Gender Equality, Conflict, and the Environment: How the inclusion of female mediators in peace agreements impacts environmental related clauses

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To my Baba, who I dedicate this project to. May he forever rest in peace.

Abstract

Recent studies have established a connection between climate, gender, and peace negotiations. Yet, the theoretical mechanisms between the three variables have not been sufficiently analyzed through quantitative methods yet. The datasets concerning conflict and climate lack gender-specific variables. Therefore, this research aims to test the theory that gender inclusion and climate justice are associated, and that women enhance the chances of environmental issues being addressed within formal diplomatic settings. In particular, the analysis explores if the inclusion of female mediators within peace processes increases the probability of the inclusion of environmental-related clauses. The dataset for this research is the PAX-Dataset, which includes each peace agreement document from 1990 until 2018. Through hand coding three new gender specific variables, this research will conduct several regression analyses for empirically testing the impact of gender inclusion on environmental issues. This empirical analysis suggests that there is not a statistically significant association between female mediators and the increased number of environmental clauses within peace agreements when considering control variables.

Keywords

Gender equality, female inclusion, peace agreement, armed conflict, environmental issues.

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Introduction

In 2016, the first peace negotiation process in Kafanchan, Nigeria took place, where the mediators and parties involved solely consisted of women. The 30-member steering committee was comprised of women from different ethnic and religious backgrounds (Olaitan, 2018, p. 2). Together, these women visited religious leaders, traditional rulers, and security agencies of different sectors within the Kafanchan region. The peace committee discussed issues directly affecting women, children, and disabled people during armed conflict, such as rape, displacement, and resource scarcity (Olaitan, 2018, p. 5). This first women only peace process, facilitated the discussion and enhancement of sustainable peace within the Kafanchan region. Through female mediators, consequences of conflict that severely affected women and children of the region got discussed during the peace process (Olaitan, 2018, p. 7). This instance of female inclusion within peace processes sheds light on the emerging literature within Feminist Peace Theory around gender equality within peace agreement negotiations. As Paffenholz et. al (2016) highlight, does the inclusion of female negotiators[1] positively affect peace negotiations through establishing gender equality and giving women affected by the consequences of conflict a channel of communication. Particularly conflicts that damage the environmental infrastructure of a state leave women in rural as well as urban areas as one of the primary vulnerable groups (Resurrección, 2013).

The Earth Summits following the first one in Rio de Janeiro in 1992 have repeatedly underlined the necessity of working towards a peaceful future and to increase awareness about the sustainable use of the earth's resources such as water, soil, minerals, and oil (Ross, 2004). The UN Security Resolution 1325 about Women, Peace and Security of 2005 recommends governments worldwide to include women as active participants within the negotiation and

[1] Note: The terms Negotiators and Mediators will be used interchangeably in this research

implementation of peace agreements. In particular those that involve environmental related issues (Yoshida, 2021, p. 44). Several researchers within Feminist Peace Theory have supported the effectiveness of gender inclusion within peace negotiations based on qualitative in-depth case studies. For instance, the women's involvement in the Columbian peace negotiation led to increased protection of the Amazon Rainforest (Yoshida, 2021). The inclusion of female mediators in peace negotiations creates a more gender equal fora. Female mediators bring another perspective on the consequences of environmental damages through conflict on the table, which increases the likelihood of environmental clauses being included. Therefore, this research will analyze *the impact of female mediators in peace agreements for environmental issues* through quantitative analysis techniques, observing if a statistical association is established in a large-N sample. The PAX-Dataset (Bell et. al, 2020) has been recoded by hand and three new variables called "ThirdPartyGender", "FemaleRatio" and 'FemaleNumber" have been added. Through open-source intelligence, the gender of all mediators involved in each peace agreement process between 1990 and 2018 has been identified and coded. This allows to statistically test the impact of gender inclusion for environmental consideration within peace negotiations. The lack of statistical analyses including women and the environment within the Feminist-Peace academia is addressed through this study. Furthermore, it contributes to the intersectional area of Feminist-Peace Theory that aims to amplify the voices of women worldwide. This study follows to discuss the literature review, theory, research design, analysis, and conclusion.

Literature Review

Peace studies as a discipline have a great history of identifying the main causes of conflict. However, a mediator's degree of influence within peace negotiations has not reached consensus yet among scholars (Ellerby, 2016). Klein (2012) underlines that in a situation of conflict, legal,

political, and socio-economic factors play an important role. Neglecting these factors or trying to solve the conflict within a court of one state, might lead to further tensions between the conflicting parties (Klein, 2012). To avoid escalations, third party mediation seems to be one useful tactic for interstate as well as intrastate wars (Smith, 1985).

Traditional literature on mediation emphasizes the importance of impartiality and neutrality, as the optimal strategies to achieve peace for the parties in conflict (Smith, 1985, p. 13). Several scholars emphasize that through mediation, disputing parties which are usually isolated from each other, can get into dialogue through a channel of communication. This raises incentives for cooperation, and peace agreements are made under a "legally just" umbrella (Astor, 2007, p. 34). For peace mediations, the significance of neutrality is debated (Windham, 2019). On one hand, Smith (1985), Weingarten & Douvan (1985) and Astor (2007) see the success of conflict mediation bound to a mediator's neutrality. It does not matter if the mediator is an individual, international organization, or state, as long as it upholds the norms of impartiality and fairness (Weingarten & Douvan, 1985).

On the other hand, recently emerging academia highlights the use of mediation by third parties to obtain economic, political, or financial advantages for themselves (RezaeeDaryakenari & Thies, 2016). It is argued that third party mediation is highly unlikely to be executed in an environment of neutrality since the mediator cannot guarantee full impartiality towards the conflict. Their personal attitude will (eventually consciously or subconsciously) influence the mediators' strategy towards the conflict (Clayton, 2016). As RezaeeDaryakenari & Thies, (2016) summarize, the power of the information at hand is crucial for a mediator's strategy in a given conflict. Beardsley (2009) argues that a mediator goes through a cost-benefit analysis to evaluate which strategy benefits the mediators party in the end as well. In this case, the mediator does not only act biased, but they intentionally manipulate the conflict for their own benefit

(RezaeeDaryakenari & Thies, 2016). This asymmetry of information between the parties involved, creates difficulties to reach a peace agreement (Clayton, 2016).

Moreover, Clayton (2016) and Beardsley (2009), state that the leverage a mediator has on the conflict depends ultimately on each individual case of conflict, which actors are embroiled in and to what extent a mediator is involved into the process. According to Kydd (2003, p. 4) one can distinguish between weak and powerful mediators by looking at their position. A weak mediator is generally one that is neutral and has no other incentive than establishing peace through the provision information. A powerful mediator is biased towards a specific party or outcome and uses the information at hand to get the most out of the conflict for themselves (Kydd, 2003, p. 57). Therefore, Kydd (2003) agrees with RezaeeDaryakenari & Thies (2016) and Beardsley (2009) that neutrality is not necessarily an important attribute for a mediator, but rather the effective use of information to achieve a certain outcome. As a result, their arguments are consistent with each other.

Therefore, third-party mediation facilitates settling a conflict, yet the mediators influence varies with each peace negotiation (Ellerby, 2016). Within a situation of conflict, the "state of anarchy", caused by state institutions not functioning, leads to displacement, destruction, and environmental degradation (Smith et. al, 2021). Even if the conflict is not caused by environmental issues, one major area that is affected heavily by war is the environmental infrastructure within a state (Howard & Carter, 2020, p. 23). This includes the resource-supply infrastructure, which contains for instance agricultural lands, drinking water factories, forests, or animal farms. These infrastructures might be exploited, destroyed, or left unregulated due to local workers escaping conflict zones (Howard & Carter, 2020).

Accordingly, Resurrección (2013) underlines the importance of third-party mediators that push for the inclusion of environmental clauses within peace agreements. For instance, the Istanbul Process on Regional Security and Cooperation for a Secure and Stable Afghanistan (2010-2011)

included several third parties such as the Parliament of Afghanistan, but also Afghan refugees living in Iran and Afghani tribal leaders. The latter emphasized the importance of a "water clause" (Bell et. al, 2020). The peace agreement has one paragraph for the organization of water-supply infrastructures within Afghanistan. Several water pipes leading to villages located in the rural land had been damaged by rebel groups (Bell et. al, 2020). This peace agreement poses an instance of how third-party mediation pushes for the inclusion of environmental clauses (Smith et. al, 2021, p. 21).

How women influence peace negotiations

Scholars debate the importance of women in peace and climate negotiations (e.g: Paffenholz et. al 2016, Windham 2019, Smith et. al 2021, Klein 2012, Jackson 1993, Weingarten & Douvan 1985, Resurrección 2013 and Ellerby 2016).

Weingarten & Douvan (1985) highlight the biological differences between men and women. They underline that women are evolutionarily more prone to peace and contain a greater amount of empathy than men. In a situation of conflict, women are more likely to push for peace between different parties (Weingarten & Douvan, 1985, p. 356) In addition, some scholars emphasize that women are more conflict averse and generally put greater emphasis on harmony due to their traditional role as mothers and housewives (Klein, 2012). An inclusion of women would therefore lead more likely to successful conflict mediation (Klein 2012, Astor 2007, Weingarten & Douvan 1985).

Furthermore, Jackson (1993), Sjoberg et. al (2018), Paffenholz et. al (2016) and Resurrección (2013) highlight that the notion of the "caring mother" translates into the image of women caring more about the environment around them. Jackson (1993) states that the academia around climate change and women represents women as the most vulnerable group in instances

of climatic changes. Therefore, some climate negotiations highlighted the need to better protect women from the consequences of natural disasters (Paffenholz et. al, 2016).

However, other scholars highlight that this contextualization of women as "vulnerable" neglects the multi-dimensionality of a conflict, since each conflict has its own history, cultural and societal background (Jackson, 1993). Moreover, some authors state that to impose the image of the "poor rural working women" legitimizes to keep women away from jobs that require education such as office jobs (Resurrección, 2013). Paffenholz et. al (2016) evaluate the importance to create gender equality in each working sector, especially those who are dominated by the male sex. In their qualitative study they found that the inclusion of women in peace negotiations leads to a higher success rate of signed peace agreements (Paffenholz et. al, 2016). Moreover, the qualitative study by Howard & Carter (2020), concluded that the inclusion of women in climate negotiations in the Pacific resulted in a higher number of environmental clauses. Windham (2019) summarized that even though only 5% of all leading mediators in peace negotiations are women, the ratification rate of the peace agreement is 3 times more likely, if the mediation team is either headed by a woman or includes female delegates.

The patriarchal structures of states generally pose advantages for men over women in the socio-political context, and especially in the realm of peace mediation (Windham, 2019). Even though women are seen as closer to the environment and as more peaceful, the area of peace negotiation, conflict resolution persists to be a masculine domain (Ellerby, 2016). Since it is generally considered that men are the ones actively engaging in conflict, they are also seen as the main stakeholders for conflict resolution (Ellerby, 2016). In this way, women are not considered as central stakeholders for peace negotiations, which results in low numbers of female mediators in peace negotiations (Windham, 2019, p. 5). However, the literature suggests

that the influence of even one woman in a peace negotiation can exert the influence of her male counterpart (Paffenholz et. al, 2016, p. 8).

The existing studies around Feminist Peace Theory emphasize that it is more about "making women count rather than just counting women" (Paffenholz et. al, 2016, p. 23) within peace or climate negotiations. They indicate that the inclusion of women in climate negotiations is important, yet in-depth studies of protocols of the negotiations are the key for seeing the actual change women make in climate and peace negotiations. As Smith et. al (2021) point out, a gap in the literature is the "gender-climate-conflict" nexus with little information at hand about the relationship between the three factors. Moreover, there are few quantitative studies about the role of women in peace negotiations since most studies rely on in-depth interviews and congress-protocols (Smith et. al, 2021, p. 27). Even though there is extensive literature on the importance of women within climate negotiations, little can be found on the influence of women as mediators for environmental clauses within peace agreements. Even less can be found about quantitative methods of testing this mechanism, creating difficulties to establish generalizable statements. If women are important negotiators within climate agreements, then their significance for the environmental aspect within peace agreements should be analyzed as well. Therefore, this research aims to address this gap by analyzing:

To what extent does the inclusion of female mediators in peace negotiations impact the inclusion of environmental clauses?

Theoretical Framework

The Beijing Declaration and Platform for Action (1995) recognized the intersection between "women and environment" as one of the 12 pillars in creating gender equality globally. As mentioned above, less than 5% of women hold positions as chief mediators in peace-negotiations since 1990 (Windham, 2019). One reason for the recurring low numbers of female

representation is that gender dynamics are only poorly understood on the international level, particularly in the climate-security policymaking and the peace mediations practice (Yoshida, 2021, p. 23). However, a recent study by Ellerby (2016, p. 544) highlighted that female inclusion increases the success rate of a peace agreement being ratified by 64%. Therefore, the impact of gender equality on sustainable peace is seen as a significant part of Feminist Peace Theory (Astor, 2007, p. 12). As a result, the theory that gender equality itself increases the inclusion of environmental issues within peace agreements, is linked to mechanisms that have not been presented together yet. This study suggests four mechanisms that are connected to the theory of gender equality and environmental issues: The Cornucopian school of thought (1), the signaling effect (2), the vulnerability of women in conflict zones (3) and women as active agents of peace (4).

Most scholars of Feminist Peace Theory and Conflict Studies have touched on either mechanism. However, to fully grasp the theoretical impact and societal implications of gender equality on environmental issues, this study connects these mechanisms together under the theory of gender equality. Peace negotiations generates peace agreements which set the structure for state reconstruction after conflict, affecting the lives of women and their position in the society as a whole (O'Reilly & ÓSúilleabháin, 2013, p. 5). Therefore, gender equality within the forum of formal negotiation can affect the outcome of the latter differently, compared to a one-gender dominated negotiation.

In this study, the term mediation will refer to an individual, non-governmental organization, international organization, or state engaging as a third-party mediator in a negotiation (Clayton, 2016, p. 5). Mediation takes place as a diplomatic formal process either between two or more states in conflict or between the state's elite and the rebel groups leaders with the goal of creating an official peace agreement (Craig, 2011). In this study mediation indicates that parties in conflict give up some kind of control over the conflict and show a level of willingness to

accept a third-party mediator (Nagel, 2021, p. 435). Moreover, the focus is on formal processes of mediation, which involve either non-state actors, state leaders and third-party mediators. Henceforth each type of conflict, inter and intrastate with a minimum of 25 battle related deaths that involved an official peace agreement and third-party mediation will be considered (Bell et. al, 2020).

Moreover, in this research, gender will not refer to the biological sex of an individual, but to the gender that the individual identifies themselves with (Sjoberg et. al, 2018). This division of sex and gender amplifies the voices of those women who are not women by their sex, yet by their gender. Through the consideration of the sex/gender dichotomy, the new academic discourse around gender is considered.

Figure 1- Women's Global Representation in Politics

(Word Economic Forum Global Gender Gap Report, 2020)

As shown representatively in Figure 1, women are underrepresented in diplomatic and international political forums. However, the establishment of gender equality in forums such as

peace negotiations decrease the risk of conflict re-escalation by 20% (Ellerby, 2016, p. 23). In a situation of conflict, rebel groups, state institutions, the military or foreign intervention might exploit and damage the environment within a state. A cost-benefit analysis by both sides makes the establishment of a peace agreement more lucrative than the further destruction of a state's infrastructure, killing of civilians and to live in a permanent fear of attacks (Beardsley, 2009). In addition, female participation in peace negotiations increases the chances of cultural and environmental reparations after armed conflict by 75% (Windham, 2019).

Accordingly, the Cornucopian school of thought offers a theoretical link between female inclusion and increased consideration of environmental issues. Contrary to the Neo-Malthusian thought which suggests that ultimately resource scarcity leads to armed conflict, war and starvation, the Cornucopian theory offers a more utopian perspective (Haspeslagh, 2020, p. 45). The latter theory implies that with the increase of humans, more labor force will be available to harvest and allocate resources properly (Haspeslagh, 2020). The issue of resource scarcity can be overcome by establishing equal working conditions for men and women alike, along with increasing cooperation between states (Clayton, 2016, p. 131).

Therefore, a counteraction against environmental degradation as a consequence of conflict is the female inclusion into the male-dominated fora of peace mediation. By giving both equal chances of mediating a conflict, gender inclusion supports sustainable cooperation (Astor, 2007, p. 34). Further below it is elaborated in detail how men and women experience different consequences of conflict and environmental degradation. However, it is the combination of these experiences that increase the likelihood of environmental issues being addressed in peace negotiations (Jackson, 1993, p. 245). In addition, the Cornucopian Thought states that resource scarcity can only be overcome if men and women cooperate equally (Haspeslagh, 2020, p. 50). Therefore, the Cornucopian school underlines that environmental issues are more likely to be addressed if a peace negotiation is gender inclusive.

As mentioned above, do female mediators bring different perspectives on the consequences of war to the negotiation than male mediators (Resurrección, 2013). This is caused by women experiencing some consequences of armed conflict different than men (Windham, 2019, p. 34). For instance, when the terrorist group ISIS invaded Mosul in Iraq in 2014, 70% of women experienced forms of sexual violence, in contrast to 15% of men (Yoshida, 2021, p. 29). Armed conflicts destroy a state's infrastructure and hamper civilian access to resources. The majority of armed conflicts since 1990 until 2019 occurred in states with a low degree of institutionalized state systems and strong traditional societal structures (Bell et. al, 2020). Taking again the instance of Iraq in 2014, around 40% of Iraqi men left to fight for either side. Another 20% fled the country to seek refuge for themselves and with the aim to bring their families afterwards (UNHCR-Report, 2016). As a consequence, the majority of women were left as the main providers of food and maintainers of farms, drinking water springs and other resources (UNHCR-Report, 2016). However, less than 20% of women own the total percentage of land worldwide, while over 500 million of them farm and produce the majority of the world's food supply (Global Gender Gap Report, 2020). In addition, it is also seen as the responsibility of women to protect children, elderly, and disabled people along with the maintenance of the household. The increased pressure of women in times of conflicts led in Iraq to an increase of 40% in female prostitution and 30% increase in female drug use (Paffenholz et. al, 2016, p. 17).

This leaves women as one of the main vulnerable groups in situations of conflict. Female inclusion into peace negotiations, raises the likelihood of these vulnerabilities women in war zones face to be addressed. A male negotiation team does not indicate that female issues will be neglected, yet mediation between conflicting parties means a careful choice of words and proposals. 95 % of women in the diplomatic arena either have been subject to gender-related discrimination or know other women affected by this issue (Sjoberg et. al, 2018, p. 34) The involvement of women as mediators increases the likelihood that gender-related

discriminations get addressed, due to the shared experiences of being a woman. Therefore, the shared perspective increases the incentives of environmental issues, which particularly affect women in situations of conflict, to be included.

While the mechanism of vulnerability explains one link between increased environmental clauses and female inclusion, the mechanism of women as active agents of peace further expands the argument. The underlying theory here is one that acknowledges the vulnerability of women in conflict, yet their active agency within peace negotiations is seen and considered as important for environmental clauses. Instead of victimizing women who are left vulnerable in situations of conflict, female active participation in peace negotiations represents the opposite (Paffenholz et. al, 2016). To shed light on a women's vulnerability does not exclude their significance for formal peace negotiation processes. It is rather that their vulnerability translates into active peace building. Moreover, the monopolization of women as one vulnerable group neglects that each woman has her own cultural, societal, historical, and economic background (Jackson, 1993). Within peace negotiations, female mediation can help to change the discourse of women as one group. For instance, a woman living in a rural village might be affected by resource exploitation through rebel groups, yet another woman in the same state might not be affected since she lives in a bigger city and is less exposed to risks of resource scarcity (Yoshida, 2021).

Therefore, the class, cultural background and party affiliation between female mediators can be truly diverse as well (Paffenholz et. al, 2016). As a result, the promotion of diverse women's groups rather than a repeated show casting of women as a single group is underlined. Furthermore, diplomacy as a part of formal peace mediation is a gendered institution. As history exemplifies, women had to fight for their place at the negotiation table but are generally taken less serious (Howard & Carter, 2020). The inclusion of female mediator's sheds light on the strategic interests' women bring on the table for conflict resolution. By actively including them

into peace negotiations, one might see a change in the peace agreement that is being generated (Paffenholz et. al, 2016, p. 35).

Third, also the mechanism of the signaling effect to the international community is linked to the overall theory of gender equality. A signaling effect indicates that a specific action by one party creates an effect either targeted to a specific community, or to the general public (O'Reilly & ÓSúilleabháin, 2013). The signaling effect of including female mediators is directed to the state in conflict and/or to the international community. The crucial point here is to present that women are accepted in formal diplomatic environments. Their inclusion signals that women are accepted by the conflicting parties as part of the main negotiators. This signals that the conflicting parties acknowledge that female negotiators have the capability for conflict resolution and formal crisis management. As active participants in conflict resolution, female mediators create an image contrary to the one of the victimized woman who is left alone in a war zone and depends on external help (Yoshida, 2021). The signaling effect increases the likelihood of other structural issues such as environmental damages to be addressed as well.

Therefore, the inclusion of female mediators will not lead to more neutrality, but rather to more bias for the reconstruction of environmental infrastructure (Yoshida, 2021, 4). For instance, it was the female mediators in the Columbian peace agreements of 2000 who pushed for the protection of the Amazon rainforest (Yoshida, 2021, p. 3) In this case, active female mediation played a significant role in raising awareness about the importance of the reconstruction and protection of the environment in post-conflict situations (Yoshida, 2021, p. 3). It was because of their biasedness that they knew they had to convince both sides for the protection of the Amazon Rainforest. Another example is presented from local communities of the Pawoti Village in Nepal (Smith et. al, 2021, p. 22). Here, women took active part in local-level mediation and brought different parties in conflict on the same table. By pressuring male family members to communicate with each other, female negotiators were able to resolve several

disputes over a local drinking-water source (Smith et.al, 2021, p. 23). These are empirical instances of how biasedness, gender equality and using one's own vulnerability to be an agent of peace are connected mechanisms. The intersection between women and climate is crucial, especially in situations of conflict. It highlights how women's relationship with their environment and armed conflict, is mediated by "experiences of social, economic, and political inequalities" (Yoshida, 2021, p. 21).

The analysis explores whether female inclusion as third-party mediators in peace negotiations increases environmental clauses within peace agreements. The mechanisms highlighted the overall theory of gender equality and its relevance for the research question. From the above discussion, the following hypothesis is derived:

H1: The more women are included as third-party mediators within a peace negotiation, the more environmental clauses are to be found within the peace agreement.

Research Design

On the basis of the existing studies[2], this research conducts a quantitative analysis, allowing to test the theory of gender equality for its generalizability. The dataset for the analysis of the dependent variable, the inclusion of environmental clauses, is derived from the Peace Agreement Database (Bell et. al, 2020). It contains worldwide data from over 1832 intra-state and inter-state conflict resolutions from a time period between 1990-2019 (Bell et. al, 2020). The decision for the usage of this dataset lies in the dataset itself since it contains exhaustive coding of each peace agreement, involved parties, third parties and the status of the peace agreement. The PAX-Dataset contains the names of all third-party actors involved in the peace

[2] See Paffenholz et. al (2016), Windham (2019), Smith et. al (20201), Hemmati & Röhr (2009), Yoshida (2021)

negotiation process (Bell et. al, 2020). Moreover, the dataset provides variables which describe the specific clauses that were included into the peace agreement. For instance, the peace agreement of Nepal in 2007 contains a gender-specific clause which gives women in Nepal an enhanced channel of communication with the bureaucratic institutions of the Nepalese state (Bell et. al, 2020).

This dataset presents three variables which are concerned with the inclusion of environmental clauses within peace agreements. All three variables are numerical and dichotomous. A coding of 1 indicates that the peace agreement provides a clause about the issues the variable is concerned with. A coding of 0 indicates that there is no clause representing the variable. “LaEn” presents an inclusion of an environmental clause intended to repair the damaged forests, farmlands, dunes etc... (Bell et. al, 2020). The variable “Wat” is coded with a 1, if the peace agreement includes a specific clause aimed to protect rivers, seas, lakes or drinking water springs within the state. The variable “NatRes” is coded with a 1, if the peace agreement includes a specific clause aimed for the protection and enhancement of a state’s infrastructure regarding their natural resources. In order to measure how predictor variables, impact the inclusion of environmental clauses, a new dummy variable “EnvInc” is created, which will be the main dependent variable. It compiles the coding of “LaEn”, “NatRes” and “Wat” together and takes either the value of 1 or 0. If at least one clause related to one of the three variables is presented in a peace agreement, “EnvInc” shows 1=Included. If no related clause is included, “EnvInc” shows 0=Not Included.

Since the hypothesis claims that female inclusion will increase the number of environmental clauses, each peace agreement containing a third-party will be considered. 1691 out of 1832 peace agreements are successfully signed by both sides of the conflict, 124 are unilateral and 10 have an unclear status. Nevertheless, this analysis will consider every peace agreement despite its status since every inclusion of women in diplomatic settings signals to the

international community and the parties in conflict that women are legitimate diplomatic actors for peacebuilding (Paffenholz et. al, 2016). This includes peace agreements which were not successful and those whose durability might not have lasted for a longer period in time. However, an unsuccessful peace agreement does not mean that the role of the female mediator is unsuccessful, the initial act of including a woman in a mediator team is in itself a success if one observes the gap of women and men in formal political positions (Windham, 2019, p. 21). Even though the dataset provides the names of third-party mediators involved, it lacks a gender-oriented variable. For conducting a quantitative analysis, a new categorical variable called "ThirdPartyGender" is created. The variable contains 773 out of the 1832 peace agreements, all those which have an identifiable third-party mediator.

Through open-source research, the gender of the mediators has been identified to empirically assess the impact of female inclusion in peace agreements. Each peace agreement has been screened by hand and the gender inclusive variable "ThirdPartyGender" is constituted by hand. Its impact is empirically tested on the inclusion of environmental clauses. If the third party of a peace agreement contains at least one female actor, then the new numerical variable "ThirdPartyGender" is being coded with "1". If there are solely male mediators present, the variable is coded with "0". All other 1059 peace agreements are coded as system missing and are not included into the analysis, since the peace agreement does not mention any individual third-party mediators. The coding of a gender specific variable facilitates the assessment of gender related issues within peace negotiation processes.

For robustness checks of the analysis, a second independent variable is provided. The numerical variable "FemaleNumber" measures the total number of female mediators within one negotiation team. This variable is hand-coded and controls for the robustness of the main predictor variable "ThirdPartyGender". Different from "ThirdPartyGender" which only shows if there is a woman included within one peace process, does "FemaleNumber" present a more

differentiated variable, to complement the main predictor's explanatory strength. Through open-source research the team members were identified, and the total number of female mediators calculated.

The variable "FemaleRatio" functions as a robustness check to the dependent variable as well. The scale between 0 and 1 measures the ratio of female mediators within the 116 peace agreements that included female mediators. For each mediation team the number of female mediators is divided by the number of male mediators, hence, the female ratio within one mediation team is assessed. Therefore, "FemaleRatio" provides the percentage of female mediators within one team. The two predictor variables "FemaleRatio" and "Female Number", will both check for robustness of the main independent variables results.

One commonly used control variable is the regime type of states in conflict. In democracies the environmental infrastructure and equal supply of resources such as water and crops, are seen as public goods (Hegre et. al, 2002, p. 714). Since conflict damages the environmental and resource infrastructure, it is seen as the responsibility of the elected government to manage the reparation. For the elected members of government, the likelihood of reelection rises, if an investment is made into these public goods (Hegre et. al, 2002, p. 734). In autocratic regimes, the political elite holds most of the political power. Therefore, the elite in power cannot be hold accountable as easy by its citizens as in democracies. In fact, autocratic leaders either do not hold elections or hold fraudulent elections, which gives them the freedom to invest the state's money rather in their own interests instead of public goods (Hegre et. al, 2003). Therefore, the variable "Polity2" is merged into the dataset (Marshall et. al, 2002). This variable is received from the Polity IV Regime trends dataset, which classifies political regimes of each recognized state on a range from full democracies (10) to autocracies (-10) since 1800 until 2020. The variable will control if a state's regime type has a greater influence on the inclusion of environmental clauses than the mediator's gender (Marshall et. al, 2002).

Another control variable “Conflict Type” measures the type of conflict and is from the PAX-Dataset (Bell et. al, 2020). It classifies conflicts as “Governmental” if they are of political or ideological nature, and “Territorial” if the peace agreement is concerned about territorial disputes. Depending on type of conflict, the likelihood for environmental issues to be subject of discussion varies. According to Brauch et. al (2008), territorial disputes are more likely to include environmental clauses than political or ideological conflicts. An inclusion of “Conflict Type” will analyze if the type of conflict will affect the outcome variable (Bell et. al, 2020)

The categorical variable “Agreement Type” from the PAX-Dataset classifies the conflicts into inter/intrastate (1), intrastate (2) or interstate (3) (Bell et. al, 2020). Similar to “Conflict Type” the national/transnationality of a conflict might affect the importance of environmental factors. Even though resource-infrastructure and the flora and fauna of a state get damaged in intra and interstate conflicts, the importance to reconstruct damaged environmental sources could be of higher importance within intra-state conflicts since here the focus is turned more into the state (Brauch et. al, 2008). In most interstate conflicts, the main issue to solve is mainly to settle the conflict between two supranational entities, which decreases the possibility of a comprehensive environmental consideration of local damages (Bell et. al, 2020). However, peace agreements coded as “inter/intrastate” agreement types are not coded for a “Polity2” score. Nevertheless, this control variable will be included, as several inter/intrastate agreement types include environmental clauses. The missing control from the “Polity2” variable will be substituted through this control variable.

Another common control variable is the region of the conflict from the PAX-Dataset (Bell et. al, 2020). The variable “Region” is split into Asia and Pacific (1), Europe and Eurasia (2), North Africa and the Middle East (3), Americas (4), Africa (5) and Cross Regional (6). According to Clayton (2016, p. 34), does the consideration of environmental factors depend on the degree of resource scarcity in specific countries and regions. In regions where general resource scarcity

due to difficult geographic living standards is great, the settlement of environmental damages after armed conflict seems more lucrative than in countries without heavy resource scarcity (Clayton, 2016). For instance, several peace agreements following the peace negotiation process between the Nepalese government and its regions from 2006 include clauses related to the regulation of farmlands and food scarcity, following a wheat shortage during the conflict (Smith et. al, 2021, p. 24). Another instance provides the Iraqi Peace process from 2005, where clauses about the protection of water pipes, farmland and the regulation of natural resources were included (Bell et. al, 2020).

Lastly, "GDP" controls for the state's GDP. This common control variable measures if the financial situation of a state in conflict might be a decisive factor for the consideration of environmental issues (Feenstra et. al, 2015). Since conflicts damage a state's infrastructure, a higher state GDP indicates a higher probability of reparations of environmental damages (Brauch et. al, 2008). As Figure 2 & 3 below show, have states exposed to climate and fragility risks, higher risks for conflicts escalation as well. The comparison underlines the relation between conflict and potential climate risks. A high state GDP increases the chance that damages in climatic fragile countries are repaired. Even though this research analyzes the significance of gender within peace negotiations, its effect cannot be seen isolated but rather as part of an intersection between several factors, including climatic and economic ones (Smith et. al, 2021).

Figure 2–Climate Exposure and Fragility Risks

(Zelnik &Meron, 2018).

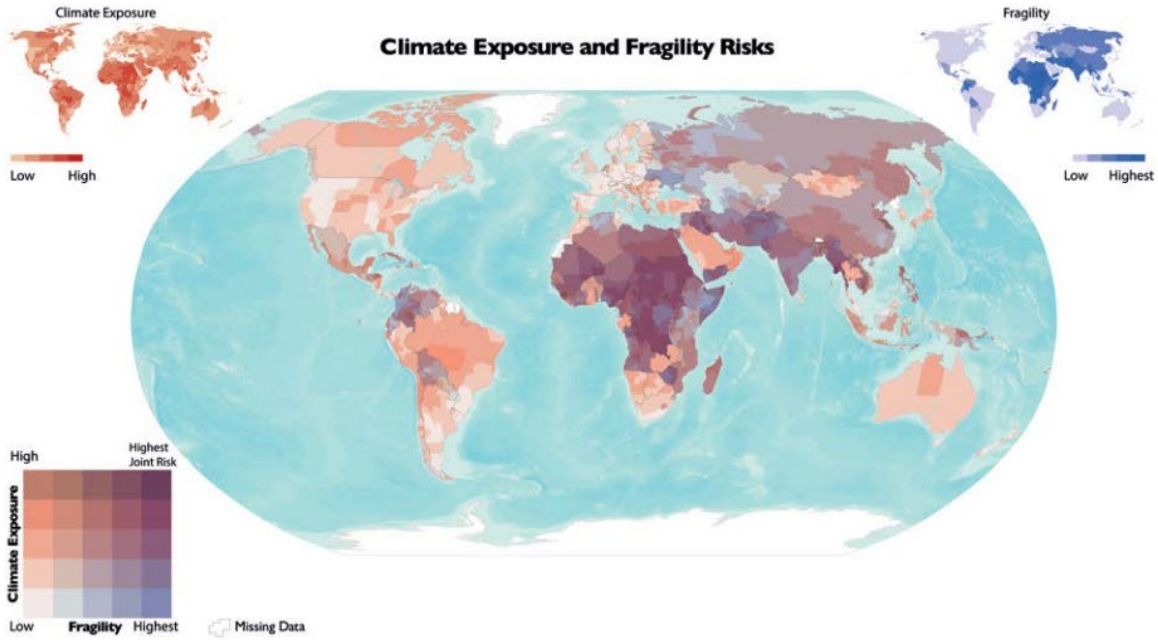
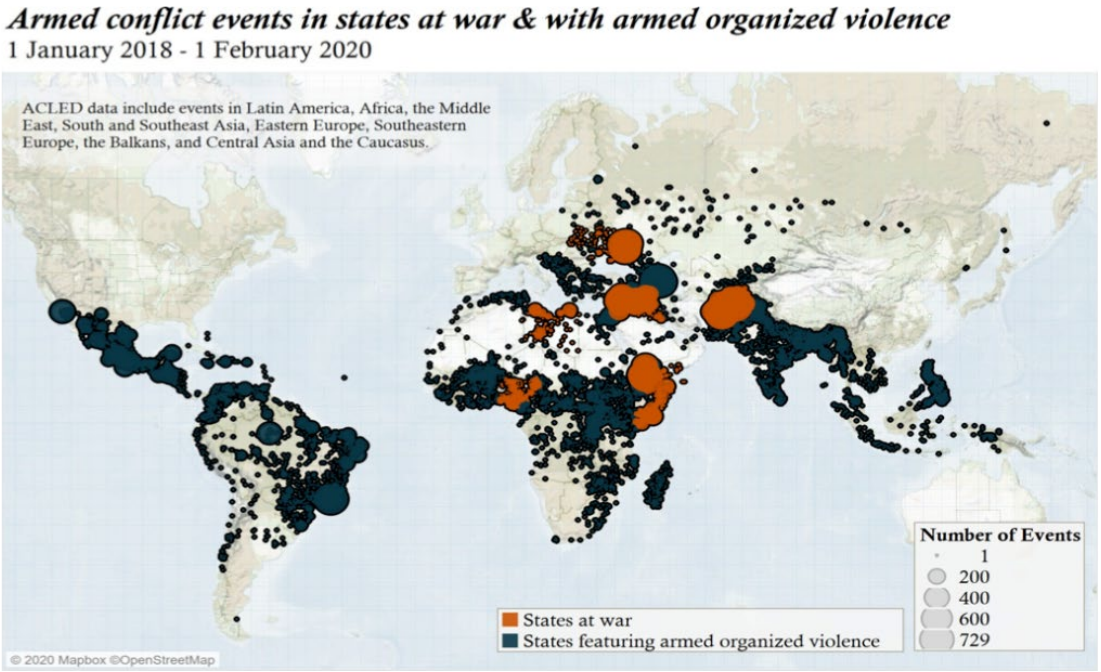


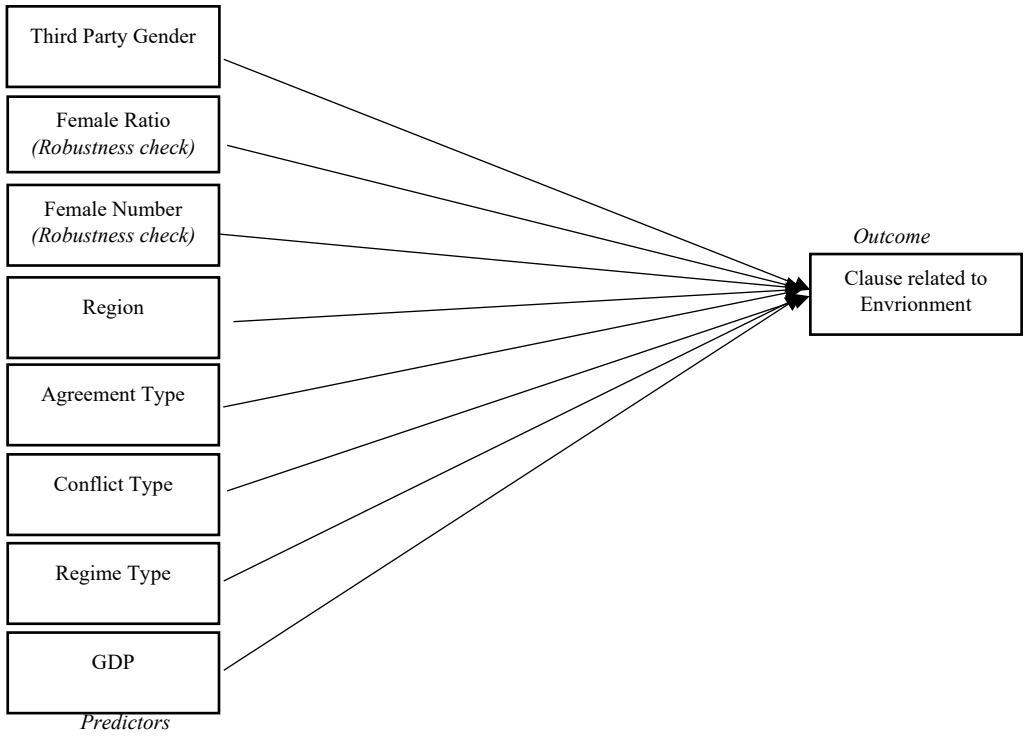
Figure 3- Geographical Overview of armed conflict

(Kishi et. al, 2020)



Further measurements indicate that all types of peace agreements can be included into the analysis. Further details are presented on Figure 9 and Figure 10 in Appendix A.

Figure 4 - Research Design



Estimation Model

Two statistical models are used for the null hypothesis testing. The binary logistic regression model is used for the empirical analysis of the data. Logistic regression models are particularly well suited for analyses with a discrete outcome, meaning that the outcome variable can take a binary value (Field, 2018). It is well suited for analyses where the predictor variables are categorical and the issue at hand can be considered as a classification problem. The outcome variable “EnvInc” is coded with either 0 for no inclusion of environmental clauses and 1 for the inclusion of environmental clauses and is therefore a binary variable. Since some countries are included several times within the dataset for several years, a Complex Clustered Logistic Regression will be run as well to control for heteroscedasticity. The analysis is clustered by “country”, correcting for the independence of observations.

Results and Analysis

Analysis 1- Logistic Regression Analysis

Variable	Model 1	Model 2
(Constant)	-1.814***	-0.075
	(0.278)	(1.356)
Third Party Gender	1.025*	0.766
	(0.472)	(0.595)
Region		
Africa (1)		0.385
		(1.246)
Americas (2)		-0.014
		(1.553)
Asia and Pacific (3)		3.011
		(1.658)
Europe and Eurasia (4)		-19.161
		(11527.482)
Polity2		-0.055
		(0.075)
GDP		0.000
		(0.000)
Agreement Type		
Interstate/Intrastate (1)		-2.129
		(1.577)
Intrastate (2)		-2.016
		(1.032)
Conflict Type		
Governmental (1)		-
Territory/Governmental (2)		-
-2LL	126.484	110.468
Nagelkerke R^2	0.052	0.225
Classification Accuracy	82%	84.3%
N	139	139

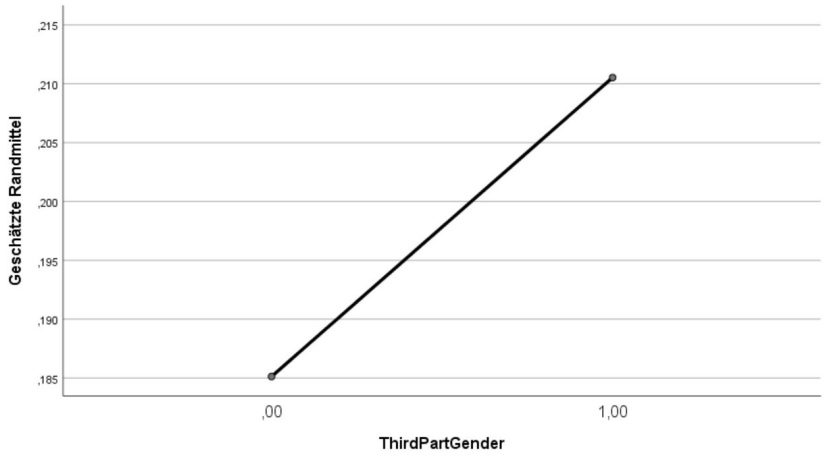
*Note: Standard Errors in Parentheses. ***p < 0.001, **p< 0.01, *p< 0.05*
a. Complex Clustered Logistic Regression Model

Model 1 presents the results of the binary logistic regression analysis with the main predictor variable and the constant. The predictor variable “ThirdPartyGender” is statistically significant

on the 0.05% level. The unstandardized Beta coefficient for the predictor variable "ThirdPartyGender" is significant with *B (139)* =1.025, *SE*=0.472, *Wald*=4.714, p<0.05. The estimated odds ratio favors an increase in the constant "Environmental Inclusion" by 17% for every 1 unit increase in "ThirdPartyGender" [*Exp(B)*= 2.788, 95% CI (0.065, 2.631)]. The null hypothesis can be rejected for Model 1. The overall fit of Model 1 remains low with -*2LL*=126.484 and Nagelkerke R^2=0.052. The large numerical variation within Model 1 and the low R^2 show that even though Model 1 is statistically significant, its overall explanatory strength for the variables remains poor. The classification accuracy of 82% presents that the analysis correctly classified 82% of the cases without any addition of predictor variables.

In addition, Figure 5 presents a linear relationship between the inclusion of female mediators in peace agreements and the inclusion of environmental clauses. In comparison, a male mediation team leads to the inclusion of environmental related clauses with the Exp(B)= 0.185. A mediation team where at least one woman is included, increases the odds about Exp(B)= 0.210. This positive association between the predictor and the outcome supports the hypothesis, that female mediators positively impact the environmental negotiations in situations of conflict.

Figure 5- Linear Relation between Environmental Inclusion and Third-Party Gender



Second, Model 2 presents the statistical results with the addition of the four control variables. The Beta value of the main predictor variable "ThirdPartyGender" is not statistically

significant, and the null hypothesis cannot be rejected. The main independent variable "ThirdPartyGender" shows an unstandardized Beta coefficient *B (139)* = 0.766, *SE*=0.595, *Wald*=1.654 p>0.05. Through the addition of the control variables, the statistical significance of the probability of the main predictors Beta coefficient to impact the constants odds, decreases. Similarly, to Model 1, Model 2 has a high -*2LL*=110.468 and a low R^2=0.225. Model 2 has a low explanatory power of the overall fit of the regression and cannot explain much of the variance. The classification accuracy of the analysis increases to 81.2% by adding the control variables, which indicates that the covariates contribute to the overall prediction strength of the model. The overall strength of the model is of importance for the hypothesis testing. Even though no statistically significant correlation between the main predictor and the outcome variable can be assessed, the low model strength indicates that another type of statistical model might explain more of the model's outcome. The results of the binary logistic regression are correct, yet they present a low explanatory power.

Analysis 2- Complex Clustered Logistic Regression

Variable		Model 1a
(Constant)		-1.118 (1.690)
Third Party Gender		
	Male (0)	0.682 (0.384)
	Female (1)	0.000 (0.000)
Region		
	Africa (1)	0.221 (1.559)
	Americas (2)	0.669 (1.704)
	Asia and Pacific (3)	-2.334 (1.738)
	Europe and Eurasia (4)	20.294*** (1.841)
Polity2		0.057 (0.069)
GDP		2.277E-6 (1.55E-7)
Agreement Type		
	Interstate/Intrastate (1)	21.780 (0.000)
	Intrastate (2)	21.688 (0.000)
Conflict Type		
	Governmental (1)	-19.830 (0.000)
	Territory/Governmental (2)	0.000 (0.000)
Cox & Snell R^2		0.179
Nagelkerke R^2		0.245
N		139

*Note: Standard Errors in Parentheses. ***p < 0.001, **p< 0.01, *p< 0.05*
a. Complex Clustered Logistic Regression Model

Table 1a presents the results of the Complex Clustered Logistic Regression Model. Model 1a presents no statistically significant findings of the predictors Beta coefficient. The independent variable "ThirdPartyGender Male (0)" has an unstandardized Beta coefficient of *B (139)* = 0.682, *SE*= 0.384, p>0.05. The p value is greater than 0.05, indicating no statistically significant

association. The main predictor variable "ThirdPartyGender Female (1)" has an unstandardized Beta coefficient of *B (139*) =-0.000, *SE*=0.000, p>0.05. The p value is not smaller than 0.05, estimating no significant correlation between "ThirdPartyGender Female (1)" and the outcome variable "Environmental Inclusion". The overall strength of the model increased in comparison to Model 1 with the Nagelkerke R^2=0.245. However, the more conservative Cox & Snell R^2=0.179 present a low overall fit of the model. In comparison, the Complex Clustered Logistic Regression Model does explain more of the model's variation than the Binary Logistic Regression Model. Both models show no statistical significance between the main predictor variable and the outcome with the addition of the control variables.

Moreover, a high significant correlation between the control "Region Europe and Eurasia (4)" and the outcome variable is presented in the Complex Clustered Regression model, *B (139)* = 20.294, *SE*=1.841, p<0.0001. Therefore, another Complex Clustered Regression Model is executed, with an Interaction variable called "Interaction_Eu_Gender". These variable models the effect of "Region Europe and Eurasia" and "ThirdPartyGender" combined. It explores if there is a possible interaction between Third Party Gender and the Region Europe and Eurasia. The complex clustered regression model shows no significant correlation between the Interaction variable and the outcome variable "Environmental Inclusion", *B (109)* = 0.051, *SE*=0.000, p>0.05. The interaction between the variable and the constant does not indicate a significant association between the two predictor variables "ThirdPartyGender" and "Region_Europe_and_Eurasia". The full model is presented in Appendix A.

Discussion

The results of the three models do not show a significant association between the inclusion of female mediators and increased environmental clauses within peace agreements with the

addition of the four control variables. The statistical significance of the Binary Logistic Regression Model 1 loses the association with the addition of the control variables. However, this does not indicate that gender equality is not relevant for environmental related issues within peace negotiations. There is also the possibility that the impact of gender equality on environmental related clauses within peace negotiations cannot be explored statistically. A negotiation team that includes one woman, might not guarantee a direct increase in environmental clauses. First, women differ in their perspectives and opinions from each other. Therefore, there is the possibility of female negotiators not being interested in environmental issues. Moreover, in this study, there were a total of 2220 male mediators compared to 121 female mediators. Perhaps, the hypothesis of this study cannot be supported by the empirical analysis due to the numerical gap between male and female mediators. Even though a female mediator is included in a negotiation team and introduces environmental related issues, it is not guaranteed that her point of view is considered. Lastly, there might be the possibility that there is simply no association between female mediators in peace negotiations and environmental related clauses. However, these assumptions require further analysis with more advanced gender-related data.

Robustness Check

The statistical analyses, Binary Logistic Regression and Complex Clustered Logistic Regression were executed with the two other main predictors, “FemaleRatio” and “FemaleNumber”. The odds ratio of both predictor variables is robust with favoring an increase in the dependent variable “EnvInc”, for each unit increase in either “FemaleRatio” or “FemaleNumber”. Furthermore, the robustness check showed that the results are not statistically significant. The robustness check for the interaction variables “Interaction_Eu_FemaleRatio” and “Interaction_Eu_FemaleNumber” do not present a

statistical association neither. This further supports the assumptions that either, the statistical analysis of this research did not grasp the complexity of measuring the effect of gender inclusion environmental clauses. On the other hand, it might indicate that there is no statistical association between female inclusion in peace negotiations and increased environmental clauses within peace agreements. For further detailed information about the generated estimates, please refer to Appendix A.

Conclusion

This research aimed to address the gap within the Feminist-Peace scholarship by highlighting the impact of including female mediators in peace building processes for environmental related issues. As the empirical results show, statistical significance cannot be measured between the inclusion of female mediators within one mediation team and an increase in environmental clauses with the consideration of control variables. This concludes that the impact of female mediators in peace negotiations for environmental clauses benefits from further analysis with advanced data. Even though scholars examining the "climate-conflict-gender" (Smith et. al, 2021, p. 5) nexus have recommended to not solely count the numbers of women, but rather "making women count" (Paffenholz et. al, 2016, p. 1), statistical analyses provide scientific evidence for large-N samples. The large gap between the total number of male and female mediators within formal peace negotiations requires more attention from the international diplomatic community. The introduction of specific gender-related polices support the further inclusion of female mediators within peace negotiations and increase the potential for peace agreements with increased numbers of environmental clauses. In this way future statistical research might explore the impact of gender equal mediation on environmental clauses within peace agreements. The more gender equal the number of mediators is, the more generalizable hypotheses can be generated. In addition, datasets concerning causes and consequences of

conflict can be used for the creation of gender-specific variables as well, to further facilitate gender-specific research. However, the statistically significant findings of the Binary Regression Model 1 can be used as a basis for further quantitative analyses. Therefore, future research into the impact of female mediation in peace negotiations on environmental related clauses is highly recommended.

Lastly, the significance of the intersection between climate, conflict and gender has been suggested by this research. It supports the results of some existing scholars of conflict studies that neither gender nor climate can be isolated from empirical analyses when observing the causes and consequences of intra and interstate conflict (Clayton, 2016). To make sustainable peace work, is the inclusion of gender and climate indispensable.

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Appendix A

Analysis 3-Complex Clustered Regression with Interactive Variable" Interaction_Eu_Gender"

Variable	Model 1a
(Constant)	-23.956 (135.498)
Interaction_Eu_Gender	
Male (0)	0.051 (0.000)
Female (1)	0.000 (0.000)
Region	0.052 (0.083)
Polity2	-8.843E-6 (2.564E-6)
GDP	-
Agreement Type	
Interstate/Intrastate (1)	21.414 (53.577)
Intrastate (2)	-20.535 (53.566)
Conflict Type	
Governmental (1)	-
Territory/Governmental (2)	-
Cox & Snell R^2	0.232
Nagelkerke R^2	0.387
N	134

*Note: Standard Errors in Parentheses. ***p < 0.001, **p< 0.01, *p< 0.05*

a. Complex Clustered Logistic Regression Model

Robustness Check-Female Ratio Logistic Regression

Variable	Model 1	Model 2
(Constant)	-1.600***	0.100
	(0.241)	(1.374)
Female Ratio	0.272	0.106
	(0.713)	(1.604)
Region		
Africa (1)		0.489
		(1.267)
Americas (2)		0.113
		(1.570)
Asia and Pacific (3)		3.175
		(1.693)
Europe and Eurasia (4)		-19.424
		(12704.205)
Polity2-First		-0.039
		(0.073)
CGDPE-Mean		0.000
		(0.000)
Agreement Type		
Interstate/Intrastate (1)		-1.693
		(1.551)
Intrastate (2)		-2.160*
		(1.041)
Conflict Type		
Governmental (1)		-
Territory/Governmental (2)		-
-2LL	122.738	107.179
Nagelkerke R^2	0.002	0.184
Classification Accuracy	82.8%	82.8%
N	134	134

*Note: Standard Errors in Parentheses. ***p < 0.001, **p< 0.01, *p< 0.05*

a. Complex Clustered Logistic Regression Model

Robustness Check-Female Ratio Complex Clustered Regression

Table 2a	Model 1a
(Constant)	21.678 (0.000)
Female Ratio	
0.00 (1)	-18.696 (0.000)
0.08 (2)	-64.176 (0.00)
0.10 (3)	-21.424 (0.000)
0.11 (4)	0.491 (0.000)
0.13 (5)	-19.024 (0.000)
0.17 (6)	-21.064 (0.000)
0.20 (7)	-20.022 (0.000)
0.25 (8)	-44.275 (0.000)
0.33 (9)	-18.091 (0.000)
0.50 (10)	2.245 (0.000)
0.63 (11)	0.874 (0.000)
1.00 (12)	-19.851 (0.000)
Region	
Africa (1)	-0.645 (1.748)
Americas (2)	-0.076 (1.722)
Asia and Pacific (3)	-3.911 (1.860)
Europe and Eurasia (4)	19.806*** (2.051)
Polity2-First	0.095 (0.080)
CGDPE-Mean	2.843E-6 (2.564E-6)
Agreement Type	

Interstate/Intrastate (1)	42.361 (0.000)
Intrastate (2)	21.883 (0.000)
Conflict Type	
Governmental (1)	-19.923 (0.000)
Territory/Governmental (2)	-
Cox & Snell R^2	0.232
Nagelkerke R^2	0.387
N	134

*Note: Standard Errors in Parentheses. ***p < 0.001, **p< 0.01, *p< 0.05*

a. Complex Clustered Logistic Regression Model

Complex Clustered Logistic Regression with Interaction_Eu_FemaleRatio

Parameterschätzer

EnvInc	Parameter	B	Standard Fehler	95%-Konfidenzintervall		Testen von Hypothesen			Exp(B)	95% Konfidenzintervall für Exp (B)	
				Untere Grenze	Obere Grenze	t	Freiheitsgrade	Sig.		Untere Grenze	Obere Grenze
,00	(Konstanter Term)	-,222	1,561	-3,410	2,966	-,142	30,000	,888	,801	,033	19,418
	[Agtp=Intra]	21,901	25,467	-30,108	73,911	,860	30,000	,397	3247687456	8,396E-14	1,256E+32
	[Agtp=IntraLocal]	,000[a]	.	.	.	.	.	.	1,000	.	.
	[Contp=Government]	-20,830	25,454	-72,813	31,153	-,818	30,000	,420	8,985E-10	2,385E-32	3,385E+13
	[Contp=Government/territory]	,000[a]	.	.	.	.	.	.	1,000	.	.
	[Contp=Inter-group]	,000[a]	.	.	.	.	.	.	1,000	.	.
	[Reg=Africa (excl MENA)]	,888	1,608	-2,395	4,171	,553	30,000	,585	2,431	,091	64,810
	[Reg=Americas]	1,235	1,715	-2,267	4,736	,720	30,000	,477	3,438	,104	114,021
	[Reg=Asia and Pacific]	-2,823	1,565	-6,019	,372	-1,804	30,000	,081	,059	,002	1,451
	[Reg=Europe and Eurasia]	21,593	1,869	17,775	25,410	11,552	30,000	,000	2385232656	52444959,27	1,085E+11
	[Reg=Middle East and North Africa]	,000[a]	.	.	.	.	.	.	1,000	.	.
	[Interaction_EU_FemRatio=,00]	,000[a]	.	.	.	.	.	.	1,000	.	.
	cgdpe_mean	3,707E-6	3,226E-6	-2,882E-6	1,029E-5	1,149	30,000	,260	1,000	1,000	1,000
	polity2_first	,109	,080	-,054	,272	1,368	30,000	,181	1,115	,948	1,313

Abhängige Variable: EnvInc (Referenzkategorie = 1,00)
Modell: (Konstanter Term), Agtp, Contp, Reg, Interaction_EU_FemRatio, cgdpe_mean, polity2_first

a. Auf 0 gesetzt, da dieser Parameter redundant ist.

Robustness Check- Female Number Logistic Regression

Table 3	Model 1	Model 2
(Constant)	-1.544***	-0.058
	(0.228)	(1.348)
Female Number	0.007	-0.016
	(0.079)	(0.107)
Region		
Africa (1)		0.562
		(1.251)
Americas (2)		0.140
		(1.561)
Asia and Pacific (3)		3.089
		(1.667)
Europe and Eurasia (4)		-19.018***
		(11455.047)
Polity2-First		-0.041
		(0.073)
CGDPE-Mean		0.000
		(0.000)
Agreement Type		
Interstate/Intrastate (1)		-1.549
		(1.500)
Intrastate (2)		-2.094*
		(1.037)
Conflict Type		
Governmental (1)		-
Territory/Governmental (2)		-
-2LL	127.514	107.179
Nagelkerke R^2	0.000	0.184
Classification Accuracy	82.6%	82.8%
N	138	138

*Note: Standard Errors in Parentheses. ***p < 0.001, **p< 0.01, *p< 0.05*

a. Complex Clustered Logistic Regression Model

Robustness Check-Female Number Complex Clustered Regression

Table 3a	Model 1a
(Constant)	19.888 (0.000)
Female Number	
0.00 (1)	-20.017 (0.000)
1.00(2)	-20.995 (0.00)
2.00 (3)	-21.181 (0.000)
5.00 (4)	-0.286 (0.000)
Region	
Africa (1)	-0.155 (1.304)
Americas (2)	0.279 (1.429)
Asia and Pacific (3)	-2.378 (1.546)
Europe and Eurasia (4)	19.909*** (1.616)
Polity2-First	0.065 (0.075)
CGDPE-Mean	1.735E-6 (2.280E-6)
Agreement Type	
Interstate/Intrastate (1)	22.048 (46.851)
Intrastate (2)	21.715 (46.849)
Conflict Type	
Governmental (1)	-
Territory/Governmental (2)	-
Cox & Snell R^2	0.151
Nagelkerke R^2	0.250
N	138

*Note: Standard Errors in Parentheses. ***p < 0.001, **p< 0.01, *p< 0.05*
a. Complex Clustered Logistic Regression Model

Complex Clustered Logistic Regression with variable Interaction_EU_Female Number

Parameterschätzer

EnvInc	Parameter	B	Standard Fehler	95%-Konfidenzintervall		Testen von Hypothesen			Exp(B)	95% Konfidenzintervall für Exp (B)	
				Untere Grenze	Obere Grenze	t	Freiheitsgrade	Sig.		Untere Grenze	Obere Grenze
,00	(Konstanter Term)	-,222	1,561	-3,410	2,966	-,142	30,000	,888	,801	,033	19,418
	[Agtp=Intra]	21,901	25,467	-30,108	73,911	,860	30,000	,397	3247687456	8,396E-14	1,256E+32
	[Agtp=IntraLocal]	,000[a]	.	.	.	.	.	.	1,000	.	.
	[Contp=Government]	-20,830	25,454	-72,813	31,153	-,818	30,000	,420	8,985E-10	2,385E-32	3,385E+13
	[Contp=Government/territory]	,000[a]	.	.	.	.	.	.	1,000	.	.
	[Contp=Inter-group]	,000[a]	.	.	.	.	.	.	1,000	.	.
	[Reg=Africa (excl MENA)]	,888	1,608	-2,395	4,171	,553	30,000	,585	2,431	,091	64,810
	[Reg=Americas]	1,235	1,715	-2,267	4,736	,720	30,000	,477	3,438	,104	114,021
	[Reg=Asia and Pacific]	-2,823	1,565	-6,019	,372	-1,804	30,000	,081	,059	,002	1,451
	[Reg=Europe and Eurasia]	21,593	1,869	17,775	25,410	11,552	30,000	,000	2385232656	52444959,27	1,085E+11
	[Reg=Middle East and North Africa]	,000[a]	.	.	.	.	.	.	1,000	.	.
	[Interaction_EU_FemNumber=,00]	,000[a]	.	.	.	.	.	.	1,000	.	.
	cgdpe_mean	3,707E-6	3,226E-6	-2,882E-6	1,029E-5	1,149	30,000	,260	1,000	1,000	1,000
	polity2_first	,109	,080	-,054	,272	1,368	30,000	,181	1,115	,948	1,313

Abhängige Variable: EnvInc (Referenzkategorie = 1,00)
Modell: (Konstanter Term), Agtp, Contp, Reg, Interaction_EU_FemNumber, cgdpe_mean, polity2_first

a. Auf 0 gesetzt, da dieser Parameter redundant ist.

Figure 9- Bar Chart: Peace Agreement Stages

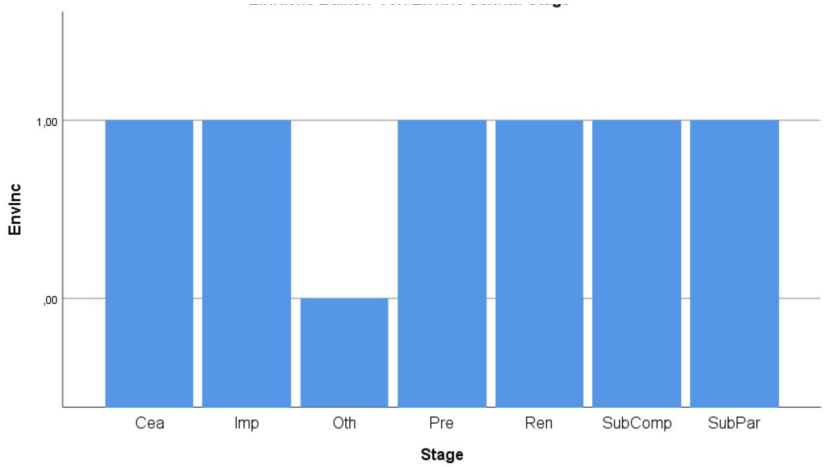

Figure 10- Descriptive Statistics Agreement Stage

Stage

		Häufigkeit	Prozent	Gültige Prozente	Kumulierte Prozente
Gültig		22337	92,4	92,4	92,4
	Cea	381	1,6	1,6	94,0
	Imp	331	1,4	1,4	95,4
	Oth	1	,0	,0	95,4
	Pre	510	2,1	2,1	97,5
	Ren	42	,2	,2	97,7
	SubComp	110	,5	,5	98,1
	SubPar	457	1,9	1,9	100,0
	Gesamt	24169	100,0	100,0	

As Figure 9 shows, do Ceasefire (Cea), Implementation (Imp), Preparation (Pre), Renewal (Ren), Comprehensive (SubComp) and Partial (SubPar) peace agreements include clauses related to the environment. Except for “Other” types of agreement (Bell et. al, 2020). However, Figure 10 shows a simple descriptive statistic, presenting that “Other” types of peace agreements are included only once. “Häufigkeit” in Figure 10 translates into Frequency. Their inclusion does therefore not influence the outcome of the analysis.

Appendix B- Descriptive Statistics

		cgdpe_mean	polity2_first	Agtp	Contp	FemaleRatio	FemaleNumber	EnvInc	ThirdPartGender
N	Valid	10399	17309	24169	24169	757	774	1832	773
	Missing	13770	6860	0	0	23412	23395	22337	23396
Average		306139,5733	-,55			,0586	,29	,1932	,1475
Median		30318,4082	-3,00			,0000	,00	,0000	,0000
Std.-Deviation		1226056,02878	7,112			,24556	1,961	,39494	,35481
Minimum		20,26	-88			,00	0	,00	,00
Maximum		20791364,00	10			3,17	38	1,00	1,00

		Interaction_EU_Gender	Interaction_EU_FemNumber	Interaction_EU_FemRatio
N	Valid	659	660	660
	Missing	23510	23509	23509
Average		,0000	,0000	,0000
Median		,0000	,0000	,0000
Std.-Deviation		,00000	,00000	,00000
Minimum		,00	,00	,00
Maximum		,00	,00	,00

Online Appendix

The online appendices are available at

https://www.dropbox.com/scl/fi/5ohnapb26oxmqhiompjiy/Appendices2.de.en.doc?dl=0&rlkey=iouxzwebulj4vxzjoj1jxrgm2

Each section represents each Regression Model, its output and syntax.