue of their (in/sufficient?) institutionalisation in government or private practice (Sauer 2010) is the matter of whether these instruments are still asking the right questions. Since gender relations in climate-sensitive areas might have changed in the years since these instruments were developed, a new generation of IA practitioners might have different training and expectations of what a good instrument is supposed to do. Recently, quality criteria for gender mainstreaming instruments have emerged (Lewalter/GenderKompetenzZentrum

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2010; Sauer 2017, in press). The project will also explore the possible added value of an analysis of the interdependency of sex and gender with other social assessment categories. The conclusions drawn from this analysis will be applied re-designing a gender impact assessment tool, which will be tested in three case studies ranging from mobility to energy efficient houses to flooding adaptation measures. As a last step in quality management, the instrument will be presented and tested in an expert workshop with targeted users, IA practitioners, public servants, policy analysts and decision-makers in the area of climate change in Germany.

At the core of the project is the distillation from the literature review of recommendations and strategic approaches to integrating sex and gender that are based on current knowledge and transferred to the German national framework as a European, industrialised nation. The German adaptation strategy, the action program for climate protection 2020 or the climate protection plan 2050 are not yet gender-sensitive. The recommendations of the research project are meant to remedy that fact and are derived from the confluence of the literature review with identified data gaps and instrument re-design. Data gaps, which could inform climate policies even better and how to counter them in the short-, middle- and long-term in a sustainable fashion. So far, lack of data has often left policy makers at a loss about how best to consider sex/gender and which effects on climate protection or adaptation these factors may have. The concrete recommendations to be developed in this research project could also provide added value for international implementation processes concerning the Global North (i.e. in the UNFCCC or of the SDGs). For this reason, the final results will be presented at a side-event of one of the UNFCCC sessions.

Interdependency and the future of a gender perspective on climate

Interdependency cross-cuts all work packages of this project. Operationalising interdependency will be a challenge, particularly with regard to the tool refinement of gender impact assessment and data gaps – both areas are heavily dependent on categorisation, i.e., through variables and indicators. The theoretical discourse is highly advanced and nuanced, but often hampered by empirical deficits. Here, a hands-on perspective that takes into account the realities of time management, resources and the need for complexity reduction in impact assessment as well as

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policy design, will have to be reconciled with the need for more fine-tuned analytical instruments that can shape more effective climate policies. Extending a gender perspective to other social categories – a hypothesis yet to be explored in the expert workshop - might also foster the ex-ante deployment of such instruments. Feminist attempts to reconcile diversity with gender analysis exist, but have yet to be connected with the practice of impact assessment, especially in science-dominated fields such as climate protection and adaptation. But if it really works there – could it work everywhere? There is hardly any policy area that is not linked to and affected by climate change (mitigation and adaptation). This research project is thus clearly ambitious, with many potential pitfalls and challenges; however, if it manages to deliver on its targets, the results could inform a wide range of planning, program-making and national implementations of international strategies in the Global North – going far beyond climate change in a narrow sense.

References

Achtnicht, Martin (2012). „German Car Buyers' Willingness to Pay to Reduce CO2 Emissions“. *Climatic Change* 113 (3–4): 679–97.

Alber, Gotelind (2015). *Climate for Change. How research should incorporate gender dimensions to inform climate change policy-makers*. Presentation at the Research Council of Norway “EnGendering Excellence”. Oslo, June 4, 2015.

Cho, Sumi; Crenshaw, Kimberlé Williams & McCall, Leslie (2013). Toward a Field of Intersectionality Studies: Theory, Applications, and Praxis. *Signs: Journal of Women in Culture and Society*, 38 (4), pp. 785-810.

D'Ippoliti, Daniela, Paola Michelozzi, Claudia Marino, Francesca de'Donato, Bettina Menne, Klea Katsouyanni, Ursula Kirchmayer, et.al. (2010). „The Impact of Heat Waves on Mortality in 9 European Cities: Results from the EuroHEAT Project“. *Environmental Health* 9 (Juli): 37.

Davidson, Debra J., and Michael Haan (2012). „Gender, political ideology, and climate change beliefs in an extractive industry community“. *Population and Environment* 34 (2): 217–34.

Davis, Kathy (2008). Intersectionality as buzzword. *Feminist Theory*, 9 (1), pp. 67-85.

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Devkota, Rohini Prasad, Tek Narayan Maraseni, and Geoff Cockfield (2014). „An Assessment of Willingness to Pay to Avoid Climate Change Induced Flood“. *Journal of Water and Climate Change* 5 (4): 569–77. doi:10.2166/wcc.2014.134.

Djoudi, Houria, Bruno Locatelli, Chloe Vaast, Kiran Asher, Maria Brockhaus, and Bimbika Basnett Sijapati (2016). „Beyond dichotomies: Gender and intersecting inequalities in climate change studies“. *Ambio* 45 (3): 248–62.

Filleul, L., S. Larrieu, and A. Lefranc (2011). „Extreme temperatures and mortality“. In *Encyclopedia of Environmental Health*, 693–99. Burlington, MA, United States of America: Elsevier.

Fothergill Alice (2008). Domestic violence after disaster: voices from the 1997 Grand Forks Flood. *Women and Disasters: From Theory to Practice*, eds Phillips BD, Morrow BH International Research Committee on Disasters, 131-154.

GGCA, Global Gender and Climate Alliance (2016). Gender and Climate change: A Closer Look at Existing Evidence. <http://wedo.org/wp-content/uploads/2016/11/GGCA-RP-FINAL.pdf> (last accessed 26.01.2017).

Hornscheidt, Antje (2009). *Intersectional challenges to gender studies – gender studies as a challenge to intersectionality*. In: Gustavson, Malena; Harrison, Katherine; Åsberg, Cecilia & Pernrud, Björn: Gender Delight. Science, Knowledge, Culture and Writing ... for Nina Lykke (pp. 33-46). Linköping: LiU Tryck/Linköpings University. LiU Tryck/Linköpings University.

Hornscheidt, Antje Lann & Baer, Susanne (2011). *Transdisciplinary Gender Studies. Conceptual and Institutional Challenges*. In: Buikema, Rosemarie; Griffin, Gabriele & Lykke, Nina: Theories and Methodologies in Postgraduate Feminist Research. Researching Differently (pp. 165-179). New York: Routledge.

Houghton Rachel (2009). “Everything became a struggle, absolute struggle”: post-flood increases in domestic violence in New Zealand. *Women, Gender and Disaster: Global Issues and Initiatives*. SAGE Publications, New Delhi, pp 99–111.

Ines Weller, Hanna Krapf, Diana Wehlau, and Karin Fischer (2010). „Untersuchung der Wahrnehmung des Klimawandels im Alltag und seiner Folgen für Konsumverhalten und Vulnerabilität in der Nordwest-Region. Eine explorative Studie.“ *artec-paper*, Nr. 166: 103.

Kaijser, Anna, and Annica Kronsell (2014). „Climate Change through the Lens of Intersectionality“. *Environmental Politics* 23 (3): 417–33.

Lewalter, Sandra; GenderKompetenzZentrum (2010). *Qualität. Was ist ein gutes GM-Instrument?* Berlin:

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GenderKompetenzZentrum/Humboldt University of Berlin, [online],
<http://www.genderkompetenz.info/genderkompetenz-2003-2010/gendermainstreaming/Implementierung/instrumente/qualitaet> (last accessed 26.01.2017).

McCright, Aaron M. (2010). „The Effects of Gender on Climate Change Knowledge and Concern in the American Public“. *Population and Environment* 32 (1): 66–87.

Olofsson, Anna, and Saman Rashid (2011). „The White (Male) Effect and Risk Perception: Can Equality Make a Difference?: The White (Male) Effect and Risk Perception“. *Risk Analysis* 31 (6): 1016–32.

Pirard, P., S. Vandentorren, M. Pascal, K. Laaidi, A. Le Tertre, S. Cassadou, and M. Ledrans (2005). „Summary of the mortality impact assessment of the 2003 heat wave in France“. *Euro surveillance. Bulletin Européen sur les maladies transmissibles* 10 (7): 153–56.

Saphores, Jean-Daniel M., Hilary Nixon, Oladele A. Ogunseitan, and Andrew A. Shapiro. 2007. „California households' willingness to pay for 'green' electronics“. *Journal of Environmental Planning and Management* 50 (1): 113–3.

Sauer, Arn (2010). *Gender Impact Assessment integrated in Social Impact Assessment – the European experiment in sub-ordination. EASY-ECO Brussels Conference Paper. EASY-ECO Conference “Sustainable Development Evaluations in Europe: From a Decade of Practices, Politics and Science to Emerging Demands”, 17-19 November 2010. Brussels: EASY-ECO.*

Sauer, Arn (2017, in press). *Equality Governance via Policy Analysis? The Implementation of Gender Impact Assessment in the European Union and Gender-based Analysis in Canada. PhD Thesis. Berlin: Centre for Transdisciplinary Gender Studies/Humboldt University of Berlin.*

Strünck, Christoph, Frank Luschei, Lisa Bleckmann, and Nadine Schreiner (2016). „Energiearmut als neues soziales Risiko? Eine empirische Analyse als Basis für existenzsichernde Sozialpolitik“. Hans-Böckler-Stiftung. https://www.uni-siegen.de/fokos/forschungsprojekte/energiearmut/2015-08-31_hbs_studie_energiearmut_als_neues_soziales_risiko.pdf (latest accessed 26.01.2017).

The Climate Institute (2015). Key demographic (gender, age and location) divergence of views on climate change, its causes and solutions. Australian Climate Institute: Sydney.

Umweltbundesamt (UBA) (2015). *Umweltbewusstsein in Deutschland 2014. Berlin/Dessau-Roßlau: Bundesministerium für Umwelt, Naturschutz, Bau und Reaktorsicherheit/Umweltbundesamt.*

Walgenbach, Katharina (2007). *Gender als interdependente Kategorie. In: Walgenbach, Katharina; Dietze, Gabriele; Hornscheidt, Antje & Palm, Kerstin: Gender als interdependente Kategorie. Neue Perspektiven*

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auf Intersektionalität, Diversität und Heterogenität (pp. 23-64). Farmington Hills: Opladen.

Walgenbach, Katharina; Dietze, Gabriele; Hornscheidt, Antje & Palm, Kerstin (2007). *Gender als interdependente Kategorie. Neue Perspektiven auf Intersektionalität, Diversität und Heterogenität*. Farmington Hills: Opladen.

Whittenbury, Kerri (2013). „Climate Change, Women’s Health, Wellbeing and Experiences of Gender Based Violence in Australia“. In Alston, Margaret and Whittenburry, Kerri (eds): *Research, Action and Policy: Addressing the Gendered Impacts of Climate Change*, 207–21. Springer: Dordrecht, Heidelberg, New York, London.

Willinger Beth, Knight Janna (2012). Setting the stage for disaster: Women in New Orleans before and after Katrina. *The Women of Katrina: How Gender, Race, and Class Matter in an American Disaster*, eds David E, Enarson EP, Vanderbilt University Press, Nashville, TN, pp 55–75.

Zottarelli Lisa K. (2008). Post-Hurricane Katrina Employment Recovery: the Interaction of Race and Place. *Soc Sci Q* 89(3):592–607.

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