HOW DO POST-CONFLICT ENVIRONMENTAL INITIATIVES AFFECT WOMEN’S EMPOWERMENT WITHIN NATURAL RESOURCE MANAGEMENT IN THE SHORT TERM?

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This thesis aims to explain how post-conflict environmental initiatives affect women’s empowerment within natural resource management in the short term. It argues that the lack of causal effect between the variables can be explained by the robustness of patriarchal institutions. Gender-sensitive environmental peacebuilding lacks the strength to counter traditional and well-established formal and informal societal structures. Using a structured focused comparison on Sudan and Democratic Republic of Congo the analysis shows that UNEP Country Recovery Programmes, which are used as an example of the post-conflict environmental initiatives, were unable to change women’s position within natural resource management in the first five years of the establishment. Even though presented theoretical frameworks partially explain the results, more research is needed to draw informed and conclusive inferences.
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## Acronyms

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<th>Full Form</th>
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<tr>
<td>DDR</td>
<td>Disarmament, demobilization and reintegration</td>
</tr>
<tr>
<td>DLC</td>
<td>Darfur Land Commission</td>
</tr>
<tr>
<td>DRC</td>
<td>Democratic Republic of Congo</td>
</tr>
<tr>
<td>ECOWAS</td>
<td>Economic Community of West African States</td>
</tr>
<tr>
<td>FAO</td>
<td>Food and Agriculture Organization for United Nations</td>
</tr>
<tr>
<td>GDP</td>
<td>Gross Domestic Product</td>
</tr>
<tr>
<td>GNI</td>
<td>Gross National Income</td>
</tr>
<tr>
<td>MONUC</td>
<td>United Nations Mission in the Democratic Republic of Congo</td>
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<tr>
<td>SFC</td>
<td>Structured Focused Comparison</td>
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<tr>
<td>PBSO</td>
<td>Peacebuilding Support Office</td>
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<td>UN</td>
<td>United Nations</td>
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<td>UNDP</td>
<td>United Nations Development Programme</td>
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<td>UNEP</td>
<td>United Nations Environment Programme</td>
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<td>UNMMIS</td>
<td>United Nations Mission in Sudan</td>
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Introduction

Women and men experience conflicts and peace in different ways. Their experiences depend on the societal roles and expectations associated with them. In many developing countries women have the responsibilities to grow food, act as caregivers and collect water and fuel. (UNEP, 2017a) These traditional household duties, which depend on natural resources, as well as the absence of decision-making power place many women in a very vulnerable position in post-conflict settings. (Arjound et al., 2015) However, it can also give way for female empowerment and gender equality if appropriate measures are taken. This paper focuses on the environmental peacebuilding and aims to answer a research question: *How do post-conflict environmental initiatives affect women’s empowerment within natural resource management in the short term?*

With the resolution 1325 UN Security Council as well as the peacebuilding community have recognized gender vulnerabilities and are committed to involving women in peace and the economic processes in war-town countries. (UNEP et. al., 2013) Since the 2000s there has been a small, yet growing amount of policy work within gender, natural resource management and the post-conflict peacebuilding nexus. In addition, some scholarly works have proved a positive correlation between foreign aid and changing societal norms connected with natural resource management and increased female empowerment. (Fearon et al., 2009) (Karuru and Yeung, 2016) However, as FAO’s recent report on food security, gender equality and peace indicates, there is an overwhelming lack of theoretical work within the field. (2017) Recognizing this research gap, this thesis aims to build a new theoretical framework to explain the relationship between post-conflict environmental initiatives (independent variable) and women’s empowerment within natural resource management (dependent variable).

In the following sections I argue that even though environmental programs have no effect on women’s empowerment in the short term, presented theories can partially explain that. A distinct feature of post-conflict environmental initiatives is their aim to strengthen environmental management, build environmental stability while supporting the consolidation of peace. Nonetheless, they fail to address gender issues within natural resource management in the first five years. Rigid patriarchal institutions can act as a barrier to the new developments, preventing women’s empowerment.
An analysis of Sudan and Democratic Republic of Congo helps to dismiss the Opportunity Theory and its causal mechanism. However, a second theoretical framework Feminist Institutionalism and the ‘Architecture of Entitlements’ can be used to understand the complex reality of interactions between current societal structures and gender-sensitive environmental policies. Nevertheless, the study cannot make any conclusive inferences and suggests that more research needs to be done within the topic.

The following chapter discusses previous literature research. Afterwards I present two theoretical frameworks in the Theory section. It is followed by Research Design, Case Studies and Results. After the alternative explanations, concluding remarks give suggestions for future research and policy works.
Little is written on environmental post-conflict initiatives and their effects on women’s empowerment. Recent years have seen an increase in policy work on the topic. However, there are close to none theory driven qualitative and quantitative studies. This literature review on dependent variable (women’s empowerment within natural resources) analyses the available scholarly works as well as draws from reports and policies written by the UN and other peacebuilding actors. By doing so, I try to present a holistic explanation of what we know about female empowerment within the environmental sector both theoretically and practically. It must be noted that not all of the literature refers to the post-conflict settings. However, the reviewed articles add valuable knowledge to our understanding of the triangular nexus between gender, environment and conflict.

To begin with, Ajroud, Westerman and Edmond suggest that due to traditional household responsibilities men and women have a very different relationship with the environment. (2015) Different reports suggest that females have more household chores related to natural resources. They are responsible for water collection, fuel gathering and the production of food. (GGCA, 2014) (UNEP, 2016) However, while acknowledging these different gender roles and expectations, we have to be careful not to victimize women further, by assuming that they are more “peaceful” and “environmentally conscious” than men. These images of females as “earth mothers” are socially constructed myths, which tend to make their ways into policies. (Frohlich and Gioli, 2015)

Greenberg and Zukerman add that women take up more masculine positions during conflicts in the absence of their husbands, fathers, brothers and sons. However it tends to be difficult for females to keep these positions once men return home, which can cause societal friction. The authors suggest that international peacebuilding initiatives must recognize hierarchical gender dimensions and address them in peace initiatives. (Zukerman and Greenberg, 2004) As environmental post-conflict programmes are a part of peacebuilding efforts, they also need to cater towards ever shifting gender roles in the post-conflict societies.

In order to fight these social stereotypes, the work needs to start with peace agreements and follow through DDR and other peacemaking and building efforts.
Unfortunately, peace agreements tend to focus on ceasefire rather than long-term development. (Karuru and Yeung, 2016) Furthermore, in cases where female ex-soldiers are not recognized in DDR programs, they are in risk of being marginalized and unacknowledged. Being neglected land reimbursements or other environmental livelihood alternatives can leave women in very vulnerable and threatening positions. (UNEP et al., 2013) Post-conflict environmental initiatives, which come after peace agreements and DDR programs, are essential in addressing unsolved gender inequalities, particularly within natural resource management.

According to Storken et.al. conflicts can result in high levels of female-headed households. (2015) This is due to male battle related deaths, men involved in fighting, or migrating to find other job opportunities. Nevertheless, this increase in female-headed households, does not fully translate into real term benefits for women. In these circumstances, gender sensitive peace-building programming and land tenure rights are of significant importance in order to provide households with capital to recover after the fighting stops. (Storken et. al., 2015) The paper presents an analysis on UNEP’s work in Darfur within natural resource management. It suggests that the inclusion of both men and women in environmental initiatives has resulted in higher female participation within public discourse, higher female representation within governmental bodies and overall higher gender awareness. (Storken et. al., 2015)

Continuingly, in their quantitative analysis on Liberia, Fearon, Humphreys and Weinstein prove that foreign aid actors have the potential to influence post-conflict societies in a positive way by bringing different groups together and empowering the vulnerable ones. (Fearon et al., 2009) This supports the idea that environmental initiatives have the potential to influence female equality in war-torn settings. In addition, Karuru and Yeung employ a qualitative approach in their study on Liberia and Nigeria. The authors show that there is a link between better natural resource management, such as improved access to water and fuel, and female empowerment. (Karuru and Yeung, 2016) The paper does not explicitly use a theoretical framework; however the authors do imply a causal mechanism. Their findings are later on discussed in depth in the Theory section of this thesis.

In her qualitative work on Tunisia, Gana has found that environmental microcredit projects positively affect female empowerment. According to the study, through microloans, which were aimed to increase female capability within farming, women accumulated an
individual budget. This new capital provided more autonomy as well as improved the women's life and working conditions. (Gana, 2013) Usually poorly educated and highly dependent on their husbands, the women were given an opportunity to invest and strengthen their role within the household and the community. According to Gana, the environmental programming, served as an alternative to employment, encouraged entrepreneurship, elevated women’s social position and strengthened their claims to land tenure. (Gana, 2013) All of these examples support the assumption that environmental initiatives can increase women’s empowerment within post-conflict societies.

Furthermore, in their work for UN Justino et al. found that there is a positive correlation between food programmes, which exhibit high gender equality programming, and changing gender norms. (UN Women, 2015) Even though food aid and initiatives do not always overlap with natural resource management, they tend to target the same patriarchal structure and set gender roles. Thus Juntino’s et. al. research strengthens the previously discussed claims of Karuru and Yeung, Stoken et. al., Fearon, Humphreys and Weinstein, and Gana. (Karuru and Yeung, 2016) (Storken et. al., 2015) (Fearon et al., 2009) (Gana, 2013)

Nevertheless, community based natural resource management not only empowers women, but can work as a disempowering force too. In their work on Namibia authors Khumalo and Freimund show that on one hand employment in a local conservancy brought women more capital to overcome “rigidly gendered livelihood constraints”. (Khumalo and Freimund, 2014, p. 1035) It gave female employees new skills and a sense of pride within community. On the other hand, these workers faced hostility from the residents of conservancy and discrimination regarding their employment terms compared to their male colleagues as well. (Khumalo and Freimund, 2014) This paper further claims that this particular case of community based natural resource management was not able to challenge the traditional gender-based roles within households. Another scholar, Scheyvens, presents similar findings in her study on ecotourism. She supports the idea that environmental initiatives are positive steps towards female empowerment, yet struggle to reshape the patriarchal society in which the women live. (Scheyvens, 2000) This means, that there are limits to the changes, which environmental initiatives can bring in the short term.

As policy papers suggest, current gender norms exist within institutions and become structural barriers for gender development. (ECOWAS, n.d.) There are formal and informal rules which manifest from the ideas of what gender is. The formal rules refer to laws and
regulations like property and land ownership. While informal rules include ideas of what is appropriate for men and women. (Sida, 2016) Such social constructions act as a counter force to female liberation and transition from male dominated societies.

To sum up, we know that men and women carry out different roles within society as well as a different relationship with natural resources overall. In conflict settings, with male led households decreasing, the number of female led households increases. This tends to result in shifting gender roles and expectations as women take up more “masculine”, income generating activities. We also know that these changes do not last once the conflict ends and that the peacebuilding actors need to take such gender shifts into account. In addition, there is a positive correlation between female involvement in natural resource management and female empowerment in both post-conflict and non-post-conflict settings. Our knowledge is mostly practical and based on short term effects, which suggest a micro-level female empowerment. While short term macro level changes are prevented by rigid societal norms and institutions.

**Research Gap and Relevance**

Besides the overall lack of scholarly work on gender, environment and conflict nexus, there are two main problems with the existing literature. First of all, there is a lack of theoretical work on women’s empowerment within natural resource management in post-conflict settings. Simultaneously, there is a need to accumulate more precise knowledge on long versus short term effects of environmental initiatives on women and their position within society.

This thesis is aimed to address both of the issues. First of all, it presents a theoretical framework, which explores the relationship between post-conflict environmental initiatives (independent variable) and women’s empowerment within natural resource management (dependent variable).

Second of all, it explores short term effects. The decision to focus on the short term was made because of the practicality of isolating the causal effect of interest. As well as to
test whether it is possible to achieve female empowerment within short amount of time (as some of the literature would suggest).

The contribution of this paper is both theoretical and empirical. I aim to fill in the academic gap of a topic, which is under researched. As well as to provide a more elaborate framework for policy workers, regarding the women’s roles within natural resource management in war-torn countries.
Even though previous research does not have an explicit theory, implicitly they build on two different theoretical frameworks: one focusing on the short term changes and the other on long term ones. Policy works by UNEP, FAO and ECOWAS aim to immediately empower women by creating opportunities of female employment within environmental field. However, they also initiate projects that address the societal systems and norms. (UNEP et. al., 2015) (FAO, 2017) (ECOWAS, n.d.) Intuitively, both of these approaches cater for a long term impact while providing contradicting short term expectations. In order to empirically test these ideas, I build and present two theoretical frameworks: the Opportunity Theory and the Feminist Institutionalism with the ‘Architecture of Entitlements’. As the theories heavily reflect current policy work, they close the theoretical gap between practical and scholarly worlds. As well as help us to answer the research question: How do post-conflict environmental initiatives affect women’s empowerment within natural resource management in the short term?

The Opportunity Theory

The Opportunity Theory is based on the works of Roemer (on egalitarian opportunity theory), Fearon, Humphreys and Weinstein (on post- conflict Liberia), Karurua and Yeung (research on gender and natural resource management in post- conflict settings) and a UN cross- departmental report Women and Natural Resources: Unlocking the Peacebuilding Potential. (Roemer, 1993) (Fearon et al., 2009) (Karurua and Yeung, 2016) (UNEP et al, 2013) This section starts with outlining the different ideas from the papers, which are later combined in to the Opportunity Theory. It ends with the causal mechanism and a proposed hypothesis.
Roemer’s work on egalitarian ethics is focused on reducing the involuntary disadvantages, which are associated with race, gender, family background or ethnicity. He aims to eliminate the causes of an outcome that do not depend on person’s responsibilities. (Ferreira and Peragine, 2015) The author’s ideas are based on the individual’s ability to achieve the same welfare position as another individual exercising a comparable degree of responsibility, regardless their socioeconomic and genetic characteristics. I borrow a notion “societal modifiers” from Roemer. The societal modifier explains society’s views on factors over which a person has no control. (Roemer, 1993) These factors divide society into categories, where an individual can belong to many different types simultaneously. In order to “level the playing field” every societal type needs to be compensated according to the position of the median in that category. (Roemer, 1993) Exercising this theory, we would expect that post-conflict environmental initiatives would act as a compensation mechanism. Consequently, individuals of the same age, ethnicity, education and family background should be able to achieve same welfare given that they exercise a comparable amount of responsibility, despite their gender.

According to Fearon, Humphreys and Weinstein community driven reconstruction programs positively affect societal cohesion. The authors do not use a theoretical mechanism, but perform a quantitative study in post-conflict Liberia. Their research shows that third party interventions can have effects on gender and societal equality in short term despite making major institutional and economic changes. (Fearon et al., 2009)

Continuingly, previously discussed Karurua and Yeung, suggest that water and energy access have the most impact on women and community empowerment. (Karurua and Yeung, 2016) Using Henry Town in Liberia as an example, they claim that with the help of Tearfund, the women were able to initiate the construction of irrigation systems in the town. In this way they not only strengthened the basic services, but supported local livelihoods, health, hygiene and macroeconomic development. As a consequence of their involvement in this particular development program, women increased their representation on the local council, which established a new rule that half of its members must be female. (Karurua and Yeung, 2016) Even though this case study does not explore the situation in Henry Town
further, we know from Karurua and Yeung’s research that more female decision makers tend to increase the amount of gender sensitive policies. (Karurua and Yeung, 2016)

The final piece of the puzzle comes from the UN cross departmental report on natural resources and gender. Here we find evidence that in Nigeria gender-sensitive natural resource initiatives, in this case access to water, reduced the time of travelling for females. In return they were able to use this time for farming and education. (UNEP et al., 2013) This particular UN project was an environmental peacebuilding initiative thus we can expect similar results in other post-war situations.

The Opportunity Theory: Theoretical Framework

As mentioned previously, post-conflict environmental initiatives have a wide specter of focus areas. They include the management of water, fuels, extractable resources and agriculture. Implementation of such programmes, usually mean better and easier access to water, food, fuels as well as other natural resources. (Karurua and Yeung, 2016) (UNEP et al., 2013) It also means that we are able to tackle gender as a societal modifier. (Roemer, 1993)

Women are inadequately dependent on natural resources due to their societal roles and norms. (Ajroud, Westerman and Edmond, 2015) Providing better natural resource management techniques gives women more time to pursue income generating activities. We expect girls and women to be able to attend education and take up jobs. (Karurua and Yeung, 2016) (UNEP et al., 2013) This would provide women with better future opportunities as well as capital to achieve better welfare and income stability.

At the same time, post-conflict environmental initiatives give women a platform to act and take initiative. This empowerment will lead to some women being places in position of power. Increased female representation strengthens gender mainstreaming and equality policies. This in turn limits gender as a societal modifier, because new policies reinforce the compensation mechanisms further. (Karurua and Yeung, 2016) (Roemer, 1993)
The Opportunity Theory: Causal Mechanism

Independent variable: post-conflict environmental initiatives

Easier access to resources

Women and girls have more time to pursue jobs and education

Better social and economic status for women

Women gain leadership positions

More gender-sensitive policies

Dependent variable: women’s empowerment within natural resource management

Figure 1. The Opportunity Theory: Causal Mechanism

Figure 1 presents the expected causal mechanism, which is based on the Opportunity Theory.

The Opportunity Theory: Hypothesis

Building on the theoretical framework and the causal mechanism, which are presented above, the Hypothesis One is: *post-conflict environmental initiatives have a strong positive effect on women’s empowerment within natural resource management in the short term.*
Feminist Institutionalism and the ‘Architecture of Entitlements’

The second theory is based on George’s article on women, peace and security. (George, 2016) The author uses a blended theory of feminist institutionalism and ‘architecture of entitlements’. She draws from the works of feminist institutional theorists such as: Chappell (2011), Crook and Mackay (2011), neo-institutional scholars: Lowndes and Roberts (2013), Mahoney and Thelen (2010), March and Olsen (1989) as well as Adger’s and Kelly’s (1999) research in political geography. This section starts with outlining the different ideas from the George’s paper, which create the theoretical framework. It ends with the causal mechanism and a proposed hypothesis.

Feminist Institutionalism and the ‘Architecture of Entitlements’: Theoretical Framework

Conflicting interests characterize and define institutional life and changes. Policies depend on the interaction between formal and informal institutions. Therefore, gender dynamics within institutions reflect the power relations which are set in society. (George, 2016) George uses works of feminist institutional scholars to explain that new policies and ideas are layered over existing practices, norms and discourses. Hence even when new gender mainstreaming policies are accepted, they lay on top of existing gender structures. (George, 2016) (Crook and Mackay, 2011) (Mahoney and Thelen, 2010) (March and Olsen, 1989) In the case of post-conflict societies the dominant patriarchal system forms the foundation for environmental peacebuilding initiatives.

In addition, gender norms tend to be particularly robust to changes. These ideas are “nested” within institutions and serve as a legacy of culture, religion and history. (George, 2016) Understanding such dynamics helps us to adjust our expectations of change and reforms. What is more, the existing institutions ‘prefer’ some reforms over the others. For example, policies, which perceive women as victims tend to ‘agree’ with the preexisting societal norms and become effective in shorter amount of time. While other policies, which give women more autonomy, take longer to manifest change. (George, 2016)
As a second part of her theory George borrows the ‘architecture of entitlements’ from the field of political geography. (2016) This concept explains the resource distribution to institutions, groups and individuals. The main idea is that formal and informal political institutions have an established architecture, which prioritizes some individuals over the others. In the case of crisis (war, drought, and other climatic disasters) existing hierarchies and resource entitlement inequalities are rarely overturned, but rather reinforced. This means that resources (political or material) are distributed according to the hierarchy. (George, 2016) (Adger and Kelly, 1999) In the case of natural resource management, this would mean that land and extractive resource benefits will be prioritized to the male population. Be that through countries’ own initiatives or through peacebuilding actions such as DDR and peace agreements. Based on the theory we expect that some environmental initiatives would focus on female population. However, the majority of benefits from natural resources, such as working in extractive industries, gaining access to land, being able to sell natural resources (wood, coal or produce), will be received by the male population.

**Feminist Institutionalism and the ‘Architecture of Entitlements’: Causal Mechanism**

<table>
<thead>
<tr>
<th>Independent variable: post-conflict environmental initiatives</th>
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<tr>
<td>New initiatives lay over existing patriarchal hierarchy</td>
</tr>
<tr>
<td>Robust institutions slow down the expected changes</td>
</tr>
<tr>
<td>(Improvements take a long time. Meanwhile majority of development programs prioritize males over females.)</td>
</tr>
<tr>
<td>Dependent variable: women’s empowerment within natural resource</td>
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*Figure 2. Feminist Institutionalism and the “Architecture of Entitlements” Theory: Causal Mechanism.*
Figure 2 shows the expected causal mechanism based on the theory of Feminist Institutionalism and the ‘Architecture of Entitlements’. Even though the mechanism does not have clear steps, it aims to explain how new policies interplay with existing institutions. It also shows that existing patriarchal hierarchy prioritizes males in natural resource management.

**Feminist Institutionalism and the ‘Architecture of Entitlements’: Hypothesis**

Based on the theoretical framework and the causal mechanism, which are presented above, the Hypothesis Two is: *post-conflict environmental initiatives have a small positive effect on women’s empowerment within natural resource management in the short term.*

The second theoretical framework does not provide us with the exact causal chain between independent and dependent variables. Nor it is mutually exclusive with the Theory of Opportunity and its causal mechanism. The Feminist Institutionalism and the ‘Architecture of Entitlements’ theory is an explanation of why we might not see the expected quick changes in female empowerment in post-conflict settings. It is important for both academic and policy worlds to evaluate the robustness of existing institutions while implementing gender-sensitive environmental initiatives in war-torn countries.

What is more, the second theoretical framework could help us to explain long term changes rather than short term ones. However, as explained earlier, due to limitations of a desk study, this thesis focuses on short term effects only.

**Theoretical Definitions**

*Post-conflict environmental initiatives-* as mentioned in the introduction these initiatives aim to strengthen environmental management, build environmental stability and support the consolidation of peace. They can include the management of water, fuels, extractable resources and agriculture. In addition, they can focus on one or more areas of natural resources management. (UNEP, n.d.a) Finally, the programmes must be gender-
sensitive and aware of different struggles between female and male population in the post-conflict setting.

Majority of such initiatives are carried out by the UN, since it has specifically committed to involve women in peacebuilding processes with the UN Security Council Resolution 1325 and UN Security Council Resolution 2122, which recognizes that “the economic empowerment of women greatly contributes to the stabilization of societies emerging from armed conflict”. (FAO, 2017) However other actors initiate similar programmes as well, even though they are not as common.

Women’s empowerment within natural resources- the Opportunity Theory talks about women’s empowerment in all sectors. However, due to practicalities I only look into the empowerment within natural resources. After the war countries receive various different gender sensitive initiatives. Focusing on overall gender equality/ female empowerment would be counterproductive. It would be impossible to establish a causal relationship between the independent and dependent variables. Therefore I define women’s empowerment within natural resources as their ability to pursue welfare comparative to males. This welfare can come from natural resources such as land tenure and employment within resource extraction or management. Additionally, it can be based on shrinking household responsibilities, which are attributed to the female population and are based on water, fuel and food collection and production.
Methodology

In order to answer the research question: How do post-conflict environmental initiatives affect women’s empowerment within natural resource management in the short term? this thesis is designed as a quantitative small-n across-case comparison. There are few reasons for this. First of all, the phenomenon of environmental peacebuilding is relatively new, meaning that there are not enough comparable cases to produce an in-depth qualitative study. (UNEP et.al., 2013) It also means that cases are too heterogeneous for a qualitative study. (Gerring, 2004) Secondly, this paper aims to generate hypothesis and explain causal relationships. It is addressing a theoretical research gap, which requires a small quantitative research. Finally, there are limitations of available information. Since the data are concentrated and based on case studies, it is impossible to generate a reliable database for qualitative research. (Gerring, 2004)

Structured Focused Comparison (SFC) is used in this comparative analysis. I ask the same set of standardized question for both cases in order to systematically gather data and produce a comparison. In addition, the questions are grounded in the theoretical framework and are focused on the dependent variable. Adequately reflecting the theory helps to narrow down the study and crystallize the causal relationship of interest. (George, 2005) In this case between post-conflict environmental initiatives and women’s empowerment within natural resource management

Case selection is done using Mill’s method of difference. Here two cases are almost identical; however the phenomenon of interest occurs in only one of them. Using this logic, the cause of the phenomenon is what sets the cases apart. (Rappaport, 1996) In the thesis the cause is the independent variable: post-conflict environmental initiatives and the phenomenon of interest- women’s empowerment within natural resource management. Besides these two variables, cases are as similar as possible. This control over other variables is necessary in order to draw inferences. In addition, the method of difference is a tool to understand the relationship between X and Y (independent and dependent variables), which is one of the objectives of this study. (Powner, 2014)
Case Selection

**UNEP Country Recovery Programmes**

The case selection is based on the independent variable. As the phenomenon of interest is the dependent variable, it is an obvious choice to select different cases based on the presence of environmental peacebuilding. In order to have more control over the analysis, a decision was made to use UNEP Country Recovery Programmes as an example of post-conflict environmental initiatives.

UNEP Country Recovery Programmes are tailor-made in order to ensure long term stability and sustainable development. (UNEP, n.d.a) They follow an in-depth fieldwork within the country (Post-Crisis Environmental Assessment, which evaluate the state of the environment and take place after a major crisis, such as war or environmental disaster). (UNEP, n.d.b) Currently there are four Country Recovery Programmes: in Sudan, Afghanistan, Haiti and South Sudan. Their work started in 2003 and continues up to date. Even though choosing these particular UNEP initiatives narrows down the case pool, it makes it easier to pick cases which are as similar as possible on the mediating (control) variables. At the same time because these programmes match the theoretical definition of independent variable, the generalizability of the analysis remains.

What is more, there are several advantages of using UNEP Country Recovery Programmes in the case selection. First of all, these Programmes are located in settings, where natural resources have a high impact on people’s lives. (UNEP, n.d.a) This means that it would be easier to identify and evaluate positive implications on gender equality. Secondly, UNEP’s work is guided by UN System-wide Action Plan on Gender Equality and Empowerment of Women. Therefore we know that UNEP itself is committed to promote gender equality and women’s empowerment through its work. (UNEP, 2017a) Third of all, UN and its departments offer a lot of available information regarding their work. Even if some of this data are incomplete and biased, the UN is still one of the best resources available for a desk study.
Gertruda Uleviciute  
Bachelor’s Thesis, 2017

Control Variables for Case Selection

Sudan was selected as the first case-study. The country has received an elaborate and complex environmental recovery work by UNEP. (UNEP et.al., 2013) It is also highly comparable with the second case: Democratic Republic of Congo (DRC), which has not received the UNEP Country Recovery Programme. The work in Sudan started in 2007. Even though DRC did not receive a programme, it would have started in 2008, after the UNEP national environmental assessment was finished. I use these years as comparison points in my variable control and case analysis. (UNEP, n.d.b.)

Using previously described Mill’s method of difference, there are nine control variables, which are held constant throughout the cases. These variables are either potential alternative explanations or could affect both independent and dependent variables.

First of all, both cases have received a UN peacekeeping mission and UNEP Post-Crisis Environmental Assessment after the conflict. (UNMIS, n.d.) (MONUC, n.d.) (UNEP, n.d.b.) It is important that the UN work within the post-conflict country is comparable, because other gender-sensitive programming could explain the changes within women’s empowerment.

Second of all, violence levels affect female social status in the society. As more men are involved in fighting, the number of female-headed households increases. This affects female relationship with welfare and natural resources, which can influence the dependent variable. (Storken et. al., 2015) What is more, even though Sudan in 2007 and DRC in 2008 were receiving peacebuilding and post-conflict programmes, violence levels in the countries were high. It is essential to highlight that post-conflict status, does not mean that the country is free of violence. Nevertheless, it means that international and local actors are implementing different policies and initiatives to help the country to transition to peace. Finally, I use UCDP database to assess the violence levels. In 2007 Sudan had 1181 deaths per year, while in 2008 DRC had 1737 deaths per year. (Uppsala Conflict Data Program, n.d.)

Economic Situation can influence both independent and dependent variables. It affects the effectiveness of the environmental initiatives as well as female position within the society. World Bank measure of GDP per capita was used to evaluate the economic situation of Sudan in 2007 and DRC in 2008. Both countries had economic struggles and were among
the poorest states in the world at the time of interest. Nevertheless, their situation was not identical with Sudan having 1,115.7 per capita (current US$) and DRC 318.1 per capita (current US$). (World Bank, n.d.a.)

Fourthly, both countries have experienced conflicts over government control. (Uppsala Conflict Data Program, n.d.) Controlling the type of conflict makes it easier to contain the influence of the political actors. The political dynamics might affect whether country receives the UNEP Country Recovery Programme as well as gender policies across the country.

Furthermore, natural resource dependency is a crucial indicator, which can affect both independent and dependent variables simultaneously as well as serve as an alternative explanation to the phenomenon of interest (female empowerment within natural resources). The measurement is taken from World Bank’s data on natural resource rents as a percentage of GDP. Both Sudan and Democratic Republic of Congo have a high natural resource dependency. Sudan 18.9% in 2007, while DRC was 33.4% in 2008 (compared to world average of 3.7% in 2007 and 5% in 2008). (World Bank, n.d.b.)

As discussed in the Theory section, increased numbers of female representation positively affect the number of gender mainstreaming and equality policies, which are released. (Karuru and Yeung, 2016) Therefore the number of women in parliament could be an alternative explanation to female empowerment. Unfortunately it was not possible to control the percentage of female parliamentarians between Sudan (18%) and DRC (8%). (World Bank, n.d.c.) As the Sudan gets an advantage over DRC within both theoretical frameworks in the short term, this will be taken into the account while analyzing the results.

Finally, the last control variables overview peace agreements and DDR programmes respectively. Neither in Sudan, nor in DRC peace agreements included paragraphs on women within natural resource management. (Peace Accords Matrix, n.d.) (United States Institute of Peace, 2002) (United States Institute of Peace, 2003) (DRC, 2003) The DDR programs in both countries had some references to women position within natural resources, however they were not effective. (HSBA Document Archive, 2012) (Lainer, 2015) (Dale, 2016)
The table below summarizes case selection based on independent variable as well as control variables.

<table>
<thead>
<tr>
<th>Control Variable</th>
<th>Sudan</th>
<th>DRC</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Independent Variable: Post-conflict Environmental Initiatives.</strong></td>
<td>YES (UNEP, n.d.a.)</td>
<td>NO (UNEP, n.d.a.)</td>
</tr>
<tr>
<td><strong>Presence of UN peacekeeping mission.</strong></td>
<td>Yes. (UNMIS, n.d.)</td>
<td>Yes. (MONUC, n.d.)</td>
</tr>
<tr>
<td><strong>UNEP Post-Crisis Environmental Assessment.</strong></td>
<td>Yes. (UNEP, n.d.b.)</td>
<td>Yes. (UNEP, n.d.b.)</td>
</tr>
<tr>
<td><strong>Levels of violence after the assessment.</strong></td>
<td>High. (Uppsala Conflict Data Program, n.d.)</td>
<td>High. (Uppsala Conflict Data Program, n.d.)</td>
</tr>
<tr>
<td><strong>Economic Situation.</strong></td>
<td>Economically Challenged (but not a mach). (World Bank, n.d.a.)</td>
<td>Economically Challenged (but not a mach). (World Bank, n.d.a.)</td>
</tr>
<tr>
<td><strong>Conflict type: over government?</strong></td>
<td>Yes. (Uppsala Conflict Data Program, n.d.)</td>
<td>Yes. (Uppsala Conflict Data Program, n.d.)</td>
</tr>
<tr>
<td><strong>Women in parliament.</strong></td>
<td>18% (World Bank, n.d.c.)</td>
<td>8% (World Bank, n.d.c.)</td>
</tr>
</tbody>
</table>

*Figure 3. Table represents control variables for the case selection.*
Operationalization

In order to translate key theoretical concepts into empirical measurements, the following sections discuss the operationalization of both independent and dependent variables. Clear and transparent rules for data gathering help to improve the reliability of this study. In addition, the women’s empowerment within natural resources is a complex phenomenon. Therefore a set of different measures is used to increase the validity of this operationalization.

Operationalization of the Independent Variable

The post-conflict environmental initiatives are measured as a presence or absence of UNEP Country Recovery Programme. Even though this is a straightforward criterion, the existence of such a programme has substantial weight to it. First of all, they are gender-sensitive due to the cross-departmental UN commitment to gender equality. (UNEP, 2017a) This means, that the programme recognizes different struggles of women and men and accounts for them. In addition, UNEP’s work is guided by the UN Security Council Resolution 1325 and UN Security Council Resolution 2122, which aim to involve women in peacebuilding and empower them economically. (FAO, 2017) It is essential for the theory and causal mechanism that the post-conflict environmental initiatives reflect the reality of gender norms and expectations as well as address them. Finally, UNEP Country Recovery Programmes are tailor-made to deal with environmental issues in a post-conflict setting and promote sustainable development. (UNEP, n.d.a.) This means that, as theoretical definition suggests, the initiatives include the management of water, fuels, extractable resources and agriculture.

Measurement question: Was the UNEP Country Recovery Programme established?
Operationalization of the Dependent Variable

Measurement of the dependent variable is based on the two aspects of the theoretical definition. Women’s empowerment within natural resources is both indirect welfare of shrinking household responsibilities as well as direct welfare, such as land tenure or benefits from natural resource rents.

As mentioned, the indirect welfare is the time that women and girls have to pursue other activities than gender-based responsibilities, such as education and jobs.

The first measurement is the expected years of schooling for girls, which reflects the ability for young females to enter and pursue education. The measurements are taken from World Bank dataset. This measure is named: expected years of schooling, female. It shows the number of years a child (in some cases adults) is expected to spend in primary, secondary, post-secondary non-tertiary and tertiary education, including years spent on repetition. (World Bank, n.d.e.)

*Measurement question 1: How many years are the girls expected to remain in the education system?*

Second measurement is the ratio of employed female population. It reflects the ability of women to enter and pursue jobs. The measurements are taken from World Bank dataset. This measure is named: Employment to population ratio, 15+, female (%) (modeled ILO estimate)\(^1\). It represents the proportion of the population, which is employed. In other words, the indicator refers to the percentage of females who are of age (over 15 years old) and have been involved in activities for pay or profit during the time of interest. (World Bank, n.d.e.)

*Measurement question 2: What is the employment ratio of the female population?*

The third measurement is the proportion of female employed in the industry. It could be argued that this indicator falls between indirect and direct benefits of improved and gender sensitive natural resource management. However, as time availability determines female employment levels, I present it in this section. The measurements are taken from World Bank dataset. This measure is named: Employment in industry, female (% of female employment)

\(^1\) Modeled International Labor Organization Estimate is “based mainly on nationally representative labor force
(modeled ILO estimate). It follows the same logic as previous measure regarding the definition of employment. While industry “consists of mining and quarrying, manufacturing, construction, and public utilities (electricity, gas, and water).” (World Bank, n.d.e.)

Measurement question 3: What is the proportion of female employment in the industry sector?

The next set of questions reflects the direct welfare from natural resource management.

The fourth measurement is the price of starting a business for a woman. Gana’s work, which was discussed in the Previous Research section shows that with the external aid women start their own animal farming businesses. (Gana, 2013) The assumption is that with the help of UNEP initiatives as well as shifting gender stereotypes, there should be an effect on the price of starting a business for a woman. The measurements are taken from the World Bank dataset. This measure is named: Cost of business start-up procedures, female (% of GNI per capita). Data are collected through a standardized survey by the World Bank. (World Bank, n.d.e.)

Measurement question 4: How much does it cost for a woman to start a business?

As all of these indicators need a comparative element, they are measured in three time periods. First of all, one year prior to the programme (X-1, X being the year programme starts), to establish the level of female empowerment after the conflict. Secondly, during the first year of the programme (X), to see the pattern of growth, decline or stagnation post war. Lastly, after five years of the programme (X+5), in order to see the short term effects on the dependent variable. Five years was chosen as an optimal time frame to indicate short term developments of women’s empowerment within natural resources. After presenting and analyzing the results, each measurement is classified into one of five categories:

- Strong positive effect.
- Small positive effect.
- Stagnation.
- Small negative effect.

2 Sudan has a fourth measurement to control the effects of South Sudan’s independence. The measurement is taken in 2011 or X+4
• Strong negative effect.

Classifying the results will help to compare two case studies easier.

The final measurement is the land ownership/tenure rights. These rights are closely related with gender stereotypes and culture. They are a very important part of female empowerment. (FAO, 2017) (UNEP et.al., 2013) (Karuru and Yeung, 2016) In order to measure the land ownership, I will look whether new laws have been passed and are being enforced. As there is no particular indicator of land tenure, different reports and journal articles are being used to present the results.

*Measurement question 5: Have there been practical changes in land tenure laws in five years since the establishment of the UNEP Country Recovery Programme?*

Finally, the measurements are only concerned with female empowerment within natural resources, not gender equality within natural resources. For this reason, the comparison is made over time to see the progress of female position. There is no comparison with the male population.

**Source and Methodology Criticism**

To begin with, this study is highly limited to available data and information, which is relevant. Besides being an understudied topic theoretically, empirically it is somewhat biased. As Stork et. al. explain, a lot of our knowledge and statistics are gender blind, which means that we do not know the real situation between men and women. (2015) This is very evident in the operationalization section, where some of the potential interesting indicators are left out due to unavailability of data. As an example World Bank’s dataset on natural resource rent distribution does not differentiate between male and female. Leaving out some of potential information decreases the validity of the study’s measurements.

In addition, majority of data is only available in single sources, such as World Bank Dataset. This means that it is hard to triangulate the information and eliminate possible mistakes. It is reassuring that this particular Dataset is extensive and World Bank cooperates
with other agencies and organizations to receive the data. Nevertheless, potential mistakes cannot be avoided.

Continually, both Sudan and DRC faced high levels of violence during the years of interest. Conflicts prevent continuous and broad-scope information gathering. This in turn affects the reliability of the data. To counter these issues, World Bank, FAO, UNEP and UNDP datasets are used. As leading statistical data libraries they can offer the best available information to evaluate the phenomenon of interest. However, it must be taken into account that the measurements are not completely reliable.

In 2011 South Sudan announced its independence and separated from Sudan. (Uppsala Conflict Data Program, n.d.) This event interferes with the time frame of this study. It is possible that some of the results from 2012 are caveat. The UNEP has started its work when Sudan was a unified country. However, if some areas which now belong to South Sudan were prioritized by the recovery programme, it is possible that potential positive results were lost in the data from 2012. As mentioned previously, this problem is countered by including 2011 in the measurement section.

Furthermore, using the UNEP Country Recovery Programmes to measure the independent variable is problematic as well. First of all, UNEP does not present a precise criterion on how the countries are selected for the recovery initiatives. The available information suggests that there are two factors that determine the presence of the Country Recovery Programme: a country has to request UNEP’s assistance and UNEP must determine whether this assistance is necessary. (UNEP, n.d.a) As the process is rather vague, there is a potential bias in this selection process. It is rather unclear what the UNEP believes to be necessary assistance. In addition, we do not know who have the power to invite the UN Environmental Programme. Assumingly that would be a UN approved governmental body. However in post-conflict situations the lines between legitimate and illegitimate governments and groups tend to be blurred and overlapping.

Even though Structured Focused Comparison is a great tool for comparative case study, it might not be the best tool overall to answer the research question. As there is a lack of available data, interviews and a field study would be a more appropriate approach. That is not to say that the findings of this study do not have a theoretical and empirical contribution. As discussed above a comparative structured study has an advantage of identifying and
discussing the causal mechanism. However, for more representative results, a field study is necessary as well.

Finally, measurement of the results is also influenced by my own bias. In order to compare Sudan and DRC, I group the results into five categories. Even though the categorization is simple and clear cut, it brings in bias of the author. To limit the effects of this bias, every classification is discussed in detail.
Case Studies

This chapter is divided into two case studies: Sudan and DRC. Each of them contains the background information on the conflict and natural resource situation within the country. Later the measures of independent and dependent variables are presented and discussed.

Sudan

Background

Sudan is located in the south of Sahara and is prone to droughts, desertification, floods, deforestation, loss of biodiversity, tribal and ethnic conflicts. Due to common environmental challenges, natural resources and their management traditionally play a very important role in Sudan’s economy. (El-Moghraby, 2003) Oil, agriculture and livestock are the main contributors to country’s economy. (World Bank, 2017.) In 2007 agriculture accounted for 26.7% of GDP (compared to 3.9% world average), while natural resources for 18.9% of GDP (compared to 3.7% world average). (World Bank, n.d.d) (World Bank, n.d.b.) Despite being a resource rich country, Sudan struggles with poverty eradication and external debt. Besides oil dependency, continuous conflicts have resulted in governance failures, unequal resource distribution and agriculture and livestock abandonment. (World Bank, 2017)

2005 marked the signing of Comprehensive Peace Agreement and the end of a war, which started in 1983. (Peace Insight, 2017) Shortly after the peace agreement UN Mission in Sudan (UNMIS) was deployed. (UNMIS, n.d.) It was followed by The Sudan Post-Conflict Environmental Assessment in 2007 and UNEP's Sudan Integrated Environment Programme in the same year. The main focuses of the programme was to support environmental governance and adaptation. According to UNEP itself core themes of the work in Sudan were water resource management, climate change adaptation, community based natural resource management as well as livestock (pastoralist) farming. (UNEP, n.d.c.)
Results

Independent Variable

Measurement question: Was the UNEP Country Recovery Programme established?

Yes. (UNEP, n.d.c.)

Dependent Variable

As mentioned previously, UNEP Country Recovery Programme started in 2007. Therefore the three periods that will be measured are: 2006 (X-1), 2007 (X) and 2012 (X+5).

Measurement question 1: How many years are the girls expected to remain in the education system?

Measurements are taken from World Bank Dataset. (World Bank, n.d.e.)

2006: 6.2 years.
2007: 6.0 years.
2011: 6.4 years.
2012: 6.6 years.

The expected years in education have decreased in the first year before the start of the recovery programme. Nonetheless, it has afterwards increased by 0.6 of a year, which translates into 7.2 months of additional education. It is small change compared with a standard length of primary and secondary schooling, which is expected in stronger economies. However, considering that in five years an average Sudanese girl gained additional seven months of free time to enroll in education, it is definitely a successful example.

Overall: Strong positive effect.

Measurement question 2: What is the employment ratio of the female population?
Measurements are taken from World Bank Dataset. (World Bank, n.d.e.)

2006: 19.2%.

2007: 18.9%.

2011: 18.6%.

2012: 18.8%.

From the results we can see that the employment ratio kept falling, maintaining the pattern prior to the UNEP programme. Nonetheless, the decrease is too small to be significant.

**Overall: Stagnation.**

*Measurement question 3: What is the proportion of female employment in the industry sector?*

Measurements are taken from World Bank Dataset. (World Bank, n.d.e.)

2006: 29.9%.

2007: 29.9%.

2011: 29.7%.

2012: 30.8%.

Similarly to the measurement before, we can see a small positive change. However, the increase is too small to be significant.

**Overall: Stagnation.**

*Measurement question 4: How much does it cost for a woman to start a business?*

Measurements are taken from World Bank Dataset. (World Bank, n.d.e.)

2006: 58.6%.

2007: 57.3%.

2011: 44.2%. 
The price of starting a business for a woman kept dropping throughout the years. It maintained the previous pattern of decreasing. However, since the start of the recovery programme, the decrease was very significant.

**Overall: Strong positive effect.**

*Measurement question 5: Have there been practical changes in land tenure laws in five years since the establishment of the UNEP Country Recovery Programme?*

According to FAO and UNEP there are two main land tenure systems in Sudan: the statutory legal system and the indigenous system. Majority of local land users depend on the indigenous system even though it does not formally secure usage rights. (FAO, n.d.) (UNEP, 2012) Customary rights, which come from the traditional Sudanese land ownership system, are widely recognized and legitimized among rural and ethnic communities. (Shanmugaratnam, 2008) In this case, women, which are of interest to this study, depend on customary land tenure and the indigenous system. One of the main characteristics of customary tenure is that women have access to land through a male relative. (FAO, n.d.) Women are usually marginalized in the land transactions which can be made without their consent. In addition, female-headed households, have a great difficulty proving land ownership after the death of a husband. (ibid)

Even though land matters and reforms were one of the main components of the Comprehensive Peace Agreement (2005), little has changed by 2013. (USAid, 2013) The Government of Sudan failed to integrate and reform customary land system. The only improvement was made in Darfur, where Darfur Land Commission (DLC) was established. One of the commission’s focuses is the support and integration of the indigenous land ownership system. (USAid,2013) Unfortunately according to US Aid the DLC was struggling technically and financially at the year of interest. (ibid)

Moreover, by 2013 there have been no changes in women’s situation regarding land tenure. Female ownership was dependent on male family members and grounded in customary law. (USAid, 2013) Khalid also claims that customary land system prevailed in

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3 Even though the numbers decrease, it is classed as a positive change, since it is easier for women to start a business.
Sudan, even though he does not discuss female situation in particular. (Khalid, 2016) Similar claims are made by Wily, Elhadary and Abdelatti. (Wily, 2011) (Elhadary and Abdelatti, 2016)

To sum up, five years after the establishment of UNEP’s Sudan Integrated Environment Programme there have not been major changes to the indigenous land system, besides Darfur region. As well as no positive practical changes regarding women’s land ownership rights.

**Democratic Republic of Congo**

**Background**

Democratic Republic of Congo has an abundance of natural resources. It holds significant reserves of cobalt, tantalum, copper, gold, diamonds and various minerals, some of which are largest in the world. (Wingqvist, 2008) In 2008 agriculture accounted for 24.2% of GDP (compared to 3.8% world average), natural resource rents were 33.4% (compared to 5% world average). (World Bank, n.d.)(World Bank, n.d.b.) Exports of copper and cobalt are highly responsible for driving country’s economy. Nevertheless, despite the richness of the extractable resources, DRC remains one of the poorest economies in the world. (Wingqvist, 2008)

In addition, country faces a lot of environmental challenges. Problem areas are: “land degradation, deforestation, loss of biodiversity, water pollution, and in Kinshasa air pollution”. (Wingqvist, 2008, p. 2) Besides natural disasters, conflicts play a big role in environmental degradation as well. (ibid) The devastating war in Congo ended with 2003 Inter-Congolese peace agreement. (Uppsala Conflict Data Program, n.d.) UN, however, deployed a peacekeeping mission already in 1999. (MONUC, n.d.) Following the first post-conflict democratic elections in 2006, DRC has requested UNEP to conduct a comprehensive environmental assessment in 2008. (Uppsala Conflict Data Program, n.d.) (UNEP, n.d.f.)
Results

Independent Variable

*Measurement question: Was the UNEP Country Recovery Programme established?*

No. (UNEP, n.d.d.)

Dependent Variable

DRC has never received a UNEP Country Recovery Programme. However, if it followed the same pattern as Sudan, the programme would have been established in 2008. Therefore the three periods that will be measured are: 2007 (X-1), 2008 (X) and 2013 (X+5).

*Measurement question 1: How many years are the girls expected to remain in the education system?*

Measurements are taken from World Bank Dataset. (World Bank, n.d.e.)

2007: 6.4 years.

2008: 7.1 years.

2013: 8.2 years.

We can see that the expected length of education follows the pattern prior to 2008. There is an overall a 1.1 year increase, which is a great result for Congolese girls.

*Overall: Strong positive effect.*

*Measurement question 2: What is the employment ratio of the female population?*

Measurements are taken from World Bank Dataset. (World Bank, n.d.e.)

2007: 68.0%

2008: 67.9%

2013: 67.8%
The employed female population in DRC shrank throughout the years of reference. It continued the pattern prior to expected start of UNEP recovery programme. However, as the drop is very small, it is not a significant change.

**Overall: Stagnation.**

*Measurement question 3: What is the proportion of female employment in the industry sector?*

Measurements are taken from World Bank Dataset. (World Bank, n.d.e.)

2007: 2.2%.

2008: 2.5%

2013: 2.0%.

Even though the number of women employed in the industry grew between 2007 and 2008, it later dropped by 2013. Nonetheless, the decrease is very small and insignificant.

**Overall: Stagnation.**

*Measurement question 4: How much does it cost for a woman to start a business?*

Measurements are taken from World Bank Dataset. (World Bank, n.d.e.)

2007: 871.8%.

2008: 935.4%.

2013: 200.1%.

We can see a significant change in the prices of starting a business for a female. Even though we see a pattern of growth in the first year of reference, it later decreases by more than seven hundred percent in coming five years.
Overall: Strong positive effect.\(^4\)

**Measurement question 5: Have there been practical changes in land tenure laws in five years since the establishment of the UNEP Country Recovery Programme?**

As in majority of African countries the land tenure system in DRC is guided by both formal and informal (customary) laws. There are layers of colonial, post-colonial and traditional rights, which overlap and create a complex land tenure reality. (Helliker and Murisa, 2011) The customary law is overall fragmented and inadequate to deal with the vulnerable populations. (USAid, 2010) In 2010 there was no legal framework that would help marginalized communities to secure access to land. (ibid)

In addition, even though the Congolese constitution ensures land rights for all, females are discriminated by both formal and customary legal systems. (Women for Women Int., 2014) Women are restricted in purchasing, inheriting or selling the land. (ibid)

In 2014, despite being responsible for over half of the agricultural sector, women did not have same property rights and access to land as men. (Women for Women Int., 2014) IUCN also suggests that the customary right system remained active and dominant within rural communities. (IUCN, 2016) These findings are echoed by Conciliation Resources policy brief in 2017. (Concilation Resources, 2017) Therefore in the years of interest, there have been **no positive practical changes regarding women’s land ownership rights.**

\(^4\) Even though the numbers decrease, it is classed as a positive change, since it is easier for women to start a business.
Results and Analysis

Table below summarizes previously discussed results.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Sudan</th>
<th>DRC</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Independent Variable:</strong> UNEP Country Recovery Programme.</td>
<td>Yes.</td>
<td>No.</td>
</tr>
<tr>
<td><strong>Dependent variable:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Expected years in education (female).</td>
<td>Strong positive effect.</td>
<td>Strong positive effect.</td>
</tr>
<tr>
<td>Female employment within industry.</td>
<td>Stagnation.</td>
<td>Stagnation.</td>
</tr>
<tr>
<td>Cost of starting a business (female).</td>
<td>Strong positive effect.</td>
<td>Strong positive effect.</td>
</tr>
<tr>
<td>Practical changes in land ownership (female).</td>
<td>None.</td>
<td>None.</td>
</tr>
</tbody>
</table>

Figure 4. Table of Results.

To answer the research question: *How do post-conflict environmental initiatives affect women’s empowerment within natural resource management in the short term?* two hypotheses were presented.

Hypothesis One: *post-conflict environmental initiatives have a strong positive effect on women’s empowerment within natural resource management in the short term.*
Hypothesis Two: *post-conflict environmental initiatives have a small positive effect on women’s empowerment within natural resource management in the short term.*

Unfortunately, the comparison between Sudan and DRC did not confirm any of the hypotheses. The results show no difference between the two countries regarding women’s empowerment within natural resources. There is no proven effect between independent and dependent variables.

What is more, these results have two main implications regarding the two theoretical frameworks, which are presented in this thesis. First of all, it shows that Opportunity Theory and its causal mechanism cannot explain the relationship between post-conflict environmental initiatives and women’s empowerment within natural resources in the short term. However, there is a need of more studies to confirm these findings.

Second of all, the results also suggest that the framework of Feminist Institutionalism and the ‘Architecture of Entitlements’ cannot explain the relationship between independent and dependent variables. However, it is also possible that the hypothesis, which was formulated was wrong and it should have suggested that there is no effect between the variables in the short term. This particular theory could explain why there is no causal relationship between environmental initiatives (UNEP Country Recovery Programmes) and improved female position within natural resource management. We know that new policies are layered on top of old institutional practices. We also know that men tend to be prioritized in post-conflict societies, due to the traditional patriarchal norms. It is possible that both formal and informal institutions are too robust to change in the short term. In that case the second theoretical framework would serve as an alternative explanation.

Continuingly, the results do not refute that there is an effect between independent and dependent variables in the long term. We can find various success stories in UNEP reports, which would suggest that continuous gender-sensitive environmental programming can change female situation within communities. (UNEP et.al., 2013) (UNEP, 2017b)
Alternative Explanations

To begin with, besides previously discussed potential problems with the methodology and data collection of this study, there are other factors, which could serve as alternative explanations for the results of the research.

Both DRC and Sudan have experienced and still are experiencing various sanctions from international community. However, only Sudan faced Comprehensive US sanctions since 1997, which were expanded in 2006 and eased only in 2017. The suspension did not allow any financial or trade transactions between Sudan and US citizens or entities. (World Bank, 2017) Meanwhile the trade between DRC and US has grown by 110% between 2005 and 2015. (USTR, n.d.) Even though economic sanctions alone cannot explain the absence of causal relationship, they can explain partially the delay of the effect. The economic situation coupled with rigid institutions can help us understand the robustness of status quo regarding women’s empowerment overall as well as in natural resources.

What is more, the UNEP Country Recovery Programmes which were used as an example of post-conflict environmental initiatives could be an explanation of the research results as well. UNEP is poor in continuously publishing evaluation of their initiatives. It is unclear what guidelines the experts and personnel followed as well as what lessons were learned during different stages of the projects. In this instance, we cannot evaluate how gender-sensitive Sudan’s Country Recovery Programme was. In addition, it is unclear which principles of female empowerment UNEP included in their work in Sudan and which were left out. It is possible that different post-conflict environmental initiatives would have more positive results on women’s empowerment within natural resources.

Continuingly, there are some signs of success in Darfur as well as central Sudan regarding gender inclusivity in the environmental field. Here UNEP specifically targeted women’s issues within communities and natural resource management. (UNEP et. al., 2013) (UNEP, 2017b) However, it seems that such success stories do not translate into the nationwide women’s empowerment. It should be taken into account that vast countries like Sudan are home to many different communities. These communities get different levels of priority and support from the environmental peacebuilding actors. Therefore, both the Opportunity Theory and Feminist Institutionalism with the ‘Architecture of Entitlements’ might be used to
explain micro level causal mechanisms (community level), even if they fail in macro level (national level) analysis.

Finally, the economic crisis of 2007-2008 had depressing effects on UN. Due to multi-billion funding shortages, humanitarian aid programmes were struggling to meet their targets. (Foley, 2009) In this setting UNEP’s work in Sudan suffered. Women’s involvement in peacebuilding is a new practice. (FAO, 2017) This means that adequate resources and personnel need to be dedicated in order to empower women in post-conflict settings. There is a need to create new guidelines, policies, provide research, establish entry points for action etc. Financial struggles within UNEP would have interfered with such developments and prioritize other, well-established, policy work.
This thesis explores a research question: *How do post-conflict environmental initiatives affect women’s empowerment within natural resource management in the short term?* The purpose of this study is to find and analyze a relevant theoretical framework, which would help to explain the relationship between post-conflict environmental initiatives and women’s empowerment within natural resource management. Using a comparison between Sudan and DRC two different theories were tested. First of all, the Opportunity Theory, which predicted a strong positive effect between independent and dependent variables. The second Feminist Institutionalism and ‘Architecture of Entitlements’ theory suggested that patriarchal structures will prevent a strong effect and we will witness a small positive change in women’s empowerment within natural resources.

The results have shown that there is no effect between the variables. Such findings refute both of the hypotheses. Nonetheless, it still makes a contribution to the academic field. I argue that the second theoretical framework could be used to explain the absence of a causal relationship and that the hypothesis might have been wrongly formulated. In addition, same theory could explain long term changes within society and especially women’s position in the environmental sector. The Opportunity Theory could be used to explain smaller community level changes in the short term as well. Moreover, similar causal mechanism (to the Opportunity Theory) could explain long term changes too, even though some of the assumptions would need a revision. Overall, this study contributes to the theoretical field of gender, environment and peace. It has addressed the theoretical research gap, though an exact causal mechanism was not formed.

What is more, this thesis serves as an evaluation of practical work of UNEP and Country Recovery Programmes. Providing a theoretical basis for the evaluation brings scholarly and policy worlds closer together. It also gives a new perspective to gender-sensitive projects. Despite, UNEP portraying its success stories as a common practice, systemized evaluation can reveal whether small changes within communities are replicated on a wider scale. Nonetheless, more theoretical research needs to be done to understand how post-conflict environmental initiatives affect women’s empowerment. We know very little
about long term effects as well as why some initiatives seem to be more successful than others.

Policy wise, UNEP should readjust their expectations on short term changes. This might mean focusing the budget on long term policies only or taking in practices from other fieldwork, which has had more influence over gender relations.

Finally, both academic and policy communities would benefit from gender-based data gathering. Creating datasets, which differentiate between men and women, would increase our ability to address gender-related problems, improve women’s position within both weak and strong economies as well as provide a unified system to evaluate women’s empowerment within natural resources. This way we would be able to understand the effects of food aid, micro crediting, water management and other initiatives better. Such knowledge is essential to choose the best and most sustainable approach for community and nationwide development.
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