

Environmental Conflict:  
What's gender got to do with it?

An Honors Thesis for the Peace and Justice Studies Program

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## Table of Contents

<b>Abstract</b> .....	<i>iv</i>
<b>Introduction</b> .....	1
<b>1. The Linkages between Environment and Conflict</b> .....	9
<b>2. Gender and Environmental Conflict</b> .....	22
I. Gender and Conflict.....	22
II. Gender and the Environment .....	39
III. Bridging the Gap: A Gender Analysis of Environmental Conflict .....	49
<b>3. The Cauvery River Dispute</b> .....	53
I. Background.....	53
II. Gender in the Cauvery River Dispute .....	61
III. Looking Toward the Future .....	70
IV. Conclusion .....	73
<b>4. Pastoralist Conflicts in Turkana, Kenya</b> .....	74
I. Background.....	75
II. Gender in Turkana, Kenya .....	82
III. Looking Toward the Future .....	93
IV. Conclusion .....	94
<b>Conclusion</b> .....	96
I. Key Findings and Patterns.....	96
II. Gender Mainstreaming: Present and Future.....	102
III. Concluding Remarks.....	105
<b>Bibliography</b> .....	107

## **Abstract**

Feminist security scholars have argued that conflict and peace are gendered activities and gender must be incorporated more systematically into conflict analyses. However, the examination of gender has been largely absent in environmental conflict literature. Through an analysis of two case studies—the Cauvery River dispute in India and pastoralist conflicts in Turkana, Kenya—this thesis explores the gender impacts of each conflict, the gender symbolism of the natural resources parties are fighting over, and the structure of gender in society and government. The ultimate goal of the research is to bridge the gap between two sets of conflict analyses and provide a more comprehensive view of environmental security. This thesis concludes that a better understanding of the relationship between gender and environmental management is necessary for designing effective policies and programs for environmental sustainability by promoting involvement of all stakeholders. If environmental management is key for preventing conflicts, then a gender-neutral policy approach to environmental conflict is flawed from the outset. Gender mainstreaming in environmental conflicts is a necessary policy prescription for achieving sustainable peace and security and promoting gender equality and women’s empowerment.

## **Introduction**

*In a few decades, the relationship between the environment, resources and conflict may seem almost as obvious as the connection we see today between human rights, democracy and peace.*

— Wangari Maathai, Nobel Peace Laureate 2004

*We should place women on the front lines as we craft solutions to abate global warming and adapt to it. They embody much knowledge, responsibility, and unrealized potential, and are therefore essential if we're to achieve any meaningful degree of success.*

— Center for American Progress

*When we focus on the human dimension of climate change, we see the effects of the problem differently and we then approach the solutions differently. Giving voice to the experiences of these women, allowing them to bear witness to their experiences can influence policy outcomes and instruments of adaptation.*

— Mary Robinson, former President of Ireland and former United Nations High Commissioner for Human Rights

Policymakers have recently begun to recognize the growing security threat of environmental degradation and climate change. A small but growing number of scholars argue that climate change has been intertwined with other causes of some past and current wars and will continue to have an impact on organized violence in the future.

In addition to the security of states, climate change is also increasingly recognized as a major threat to human security, especially since individuals in poorer countries will most likely bear the heaviest burdens when resources become scarce or when natural disasters strike.<sup>1</sup> Women comprise seventy percent of the 1.3 billion people living below the poverty line. As a result, they are most likely to bear the burden of the effects of climate change and environmental degradation (Dankelman et al. 2008). A number of scholars have focused on this gendered

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<sup>1</sup> Human Security is an emerging way of understanding global vulnerabilities that challenges the traditional notion of national or international security by arguing that security should be people-centric rather than state-centric

human dimension of environmental security, but how are these dynamics exacerbated or changed when environmental degradation leads to violent conflict?

One perspective that has been limited in the literature on environmental conflict is a gender analysis. Feminist security scholars argue that both conflict and peace are gendered activities. Both feminist and conventional security scholars assert that the nature of conflict is changing such that combat is no longer primarily limited to military engagements between national armies. Compared with the past, war is more likely to result in relatively greater numbers of civilian casualties. One implication is that women bear more of the suffering. Feminist scholars have argued that warfare has become inclusive as it affects all aspects of society. Therefore, our efforts to build international security, prevent conflict, and engage in peacebuilding must be inclusive as well. In order to construct a fully nuanced assessment of social needs in conflict, and build lasting peace, women must be mainstreamed into the security sector and governance structures, and gender must be incorporated more systematically into conflict analyses.

As environmental security gains momentum on the international security agenda, and as the human security dimensions are recognized, it is crucial that a gender analysis and its implications are considered. The overall purpose of this research is to bridge the gap between two sets of conflict analyses and thereby provide a more comprehensive view of environmental conflict and security. It does so by comparing two case studies: the Cauvery River dispute between Tamil Nadu and Karnataka in India and pastoralist conflicts in the Turkana district of Kenya.

This thesis is organized into four chapters. Chapter One addresses recent scholarship on the linkages between climate change, environmental degradation, and armed conflict. However,

first it is important to understand systems of climate and mechanisms of climate change in order to build a framework for understanding the climate change-conflict nexus. Climate refers to the average weather—including temperature variables, precipitation, and wind—over a select period of time (Tsuma 2011). The Fourth Assessment Report of the Intergovernmental Panel on Climate Change defines climate change as “a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climatic variability observed over comparable time periods” (IPCC 2007: 30). It is important to note that climate change can be the result of natural changes over time, or of human activities that disrupt or impact climate cycles.

For the purposes of this thesis, it is also important to distinguish climate change from environmental change. Environmental change includes climate change and its effects on the environment, but also encompasses the non-climate related changes in the environment as a result of human activity such as deforestation, oil extraction, and overgrazing (Bronkhorst 2011). This distinction is key when looking at the two case studies, in which environmental problems associated with conflict are the results of both climate change and overuse of water or overgrazing. Additionally, some incidences of violence in relation to environmental stress in these cases transpire in time periods before scientists and scholars recognized the occurrence of climate change.

So what exactly is environmental security? There is not one canonical definition. The Institute for Environmental Security, in an overview of the environmental security field, observed that over the next one hundred years, one third of current land cover will change. This environmental change will disrupt the normal functioning of ecosystems and lead to increased flooding due to heavy rains and sea level rise, drought, desertification, or other erratic weather

patterns. As a result, the incidence of other threats—including famine, disasters leading to death and destruction, loss of livelihood, lost access to vital resources, destabilization of regions, and violent conflict—will also increase. This thesis focuses primarily on the violent conflict aspect of environmental security, though it is difficult to completely separate the dimensions of environmental security, as they are often inextricable from one another.

Violent conflict refers to the actions, attitudes, or systems that cause physical, psychological, or social damage and are the result of two or more parties having, or perceiving to have, incompatible goals and interests and acting upon these differences (Campbell et al. 2009). Environmental conflicts, more specifically, are conflicts over the use of natural resources, whether they are scarce or abundant (Fleischli 2006). It is important to note that environmental dynamics are rarely the sole cause of armed conflict or violence. Several scholars have written about the linkages between environment and conflict and Chapter One will provide an overview of the literature, pointing to the absence of a gender analysis.

Chapter Two provides an overview of why it is important to include a gender analysis in environmental conflict. In this thesis, gender is understood as the socially or culturally constructed roles and relationships between women and men, and not as a natural consequence of the biological sex differences between women and men (Fleischli 2006; Dankelman et al. 2008). Gender as an analytical focus is contextually specific, and differences among women do exist. But however differentiated gender may be, gender oppression still exists. Therefore, in many societies, women as a group can still be seen as having subordinate positions.

This thesis looks into gender to focus on aspects of inequality between men and women, and their respective roles, positions, and needs. But it focuses specifically on women, in order to give visibility to their respective roles, positions, and needs, following scholars such as Harcourt



and Escobar (2005), who deliberately focus on women rather than on gender and feminist analysis. They see the political importance of looking at women, beginning with how women themselves experience gender inequalities. They write,

Too often the differences for women and men become smoothed away in progressive analytical frameworks. Knowledge about women continue to be hardest to come by, and although many of us work in feminist theory, we try in this book not to assume that readers share that knowledge, but instead bring it in when it helps explain the story we are telling (2005: 2).

Similarly, this thesis describes feminist analyses and theory when it helps explain the situation of women, but primarily focuses on women and their lived experiences. In order to give visibility to women's roles and positions in the socio-cultural and ecological spheres, I refer to "women" as groups of persons, and "gender" as a construct.

Even though this thesis focuses on women rather than strictly on gender relations, it is still a feminist analysis. Susan Geiger (1990: 169) explains that there is nothing "inherently feminist about women's oral histories or women doing women's oral histories." In order to understand what makes a piece of work a feminist analysis, she asserts, we need to look at the objectives of the researcher, the questions addressed in the research, the research relationship, the intended audience, and potential beneficiaries. The objectives of this research—though it focuses on women specifically—are consistent with feminist objectives in that it "presupposes gender as a...central analytical concept" and highlights problems through "the study of women as embodying and creating historically and situationally specific...realities," (Geiger 1990: 170).

It is often argued that environmental change is gender neutral, implying that it impacts women and men in the same ways. However, scholars have predicted that environmental change will accentuate the gaps between the world's rich and poor. In developing countries, women are among the poorest and most disadvantaged, as they make up seventy percent of those living

below the poverty line (Omolo 2010b, Dankelman et al. 2008). For this reason, the effects of environmental change will disproportionately impact women as they lose livelihoods, slip deeper into poverty, and experience increased inequality and marginalization. Adaptation to and mitigation of climate change is predominantly a social issue in which gender plays a significant part because women and men have different experiences and knowledge. Therefore, both the effects and solutions to climate change are gendered.

Vulnerability differs between men and women based on their socially constructed roles and responsibilities. Women's long-established roles include household work, water procurement, food production and provision, and childrearing; therefore, as access to basic needs and natural resources, such as food, fuel, fertile land, and water becomes hindered due to environmental change, women's workloads increase. This leaves less time for education, income-generating activities, or participation in decision-making processes, which further exacerbates unequal gender relations (Dankelman et al. 2008).

In addition to their distinct vulnerabilities to environmental change, women also have specific gendered vulnerabilities during violent conflict. The stereotypes are that men are the soldiers who will be injured or killed in battle, while women are the wives, nurses, or social workers who act as support systems for the conflict. But the reality is that women generally make up the majority of civilian casualties and—due to breakdown of social structures and impunity—suffer in their roles as caregivers and bearers of culture (El Jack 2003). Women often cannot flee or migrate during times of violence, and gender-based violence is often used deliberately as a strategy of war to destabilize families and communities.<sup>2</sup> In other instances,

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<sup>2</sup> Gender-based violence includes rape, forced pregnancy or abortion, forced sex work, sexual slavery, or any other action that results in physical, sexual or psychological harm or suffering to women, and in some cases men.

when men are killed in battle, widows are left as heads of households with few customary or land rights.

Women are also more likely than men to be absent from decision-making related to mitigation and adaptation in the face of environmental change or conflict resolution and peacebuilding. This is often the case either because their contribution is not valued, or because they do not have time, resources, or confidence to contribute (Omolo 2010b). When women, who are important stakeholders, are excluded, the policies that result are gender-blind. However, gender sensitivity in decision-making and policy is essential for effective mitigation, adaptation, conflict resolution, and peacebuilding. There is a need to recognize the capacity of women, as well as men, to contribute important (and often, local) knowledge and insights that are gained from their distinct experiences based on gender.

The international community has acknowledged the importance of gender equality and empowerment of women as one of its Millennium Development Goals (MDG 3). Gender equality is seen as critical for the achievement of sustainable development, and an essential prerequisite for achieving all other MDGs such as global poverty eradication and ensuring environmental sustainability (UNEP 2006). Gender mainstreaming (which will be defined and discussed in more detail in Chapter Two) has emerged worldwide as the key strategy to achieve gender equality, and as a critical component for realizing national sustainable development goals, environmental management, and conflict resolution. The UN's Commission on the Status of Women, for example, has stated that all governments "should be encouraged to mainstream gender perspectives into their national policies, action plans and other measures on sustainable development and climate change" (UN 2008: 3).

Since women have specific vulnerabilities, experiences, and knowledge in the face of environmental change as well as in violent conflict, it is important to integrate these two analyses together when discussing environmental conflict. This chapter provides a comprehensive overview of the gender dimensions of both conflict and environmental change, as well as introduces the analytical framework by which the case studies will be analyzed.

Chapters Three and Four present the two case studies. Each chapter provides a background of the conflict, indicating how it is an environmental conflict and other intervening variables. I use the analytical framework presented in Chapter Two to provide a systematic gender analysis of each conflict. The conclusion synthesizes the findings of the two case studies in order to shed light on the importance of including a gender analysis when looking at environmental conflicts. This final chapter also looks at the current situation of gender mainstreaming and explores how gender mainstreaming, when more systematically incorporated into policies and programs, can contribute to greater gender equality and women's empowerment.

## **1. The Linkages between Environment and Conflict**

Ever since Thomas Malthus published his *Essay on the Principle of Population* (1798), a steady stream of policymakers and scholars have claimed that environmental stress and degradation can lead to conflict.<sup>3</sup> However, a new wave of scholarly work on this topic began in the 1980s, as security paradigms shifted with the Cold War coming to an end. This chapter provides an overview of the evolving literature on environmental conflicts and traces the development of the environmental security field within the international security realm. Much of the literature is divided into sub-themes such as water conflicts, land and territorial disputes, or conflicts over minerals. The chapter explores these themes, focusing on water and climate change as topics especially relevant to the subsequent case studies. What is clear from this literature overview is that environmental conflict scholars often focus more on the causes of environmental conflict and fail to consider the impacts in their analyses, particularly within the context of gender. The conclusion of this chapter briefly explains why this is problematic and how this thesis addresses this important gap.

Since the mid-1980s, scholars such as Westing (1986) and Galtung (1982) extended conventional security thinking to include issues such as environmental change and resource depletion. Westing examines how natural resource scarcity coupled with uneven distribution can lead to unlikely alliances, national rivalries, and war. The study evaluates the role of geographical distribution, availability, scarcity, and depletion of the world's natural resources on strategic and military policymaking, and how population growth impacts scarcity or the

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<sup>3</sup> Malthus' book examines the tendency of the human population to outstrip their resources. He concludes that unless family size is regulated, famine would eventually become a global epidemic. He argues that there are two kinds of population checks to prevent worldwide starvation: preventative checks (birth control or moral restraint) to reduce the birthrate; and positive checks (starvation, disease, war) that increase the death rate. These checks are necessary to prevent global starvation.

perception of scarcity. Similarly, Galtung (1982: 99) argues that the “destruction of the environment may lead to more wars over resources,” and suggests that “environmental effects make a country more offensive because it is more vulnerable to attack and because it may wish to make up for the deficit by...getting access to new resources.” This interdisciplinary debate was expanded by the end of the Cold War and exemplified the search for alternative security paradigms in international security studies (Hagmann 2005). Research focused on whether the physical environment represented a threat to security, and was a product of shifting security paradigms: threats to security were no longer understood as solely from and against the state, but rather transcended national boundaries and originated from sources other than the state.

A number of major contributions on empirical tracing of the environment-conflict link emerged in the early 1990s. They were characterized by a strong emphasis on evidence-based research, using case studies to trace the process of degradation and violence. This research stream focused predominantly on causal links between what they called “environmental scarcity,” degradation, and national and international conflict in developing countries and countries in transition to democracy. Two research groups were at the forefront of the endeavor to demonstrate causal mechanisms between resource scarcity and physical violence: conflict researchers at the University of Toronto directed by Thomas Homer-Dixon, usually referred to as “the Toronto Group;” and scholars associated with the “Environment and Conflict Project” (ENCOP) of the Swiss Federal Institute of Technology in Zurich and the Swiss Peace Foundation in Bern (Hagmann 2005). These groups of scholars, frequently referred to as neo-Malthusians, claim that environmental changes pose a severe and direct threat to security because of their potential to increase resource scarcity.

The research of Thomas Homer-Dixon, the leading scholar in the Toronto Group, illustrates these mechanisms. He argues (1994, 2001) that decreasing access to renewable resources increases civilian frustration, which in turn creates grievances against the state, weakens the state and civil society, and increases the opportunity for instigating an insurrection. He identifies three types of resource scarcity that constitute “environmental scarcity”: (i) supply-induced scarcity, which is the reduced availability of renewable resources due to consumption and degradation that develop faster than regeneration processes; (ii) demand-induced scarcity, which is a consequence of population growth and/or increased consumption per capita; and (iii) structural scarcity caused by an unequal distribution of natural resources.

These three components interact and reinforce each other, resulting in two social processes labeled as “resource capture” and “ecological marginalization.” The former occurs when resource depletion and population growth create unequal access to resources. In such cases, powerful state elites or other groups – attempting to secure resources that may become scarce in the future – manipulate a country’s policies in their own favor. This weakens institutional responses to social grievances and increases the risk of violent conflict. The latter process occurs when unequal resource access and population growth affect resource degradation and depletion. Under those circumstances, groups facing environmental scarcity may migrate into areas that are already ecologically stressed, resulting in further degradation of resources and increased risk of violence between natives and newcomers. In both case studies in this thesis, we will see the interplay of these three forms of scarcity and how they contribute to resource capture and ecological marginalization, which both play a role in the outbreak of violence.

The Toronto Group explored how and under what circumstances environmental scarcity contributes to the outbreak of armed conflict. Their analysis focused mainly on resources that are

key for food production such as cropland, freshwater, and forests. They concluded that environmental scarcity “rarely contributes *directly* to interstate conflict” (Homer-Dixon 1996: 48, my emphasis). Rather, their conclusions focused on how a number of negative consequences such as poverty, population displacement, or state weakness were associated with environmental scarcity. These social effects create and reinforce instability and under given circumstances, may lead to collective violent action.

The next wave of research was inspired by theoretical and methodological criticism of the Toronto Group and to a lesser degree of ENCOP. A number of researchers associated with the International Peace Research Institute (PRIO), Oslo, are among this group of environmental conflict researchers. They initially set out to test the conclusions of previous research, and utilized statistical methods conducted across large cross-national populations. Their contributions provide a clearer picture of the geography, distributions, and evolution of environmental conflict cases (Hagmann 2005). Their quantitative models allowed for explorations of the relative significance of different variables and thereby refined existing environmental conflict models. New ecologic and socio-political variables were included in studies that focused on renewable and non-renewable natural resources alike.

Gleditsch (2001: 269) subscribes to a “fairly pessimistic assessment of the state of the study of environmental causes of conflict” and examines the research foundations for claims made by neo-Malthusians. He does so by discussing several common theoretical and methodological problems with the existing literature on environmental conflict. These include the lack of distinction between scarcity and degradation; overlooking important political, economic, and cultural variables; using untestable models; the biases of qualitative case studies to draw conclusions; and the contradiction between evidence relating to interstate versus civil



wars. Lastly, he indicates the problem of generalizing theories and empirical evidence concerning environmental factors from one level of analysis to another.

Similarly, Hauge and Ellingsen (2001) take the findings and conclusions from different case studies on the linkage between environmental degradation and conflict and reassess these findings to fit them into a broader theoretical framework about conflict research. They criticize some of Homer-Dixon's findings, saying that they ignore the more direct linkages between economic and political factors with domestic armed conflict; therefore his findings fail to contribute to a broader understanding of the causal pathways to domestic armed conflict. Hauge and Ellingsen also find that countries suffering from environmental degradation, particularly land degradation, are more prone to civil conflict. However, economic factors are statistically far more important in predicting domestic armed conflict than are environmental factors. In general, this holds true of political factors as well. They conclude that although environmental degradation contributes to the outbreak of conflict, it is not *necessarily* a catalyst. The close linkages between economic, political, and environmental variables indicate that future research should pay more attention to the interaction of these factors.

Another scholar in this next research wave is Michael Ross (2003), who presents an overview of the role that natural resources play in civil wars. He suggests four main pathways through which struggles around claims to resources lead to violent conflict: first, economically, a reduction in growth and an increase in poverty make countries more susceptible to civil war. Second, resource dependence tends to influence governments, making them less able to resolve conflicts and more likely to exacerbate them due to corruption, state weakness, and reduced accountability. Third, resource wealth may incentivize citizens to form a separate state, which could lead to civil war. And fourth, natural resources can be used by rebel groups to produce

large profits, so they raise money by either looting and sale of resources, sale of resource futures, or through extortion and kidnapping of workers in resource firms.

Ross (2003) also explores the concept of the “resource curse,” first postulated by Richard Auty in 1993. The resource curse refers to the paradox that countries with natural resource endowments have less economic growth and worse economic development than countries without endowments. This may be due to corruption, mismanagement of the resource, or reductions in competitiveness of other economic sectors and volatility of revenues due to market fluctuations. Ross’ research concludes that natural resource endowments never make conflict inevitable and that natural resources are never the only source of conflict, but their presence does heighten the danger that civil war will break out. Better policies may help to reduce the likelihood of civil conflict by directing generated wealth toward poverty reduction and education/health spending.

Through this wave of environmental conflict scholarship, some core conclusions and methods of the previous research groups were challenged. Nonetheless, scholars in this phase remained attached to the idea of investigating causalities and correlations between environmental variables and armed conflict. Members of this research stream called for inclusion of other independent and intervening variables such as poverty, political regime type, or cultural variables. Economic and political variables were identified as missing links between environmental degradation and armed conflict. In the Turkana case, we will see that several variables contribute to violence, including the availability of small arms, economic marginalization, and historical feuds, all of which are exacerbated by increased environmental stress.

Resource optimists, also known as cornucopians, provide a contrast to the neo-Malthusian view. They acknowledge that environmental changes may periodically put human wellbeing at risk. But they also claim that humans are, and will be, able to adapt to resource scarcities through market mechanisms, technological innovations, social institutions for resource allocation, or any combination. Simon (1996), for example, argues that mankind (note the gendered language) will be able to respond to new circumstances imposed by environmental changes through improvements in technology and efficiency – although he admits that population growth may lead to resource shortages or increased economic burdens in the short run. However, he also claims that rather than furthering war, population growth is likely to end it. Instead of armed conflict, conflicts over resources may lead to joint exploitation of the resources and a network of common interests. Therefore, resource scarcity based on environmental degradation may encourage joint efforts to halt degradation.

Similarly, Lomborg (2001), who is known as one of the most famous climate skeptics, argues that resources have not become increasingly scarce but rather more abundant and thus, we do not need to worry about the increase of environmentally induced conflict. He explores several issue areas—including food, soil erosion, energy, and water—and argues through statistical evidence and promises of technological fixes that there is actually little to worry about in terms of resource scarcity. Even if there were, he explains, raw materials can be substituted. In addition to human inventiveness and technological change, international trade will also play a role in mitigating local scarcities. His main argument is that in the event of increasing scarcity, prices are likely to rise, leading to greater economizing, and further technological change, trade, and substitution. Lomborg’s work—as well as others like him—demonstrates the difficulty of including solutions for resource-based conflict in policy: if you do not believe resource scarcity

is or will be a source of conflict, then why plan for it? However, his logic is somewhat flawed in that he gives too much credit to certain technological advances and his recommendations are unsustainable.

Despite these problems, the research of resource optimists still adds value to the discussion about resource-related conflict. Overall, they suggest various causal mechanisms in which scarcity of resources is just one of several key factors in the overall relationship between environmental changes and violent conflict. In several of the models (Dinar 2011a), cooperation between resource users is a distinct possibility for mitigating and/or adapting to resource scarcity. In other words, even if environmental changes exacerbate resource scarcity, violent conflict is not a foregone conclusion. Moreover, even if violent conflict occurs, resource scarcity, although it may be present in the respective case, is unlikely to be the main cause.

For the purpose of the two case studies, it is also important to look at the debates surrounding water scarcity and climate change as they relate to conflict. Hauge and Ellingsen (2001) and Gleick (1993) provide some evidence that water scarcity can lead to armed conflict. Their empirical analyses suggest that transboundary waters are associated with low-level conflicts, if not with full-scale water wars. Gleick presents a cause-and-effect relationship model that explicitly identifies indices of vulnerability that might suggest regions at risk of conflict due to water scarcity. The variables include the ratio of water demand to supply, water availability per person, the fraction of water supply originating outside a nation's borders, and dependence on hydroelectricity as a fraction of total energy supply.

In contrast, Dinar (2011b), Wolf (2007) and Lonergan (2001) report that states tend to cooperate rather than fight over shared water resources. They argue that most international water conflicts are not full-scale wars, but rather pertain to diplomatic tensions, as holds true thus far in

the Cauvery River case. Dinar considers how scarcity may lead to conflict, but also cooperation. He explores other variables that may explain conflict and cooperation over water, like geography, power of different parties, and the nature of domestic politics. Since asymmetries among river riparians (geographic, military, economic, etc.) may often impede cooperation, the goal of water management is to offset such asymmetries. Water scarcity neither guarantees conflict nor cooperation but if correct bargaining strategies and diplomatic water agreements are implemented, the asymmetries that lead to conflict can be offset.

In a similar vein, Wolf (2007) argues that water management is, by definition, conflict management. The complexity of borders, population growth, changes in governance, and climate change are placing pressure on shared water uses and demanding that effective, sustainable, and peaceful solutions be found to conflicts. He presents the idea of “hydropolitical resilience,” which is the complex human-environmental system’s ability to adapt to change (12). He concludes that water conflict prevention and management, regional collaboration including civil society, and capacity building on all scales provide credible solutions to the challenges of water, creating an environment of peace rather than conflict on international and transboundary waterways. Lonergan (2001: 124) makes the claim that “if there is a political will for peace, water will not be a hindrance. If you want reasons to fight, water will give you ample opportunities.” His basic premise, however, is that everyone needs water to survive and therefore cooperation between states is more likely. Lonergan’s ideas are important when looking at the Cauvery River dispute and how citizens (men and women) can better contribute to water management in order to avoid outbreaks of violence in the future.

Climate change has also been identified as a catalyst for conflict, particularly with regard to water scarcity and land degradation. Lee (2009) creates a framework for the relationship

between climate change and conflict through the understanding that climate change will differ by geography. He identifies two geographical regions—the equatorial tension belt and the polar tension belt—where climate change will impact conflict through what he calls “hot wars” and “cold wars.” He identifies four main vectors for climate change conflict: resource abundance; resource scarcity; large scale migration and displacement due to lack of viable land or extreme weather; and sovereignty clashes over new lands and seaways that emerge due to melting icecaps. Lee explains that hot wars are characterized by heating that leads to loss of water and desertification of habitats; displacement and scarcity are the two vectors that will be most likely here. Cold wars, on the other hand, are associated with availability of new resources or lands, and questions of state control. He supports his hypotheses by exploring the history of climate change and conflict and then offers potential solutions including mitigation and prevention, all of which must be targeted to specific regional needs.

Parenti (2011) focuses on a region he coins the “Tropic of Chaos”—an area between the Tropics of Cancer and Capricorn where economically and politically damaged states are being hit the hardest by climate change. He explains that these states are experiencing a “catastrophic convergence” of poverty, violence, and climate change. He locates the origin of the catastrophic convergence in the growth of capitalism (particularly neoliberalism), coupled with colonialism and inter-imperial conflict, and exacerbated by the small arms trade post-Cold War. In order to make specific connections between economics, political violence, and climate, Parenti explores the history of several places in the Tropic of Chaos to see how they arrived at their current state and what is to be done about it. For example, in exploring violence in Afghanistan, Parenti argues that it is not the logical outcome of a series of random events disconnected from one another, nor something peculiar to Afghan society. Rather, it is the result of colonial invasion

and occupation, historically by the British, then the Russians, currently by the U.S.; the impact of the Cold War; imperialism; and climate-change-induced drought. Additionally, he argues that water has long been a key driver of conflict, and with climate change bringing more extreme weather such as flooding and droughts, it will continue to be a greater issue.

Lee's and Parenti's findings take a qualitative approach, but much quantitative research has also been done to link climate change with conflict. Raleigh and Urdal (2007) and Hendrix and Glaser (2007) study how certain factors related to climate change, such as land degradation and freshwater availability, affect the likelihood of civil conflict in Africa. They find that only water scarcity significantly increases the likelihood of conflict. Hendrix and Glaser (2007) also examine the impact of short-term climatic changes (inter-annual variability in rainfall) on civil conflict onset in sub-Saharan Africa. They report that positive changes in rainfall significantly decrease the conflict risk in the following year. Moreover, Burke et al. (2009) find that temperature increases in Africa between 1981 and 2002 have a statistically significant effect on civil war onset. They report that a 1°C increase raises the risk of civil war by 4.5 percentage points during the same year.

However, similar to other environment-conflict debates, not all researchers reach the same conclusions and there are discrepancies between findings. Mendelsohn (2011) argues that as scarcity increases (in the case of climate change, the resource is fresh air), the propensity to cooperate will increase because desperation will create incentives. However, variability in climate change impacts will influence the likelihood of cooperation and it will probably not happen until the risks of climate change become extremely threatening. On the quantitative side, Buhaug (2010) shows that Burke et al.'s results are not statistically strong enough as compared to alternative models. In addition, he finds that climate variability measured as inter-annual

growth and deviation from annual mean precipitation and temperature does not predict civil conflict. Similarly, Theisen et al. (2010), using various drought measures while controlling for sociopolitical characteristics such as politically marginalized populations, do not find any effect of drought on civil conflict in Africa for 1960–2004. They conclude that the critical factor for civil conflict is the extent of political and economic marginalization of ethnic groups rather than environmental issues. These results cut against neo-Malthusian claims, suggesting that climate variability including decreased rainfall is not associated with higher probability of violent conflict.

In summary, in its attempts to identify whether environmental changes contribute to violent conflict, the previous existing research has arrived at ambiguous findings so far. These contradictory results primarily stem from differences across studies in the type of conflict under examination, differences in the type of environmental changes whose effect is examined, and differences in country samples and time periods. Additionally, there are other interacting effects that scientists and researchers often do not examine, such as culture, levels of inequality, or social impacts that may enhance the general understanding of both the causes and effects of these conflicts beyond quantitative data. This shows the need for continued research into the human dimensions of the environment-conflict nexus that can inform the necessary policy precautions to prevent extreme environmental degradation and violent conflict—both of which influence people’s lived experiences.

In thinking about the human dimensions of these conflicts, the overview of this literature shows an obvious missing link: what role does gender play in how populations are impacted by environmental stress and subsequently conflict? As the next chapter discusses, security paradigms continue to shift more toward human-centric analyses and away from concerns solely



of the state. Therefore, if environmental conflict scholars aim to seriously understand all the facets of environmental conflict and how to resolve them, they need to understand the impact on and contributions of marginalized (and often the most affected) populations. The following chapter explores why gender is an important lens through which to analyze environmental conflict in order to achieve the inclusion of these missing features.

## **2. Gender and Environmental Conflict**

As demonstrated in the last chapter, scholars have expanded the security paradigm to include issues such as the environment. However, both security and environmental literatures often overlook the impact on women. Over the past few decades, both feminist and conventional security scholars alike have begun to expand both the security paradigm and environmental discussions to include women's security. The first part of this chapter provides an overview of feminist security studies and a review of scholarly work about gender in conflict. The second part of this chapter then looks to the gender dimensions of environmental change. The aim of both sections is to provide ample explanation of why gender is an important lens through which to analyze environmental conflict. The last section presents a framework for a gender analysis that will be used to investigate the subsequent case studies.

### **I. Gender and Conflict**

In the post-Cold War world, the focus of security has shifted from a state-centric to a more human-centric discipline. Scholars across the political spectrum agree that the nature and conduct of war has changed: most are fought internally, usually on a smaller scale than the wars of the previous century. Ethnic divisions are prominent and civilians are often targeted. In response to this changing landscape, the literature on gender and conflict has grown steadily over the last twenty years. This includes texts dealing with the inherent masculinity of war and the security field, the ways in which war affects women and girls differently from men and boys, the particular vulnerabilities and capacities that women develop in conflict, and the different ways in which women can participate in conflict resolution and post-conflict reconstruction. Scholars have recognized that old theories of conflict have so far failed to bring to light the different ways in which current conflicts affect the roles of men and women, or the relationships and power

balance between them. Additionally, feminist scholars have criticized the inherent masculinity of the security field and have challenged normative views of both conflict and security. The first part of this section addresses these issues with an overview of feminist security studies. The section then explores the gendered impacts of conflict on women. Subsequently, it challenges the stereotypical roles assigned to men and women in conflict, and examines how these perceptions obstruct women's ability to participate in decision-making bodies. The section ends with an explanation of women's agency and inclusive security as important aspects of post-conflict reconstruction.

### *1.1 Feminist Security Studies*

Conventional security sees threats to the state coming mainly from other states or from anti-state movements and rebel groups. This definition has somewhat expanded to include threats such as financial crises, food insecurity, terrorism, climate change and environmental degradation. The mainstream view of conflict and security is based on "truths" including the idea that war is largely fought by men, acting in formal roles as soldiers; that it is defined and contained within the framework of the nation-state, which seeks to acquire or retain state power; that it is caused by conditions of poverty and frustration and failure of the state; and that while violence against civilians is widespread, it is simply an unfortunate by-product of war (Thompson 2006: 342-343). Feminist security scholars have challenged many of these "truths" and critiqued national security and realist doctrines as masculinist doctrines that perpetuate stereotypical perceptions of men and women, and war and peace. Feminist security scholars challenge realist theories of international relations that favor the "sovereign man" or the "hero warrior" as the exclusive symbol of power.

Blanchard (2003) gives a succinct overview of feminist security theory by outlining its main points. First, feminist security theory points to the extent to which international politics is such a thoroughly masculinized sphere of activity that women's voices are considered "inauthentic," implying that feminine perspectives do not belong. Second, scholars in this field question the extent to which women are secured by the state in times of war and peace by evaluating the gendered impacts of conflict on women. Third, feminist security scholars question the supposed nonexistence and irrelevance of women in international security politics and seek to expose the workings of gender and power in international relations by recovering women's experiences, recognizing gender-based exclusion from decision-making roles, and investigating women's invisibility in international relations theory. Fourth, they contest discourses wherein women are linked unreflectively with peace, which reinforces gender assumptions. These views can be seen in scholarly works from various feminist security scholars that will be explored in this chapter.

Tickner (1992, 2001) demonstrates how a feminist perspective on international relations and security studies changes and expands our view of the global system. She begins her analysis by offering a criticism of political realism. According to realist political theory, the international system reflects a condition of anarchy. States are the unitary actors, determined to expand or preserve their position in the international system, and charged with the protection of sovereignty from outside threats. According to this theory, national security is defined in political or military terms "as the protection of the boundaries and integrity of the state and its values against the dangers of a hostile international environment" (Tickner 2001: 38). However, Tickner questions the role of the state as an adequate security provider. She also challenges the myth that wars are fought to protect women, children, and others typically viewed as "vulnerable" and points to the

high level of civilian casualties in modern warfare. She also identifies that conventional security studies tend to look at causes and consequences of wars from a top-down perspective, while feminists generally take a bottom-up approach, looking at the impacts of war at the micro-level or “low” politics. Therefore, feminism’s goal of ending women’s subordination is consistent with this broader definition of security that takes the individual as its starting point.

Feminists have also looked at the security-seeking behavior of states in gendered terms, pointing to the masculinity of strategic discourse and how this may impact the understanding of and prescriptions for security. It may also explain why women’s voices have so often been seen as “inauthentic” in matters of national security, as Blanchard notes above. Security strategists often legitimize policies by appealing to masculine characteristics, such as power and aggression. This means that certain types of foreign policy behaviors are seen as more legitimate than others. Men (and even women) who are in the role of defense experts must employ “tough” language and suppress any “feminized” thoughts when constructing strategies, and cooperative choices are often seen as “weak.”

Cohn (1987) argues that language is important in understanding how people view the world and thus how they act. Her analysis of the language of US security experts, whose ideas have been important for mainstream security studies, suggests that this masculine gendered discourse is the only permissible way of speaking about national security if one is to be taken seriously by the strategic community. This rational, disembodied language precludes discussion of the death and destruction of war—issues that can be spoken of only in emotional terms and are stereotypically associated with women. The general assumption is that if war is masculine, peace is feminine, and thus undervalued. She concludes that language used in strategic discourse

constrains our ability to think fully about national security, especially in human or gendered terms.

The discussion of strategic discourse relates to the concept of hegemonic masculinities in conflict and security. Hegemonic masculinity refers to the culturally normative ideal of male behavior and comes from the work of Australian men's studies researcher, R.W. Connell. Connell (1999, 2005) hypothesizes that there is a hierarchy of masculine behavior, and that most societies encourage men to embody a dominant version of masculinity. He describes four basic patterns of how men deal with one another: hegemony, subordination, complicity, and marginalization. Men behave hegemonically if they exclude or subordinate women or "lower ranking" men, and ensure their own dominance by possession of weapons and the use of violence.

The security field and often the military are characterized by hegemonic masculinity in that all aspects of security and war are based on gendered constructions: war is valorized through its identification with heroism and masculinity while peace is devalued as feminine, weak, and a naïve goal. Aggression, propensity for violence, and courage are attributed to men, while passivity, peacefulness, and motherliness to women. Such stereotypes lead to a close linkage of masculinity with the propensity for violence. Women are made into a vulnerable symbol in need of protection, which forms the basis for the social legitimization of violence. Aggressive notions of masculinity are especially invoked in times of war and become fundamental features of hegemonic masculinity, even if they contradict the ideas and the practice of many men (Connell 2005). Cockburn and Hubic (2002: 120) state, "The nationalist discourse aims at generating a dominating, hyperactive and combative masculinity and a domesticated, passive and vulnerable femininity." Since many feminists believe that gender is a variable social construction, they

claim that there is nothing inevitable about these gendered distinctions; thus, their analyses often include the goal of postulating a different definition of security that is less dependent on binary and unequal gender hierarchies (Tickner 2001).

Enloe (2004) addresses precisely these points when she examines the role of militarized masculinity in creating and maintaining power among warlords. She examines the area controlled by the former warlord, Ismael Khan, in Afghanistan and shows how his sexual politics and US military support for him underlines an urgent need to develop a feminist analysis of the warlord phenomenon. Given the Bush Administration's incorporation of gender oppression into its rationale for bombing Afghanistan and for the war on Iraq, more thorough analysis of the role of hegemonic masculinity in the mechanics of how warlords claim and maintain power is extremely important.

### *1.ii Gendered Impacts of Conflict*

In addition to the exploration of gendered security discourses and international relations theory, feminist scholars also look at the gendered impact of conflict on women. Forced displacement and sexual violence are two impacts that are not inevitable outcomes of conflict but rather are deliberate strategies of many wars that destabilize families and communities. Displacement disproportionately disadvantages women, because it results in reduced access to resources that help women cope with household responsibilities and increased physical and emotional violence. Displacement also increases social exclusion and poverty for women—conditions that are themselves likely to prolong conflict. Forced displacement is frequently used as a *strategy* of war that targets gender relations through family breakdown and social destabilization. Displacement often leads to shifts in gendered roles and responsibilities for both women and men as migration leads to more women becoming heads of households. This has

contributed to changes in the division of labor that have created new opportunities for women but in some respects further marginalize their place in society (El Jack 2003).

Increased sexual violence is another gendered impact of conflict. Several scholars (Baaz & Stern 2009; Bastick, Grimm & Kunz 2007; Ward & Marsh 2006) have looked into the nature and patterns of conflict-related sexual violence. Sexual violence can happen in myriad locations—in homes, fields, places of detention, military sites, and refugee camps—and throughout the continuum of conflict. Perpetrators of gender-based violence range from state armed security forces, paramilitary groups, and non-state armed groups to humanitarian and peacekeeping personnel and civilians. Women and girls are often targeted while performing daily chores, such as collecting food, water, and wood. Women and children have been abducted by armed groups and kept in sexual slavery, and women and men in detention have been raped, sexually mutilated, and tortured.

Throughout history, gender-based violence has been viewed as an inevitable aspect of warfare. However, over the past few decades, scholars have been pointing to the systematic nature of gender-based violence and have argued that gender-based violence is not an inevitable consequence of war, but it can be a deliberate and necessary strategy of the conduct of contemporary wars. Duffield (1994), Mazurana (2005), and Macklin (2004) argue that this type of violence is not simply a by-product of war but is an organic part of how it is waged. Nor is rape primarily a tool of ethnic warfare, although it seems to be a fairly universal and effective strategy of military, insurgent, and non-state armed forces for the control of territory and populations. This begs a gendered analysis of how combatants and those controlling many of today's wars see gender-based violence as part of their strategy.

Gender-based violence is often carried out by fighting forces for the explicit purpose of destabilizing populations, and destroying communities and families through shame and



humiliation. In these instances, armed groups commit public rapes in front of the community, force citizens to witness the rape of their family members, or even force people to commit acts of sexual violence against their own family members (Bastick, Grimm, & Kunz 2007). These acts are what Cynthia Enloe labels “National Security Rape:” the systematic use of gender-based violence by governments and militaries to eliminate perceived threats to their national security and identity. Since women are the symbolic bearers of national identity through their roles as biological and cultural reproducers of the community, these actors use gender-based violence to punish, humiliate, and torture women of enemy communities as a means to destroy the very fabric of enemy society (Baaz & Stern 2009).

Gender-based violence can also serve to quell resistance or displace groups by instilling fear in local communities or in enemy groups. In such cases, women’s bodies are used as a medium to send a message to perceived enemies. Gender-based violence is also used as a means of genocide through forced impregnation, sterilization, or abortion (Ward & Marsh 2006). Also, the impact of gender-based violence has distinct consequences for women and girls including sexual mutilation; sterility; chronic reproductive and gynecological health problems; and marginalization from family and community due to stigma associated with sexual abuse (UN 2002).

Cynthia Enloe has consistently driven home the point that construction of masculinity matters in militarization and with relation to gender-based violence. In her chapter, “All the men are in militias, all the women are victims” (2004), she undertakes a thorough analysis of how Serbian militias used constructs of masculinity to make a 21-year-old worker rape Muslim women as part of his war effort. Her work raises questions about how war leaders define gender relations and gender identities so that fighters accept rape as such a universal strategy, even when it violates cultural norms. Her work is important in both denouncing rape as a war crime and in

finding out why generalized brutal sexual violence is such an important weapon in modern warfare.

However, gender-based violence in conflict varies across cases. Wood (2006) examines why sexual violence takes place to different extents in some conflicts or why it takes different forms in different conflicts (e.g. sexual slavery, torture in detention, indiscriminate versus targeted, public versus private, symmetric or asymmetric). Wood reviews sexual violence in numerous contexts where sexual violence was widespread or systematic, including Bosnia-Herzegovina, where, according to a UN investigatory commissions, “sexual violence was often simultaneous with military action or activity to displace certain civilian populations” (312); or Sierra Leone, where “sexual violence during the war...did not involve explicit ethnic targeting” but was more indiscriminate, as well as “extremely brutal” (314-315). She also looks at several cases where sexual violence shows opposite patterns, including Sri Lanka, where sexual violence “does not appear to be either widespread or systematic” (314); Israel/Palestine, where “sexual violence appears to be extremely limited,” though both sides have carried out violence against civilians (314); or El Salvador during the civil war, where sexual violence was one-sided, and very low in comparison to Bosnia-Herzegovina and Sierra Leone (317).

Wood offers several explanations for the variations in the patterns and nature of sexual violence in conflict. First, war may increase the opportunity to commit sexual violence, because the fighting takes place away from the combatant’s village and its social controls. She explains that *opportunity* also depends on “armed group strategy” and the norms and practices of small units. Second, war may increase the incentive to commit sexual violence, either because fighting increases testosterone levels and leads members of armed group to commit sexual violence, or that patriarchal gender relations in peacetime break down in war, leading men to resort more frequently to violence to enforce gender roles. A third approach to explaining variations in sexual violence is the instrumental argument, which looks at how sexual violence might be

promoted or tolerated by leaders of some armed groups as an effective means toward its goals. Fourth, leaders of an armed group might prohibit sexual violence for various reasons, which may explain the lack of sexual violence in some cases. Wood's analysis contributes valuable insights that discourage academics and policymakers from making assumptions or generalizations about sexual violence in conflict and promotes taking a nuanced perspective for each case.

In order to demonstrate why it is important to incorporate gender-based violence in security and conflict analyses, Hudson et al. (2009) offer empirical evidence that shows the inextricable linkage between the physical security of women and the security of nations. They prove, through statistical analysis, that higher levels of women's physical security exhibit significant and positive association with the level of state peacefulness, the degree to which the state is of concern to the international community, and the quality of relations between the state and its neighbors. They do so using measures of the Global Peace Index (GPI), the States of Concern to the International Community Scale (SOCIC), and the Relations with Neighbors subcomponent of the GPI (RN)—all of which measure how secure or insecure a state is. Additionally, their data finds that the measure of women's physical security is a better predictor of these three variables than are state attributes like level of democracy, wealth, or prevalence of Islamic civilization.

In order to explain their statistical results, they assert that when a society is predisposed to structurally or physically violent patriarchy and does not try to ameliorate gender inequality, dysfunctional models of violence and control diffuse throughout society and are manifested in state security and the state's aggressive behavior. Hudson et al.'s research is important because it shows that if a scholar or policymaker had to choose one variable that could predict which states would be more or less secure, it would be the physical security of women. They conclude, "An account of security that does not take into account gender-based violence is an impoverished

account of security. This assertion does not spring from some dogma of political correctness; rather, this assertion is based on fairly robust, though preliminary, empirical findings” (Hudson et al. 2009: 42).

### *I.iii Gendered Roles and Power Dynamics*

Some studies also explore the impact of armed conflict on gender relations in terms of how gender roles determine vulnerabilities and agency, and how power dynamics between men and women are affected by distinct types of disadvantages that armed conflict imposes. El Jack’s report (2003) on gender in armed conflict explores how gender relations are typically characterized by unequal access to, or distribution of, power. Given that gender discrimination is so prevalent, it influences other dynamics of armed conflict. More specifically, gender analyses in armed conflict highlight the differences between women and men in terms of their gendered activities, their needs, their acquisition and control of resources and their access to decision-making processes in post-conflict situations. Armed conflict exacerbates inequalities in gender relations that existed in pre-conflict periods. During and after conflict, women experience inequality that is derived from dominant understandings of gender roles and are reinforced by notions of hegemonic masculinity.

Conflict analysts often “locate” women primarily in gendered roles as “mothers” or “victims.” These identity constructions of women as victims contribute to the increased violence perpetrated against them. Analyses that maintain women’s invisibility in conflict and security contribute to the concept of “womenandchildren,” the term that Cynthia Enloe uses to describe how we lump those populations together as faceless victims of war. Escobar (1995), Enloe (2004), and Mazurana and Carlson (2004) argue that naming women in such ways leads us to take for granted certain descriptions of and solutions to armed conflict. They argue that analyses

of conflict situations would be improved if women were primarily “located” as actors in both conflict and post-conflict processes. However, in order to begin that kind of analysis, we must make women’s roles visible.

Mazurana and Carlson (2004), in their report about women and girls in Sierra Leone render women in these rebel and paramilitary groups visible by analyzing how girls and young women participated in the war in Sierra Leone and showing how girl soldiers in Sierra Leone fared in disarmament, demobilization, and reintegration (DDR) programs sponsored by the UN and the World Bank. They show that the rebels kidnapped young women and girls because they needed captive “wives” and children in order to maintain their war systems. Many of these women and girls also fought, as well as worked as spies, cooks, health workers, or porters. These women controlled the distribution of loot, supervised operations when their captor-husbands were away, and decided on fighting strategies. As captives themselves, some commanders’ wives also tried to use their power to protect captive girls from sexual abuse by other male combatants.

Much that is written about abducted women and girls in fighting forces simplifies the issue into male soldiers and kidnapped girls who are sexually exploited. Mazurana and Carlson provide insights into how rebel leaders manipulate and use gender in order to make their warfare systems viable, and the effects on those girls and women and their communities both during the conflict and in reconstruction. The study is a good example of the kind of gendered analysis that needs to be done, and it demonstrates why such analysis is so necessary. Their research reveals that the roles that women played in the rebel groups went far beyond being sex slaves, and rather showed that they were essential to the functioning of the war systems. Mazurana and Carlson also reveal how little the females in the rebel forces benefited from DDR programs, compared

with the males, precisely because there had been no gendered analysis of the fighting forces by those who planned and implemented the programs.

Stereotypical perceptions of men and women's roles in conflict are that men fight and women are the supporters, but the reality is that women make up the majority of civilian casualties and suffer due to a breakdown in social structures. Additionally, though several women's initiatives are cited as evidence that women are inherently more peaceful and nurturing than men, research has challenged the so-called peaceful nature of women by examining their involvement in national struggles, their support of armed conflict, and their contributions to war and militarism in general (El Jack 2003). However, their active role in conflict does not diminish the discrimination or violence they face due to unequal power structures that govern their relations with men. Not only do we need to understand women's diverse roles in conflict in order to deconstruct gender stereotypes, but also so that policies and programs are more sensitive to and provide more support for their needs, especially post-conflict. This is necessary to increase women's security post-conflict, and in turn—as we see from Hudson et al.'s analysis—increase overall security of the state or community.

#### *I.iv Post-Conflict Agency and Inclusive Security*

Even post-conflict reconstruction is gendered. Bennett et al. (1995) explain that peacebuilding is generally perceived to be the “softer” or feminized side of post-conflict reconstruction. If women are associated with anything at all in post-conflict reconstruction, then it tends to be in peacebuilding activities such as primary health care delivery, counseling and education services, or assistance with the provision of basic needs or income generation. Conversely, peacekeeping is highly masculinized and militarized. Men's involvement in peacekeeping involves patrolling streets and borders, maintaining control and protecting people,

primarily “womenandchildren.” This interpretation of peacekeeping and peacebuilding as distinct and separate elements, where women are protected and men are protectors, misrepresents the reality of men and women’s roles, because women are also active as peacekeepers in the military and men are part of peacebuilding activities. Moreover, these elements are not separate but intersect in ways that result in distinct injustices that reflect unequal power in gender relations. There is a persistent masculine undervaluing of women and the feminine, while politics, reconstruction, and “soldiering” are seen as “men’s work.” This lack of cooperation between the predominantly male peacekeepers and the female peacebuilders rendered gender-specific concerns an even lower priority and diminished the chances for more equal post-conflict outcomes.

These stereotypical perceptions of women’s roles and responsibilities result in exacerbated gender inequalities post-conflict. Organizations and states persistently fail to enforce international laws designed to promote gender equality or fail to create gender-sensitive initiatives and policies that address their vulnerabilities. Women are often excluded from these decision-making structures, because generally, women are thought to be lacking in expertise to function in the public arena. Tickner (2001: 37) writes, “Women’s voices have rarely been granted legitimacy in matters of war and national security, they have been stereotypically associated with idealized versions of peace... the term *woman* is antithetical to our stereotypical image of national security specialists. Women have rarely been security providers in the conventional sense of the term, as soldiers or policymakers.” Many feminist security scholars try to redefine security and post-conflict reconstruction in an attempt to move beyond these unhelpful dichotomies and contribute to a more comprehensive understanding not only of security issues, but also of women’s specific needs.

One strategy that feminist security scholars advocate in order to ensure that gender inequality is not exacerbated post-conflict is inclusive security. Hunt and Posa (2001) discuss the concept of inclusive security, an approach to security that emphasizes women's agency rather than their vulnerability. They argue that women are crucial to post-conflict reconstruction since they are often at the center of the community and have local knowledge about the conflict and the culture. Women have been able to bridge the divide even in situations where leaders have deemed conflict resolution futile in the face of so-called intractable ethnic hatreds. They point to Sudan, where women working in the New Sudan Council of Churches conducted their own version of shuttle diplomacy and organized the Wunlit tribal summit in February 1999 to bring an end to hostilities between the Dinka and Nuer peoples. As a result, the Wunlit Covenant guaranteed peace between the Dinka and the Nuer, who agreed to share rights to water, fishing, and grazing land, which had been key points of disagreement. Additionally, Sudanese women worked closely with tribal chiefs and relief organizations to establish a system allowing women to pick up the food for their families, a task generally reserved for men who often did not distribute it to their families. Ironically, women's more common status as second-class citizens has been a source of empowerment, since it has made women adept at finding innovative ways to cope with problems. Often through moral suasion, local women have influence where outsiders, such as international human rights agencies, do not. This will be evident in the Turkana case, where women have been successful in negotiating with raiders because of the respect given to women in their society.

However, inclusive security is not just about including women, or "add women and stir;" as we will see in the Cauvery River case, simply including women at the table will not necessarily create gender-sensitive policies and programs that address women's specific needs



and vulnerabilities. In order to ensure gender equality and to overcome problems of marginalization and under-representation, policymakers have begun to integrate gender concerns and gender issues into mainstream policies, programs, projects, and institutional structures through gender mainstreaming. There are two prevailing definitions for gender mainstreaming:

Gender mainstreaming is the (re)organization, improvement, development, and evaluation of policy processes, so that a gender equality perspective is incorporated in all policies at all levels and at all stages, by the actors normally involved in policy-making. (Definition of the Group of Specialists on Gender Mainstreaming at the Council of Europe, qtd. in Dankelman 2010: 12)

Mainstreaming a gender perspective is the process of assessing the implications for women and men of any planned action...It is a strategy for making women's as well as men's concerns and experiences an integral dimension of the design, implementation, monitoring, and evaluation of policies and programs...so that women and men benefit equally and inequality is not perpetuated. The ultimate goal is to achieve **gender equality**. (Definition of Economic and Social Council, qtd. in Dankelman 2010: 12, my emphasis)

Two key aspects of gender mainstreaming are (i) gender analysis, to understand the socially constructed roles of men and women and how they shape social processes; and (ii) gender capacity building through training and education in order to strengthen women's skillfulness and competence to create political and social change (Moser & Moser 2005). Gender mainstreaming is vital because it encourages the creation of policies and programs that both protect and empower women's participation in decision-making. Additionally, it aims to ensure that post-conflict programs, including DDR, are sensitive to women's needs, which Mazurana and Carlson exhibited as necessary in their evaluation of programs in Sierra Leone.

One of the most substantial successes in the realm of gender mainstreaming was the passage of UN Security Council Resolution 1325 on Women, Peace, and Security. Adopted in 2000, UNSCR 1325 calls on member states to incorporate a "gender perspective" and increase

the equal participation of women in the “prevention and resolution of conflicts” and in the “maintenance and promotion of peace and security.” It calls upon parties involved in armed conflict to abide by international laws that protect the rights of civilian women and girls and to incorporate policies and procedures that protect women from gender-based crimes such as rape and sexual violence. However, despite efforts toward gender mainstreaming, in their article “Is there life after gender mainstreaming?” Rao and Kelleher (2005) point to the fact that while women have made many societal gains in the last decade, the successful promotion of women’s empowerment and gender equality are not institutionalized yet in the day-to-day routines of states, agencies, and other institutions. The conclusion will address some of these issues, exploring strategies for gender mainstreaming as well as the challenges associated with those strategies.

Furthermore, Greenberg and Zuckerman (2009) introduce three dimensions by which gender must be incorporated in post-conflict reconstruction: (i) women-focused activities, (ii) gender-aware programming, and (iii) strategic attention to transforming gender relations in order to heal trauma, build social capital, and avoid further violence. They also explore challenges to each of these dimensions. Dimension one involves improving political rights, property rights, livelihood opportunities, education, and training. The major challenge for women-focused activities is to achieve broad understanding among governments that focusing on gender disparities is not optional, but should instead be a priority and an integral component within strategies for building peace.

Dimension two relates to gender mainstreaming: systematically identifying and addressing gender issues that may obstruct or improve efforts to build peaceful post-conflict societies. Unlike dimension one, which focused on activities designed especially for women, this

dimension considers how overarching policies and mainstream programs typically fail to include women effectively or to reflect gender dynamics in their design and implementation.

Dimension three rests on two hypotheses: (i) without gender equality, it is impossible to achieve economically and physically secure societies without structural violence; (ii) without transforming gendered responsibilities and values, it is impossible to overcome conflict legacies for sustainable reconstruction. The particular challenge of this dimension is to change values and behaviors.

This section has explored the gender dimensions of security and conflict, but where does the environment fit in? The next section will investigate the gender dimensions of the environment with the aim of providing justification for why gender is an important analytical lens for environmental conflict.

## **II. Gender and the Environment**

As we saw in the previous chapter, environmental change poses a large threat to security. However, this threat not only has an impact on the security of nations, but also has an increasing impact on human wellbeing and security. The 2007-2008 Human Development Report: Fighting Climate Change: Human Solidarity in a Divided World concludes that environmental change threatens progress toward development and progress toward meeting the 2000 UN Millennium Development Goals (UNDP 2007). Environmental change is an ecological and humanitarian issue, where the livelihoods of various communities are threatened and their security is at stake; environmental change is not just a technical subject, but is at the center of social issues as well. Therefore, a human approach is necessary when analyzing situations where environmental change is occurring. Furthermore, if people need to be at the center of analysis, then there is an urgent need to understand these changes and their impacts from a gender perspective, and to

draw lessons from that understanding, especially when looking at the challenges and opportunities environmental change presents in the struggle for gender equality.

This section explores why environment is a gender issue. It begins with an overview of literature that relates gender to the environment on a theoretical basis. The section continues with an explanation of the socially constructed roles and responsibilities of men and women with regard to the environment, and how these roles contribute to gender-specific impacts and vulnerabilities due to environmental change. The conclusion of this section explores the opportunities created for women's agency with regard to environmental change and why it is important to include women in policies and programming and implement gender mainstreaming initiatives.

### *II.i Women and Environment: A Theoretical Overview*

Scholars have explored the relationship between women and the environment for decades, specifically through eco-feminism, a phenomenon that emerged in the 1970s and 80s. Eco-feminists believe that there is an emotional relationship between women and the environment. They argue that women are closer to nature than men and many see a connection between male domination of nature and male domination over women. In one of the earliest works to examine this relationship, Sherry Ortner (1974) analyzes the secondary status of women in society as a universal phenomenon, based on the cultural assumption that women are closer to nature than men, with men seen as occupying the "higher ground" of culture. She defines the concept of culture as "the process of generating and sustaining systems of meaningful forms (symbols, artifacts, etc.) by means of which humanity transcends the givens of natural existence" (72). In other words, culture symbolizes the products and technologies that people (or men)

create in order to overcome or assert control over nature.<sup>4</sup> Critics assert that her arguments strengthen the dichotomy between men and women and ignore cultural diversity. Later, in her essay “Gender Hegemonies” (1990), she acknowledges that her critics were right and develops a more complex picture of dominance, seeing societies in which women have strong roles.

Ortner focuses on women’s subordination in society, but does not question the social attitude to nature itself as being a lower value than culture, as others like Carolyn Merchant do. In her book, *Death of Nature: Women, Ecology, and the Scientific Revolution*, Merchant (1980) argues that there is a parallel between the degradation of nature and the oppression of women. One of the major causes, she argues, was men’s changing valuation of nature during the Enlightenment, when they began seeing nature as something to be used and exploited. Similarly, women were seen as having inferior positions in communities and households, and were something to be used and exploited.

Vandana Shiva (1988) argues that paternalistic, colonial forces and values often have marginalized women’s knowledge. It is male dominated development that has caused many social and environmental problems, and therefore women may be the answer to solving many of these problems. She saw the association between men/women and culture/nature as a pervasive ideology in many societies and recognized it as the ideological underpinning of gender inequality because in many of these societies culture was valued over nature, and thus men over women.

Several scholars have criticized the eco-feminist doctrine. Braidotti (1993) and Agarwal (1998) underline that eco-feminists primarily have focused on ideological, essentialist arguments and have failed to address power and economic differences as important sources of dominance.

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<sup>4</sup> This differs from the concept of culture discussed in the context of gender-based violence, whereby women are targeted specifically because of their role as the reproducers of culture. In that context, culture refers to the attitudes, behaviors, and rituals of a particular group that continue through generations, and are figuratively and literally reproduced.

They argue that many eco-feminists do not differentiate women themselves by class, ethnicity, or race, nor recognize that concepts of nature, culture, and gender vary across different cultures and locations. Agarwal (1998) insists that the link between women and the environment should be seen as shaped by a given gender and class/caste/race organization of production, reproduction, and distribution.

Critics of eco-feminism warn of over-simplification of relationships between women and the environment and against the dangers of comparing female bodies with Mother Nature (the dangers of which will be evident in the Cauvery River case study). However, the realities in which many women and men live show more and more clearly that specific differential roles, rights, and responsibilities of men and women influence their experiences in managing and maintaining the physical environment (Dankelman 2010). Based on such observations, the specific nexus between gender and the environment has been explored by scholars and activists. Many of these studies show that women's positions and roles have been seriously neglected, both in the understanding of vulnerabilities, and in the practice of environment and management of resources.

### *II.ii Gender Roles and Gendered Impacts of Environmental Change*

People's interactions with the natural environment have changed over time, and scholars have highlighted the gender-specific roles, rights and responsibilities of people in their environment since the 1970s. As many studies indicate, women and men worldwide play diverse roles in the use and management of natural resources at a local level and carry diverse responsibilities and rights, including access to and control of resources.

Menon (1991) introduces the concept of "work" as a determining factor for gender dimensions in environment. She describes work as active, labor-based interactions of human

beings with the material world. Historically, this interaction has been based upon the natural environments in which communities lived, since natural resources and processes represented the material world on which humans depended, and such resource-dependent livelihoods are still abundant throughout the world today. Menon distinguishes the following major areas of human work in those communities: food procurement; the collection of water, energy sources, and fodder; childbearing and rearing; maintenance of basic health standards; and collection of medicinal plants. Women play a predominant role in performing these tasks and thus they interact directly with the natural environment. Based on these interactions, Davidson et al. (1992), describe the specific roles of women in local communities as providers of “primary environmental care.”

In her book *Male and Female*, Margaret Mead (2001), underlines that “traditional” economies show a division of labor along gender lines. Gender-specific divisions of labor related to the environment are still visible in current societies: women and men perform different tasks and carry diverse responsibilities. However, in many cases, women are disadvantaged as compared to men with regard to land and water rights, and rights over other natural resources. Their access to such resources often depends on their relationships with other men in the community. Decision-making power of local women is also limited in comparison to that of men. So it is in their division of labor, responsibilities, and rights that relationships with the environment and natural resources are gendered, and power relationships are important determinants in that respect.

Furthermore, in their book *Women and Environment in the Third World: Alliance for the Future*, Dankelman and Davidson (1988) focus on women’s roles and positions in land use, water management, forest use, energy provision and use, urban development, and conservation.

They conclude that it is women's diverse reproductive and productive roles in these areas in the household and at the community level that are impacted adversely by environmental changes. Floods, droughts, cold and heat waves, cyclones and hurricanes, and higher average temperatures all have major impacts on people's lives and livelihoods, and particularly on those for which women are responsible. In most cases, when resources are scarcer, production goes down, prices go up, and conflicts regarding resources increase—this all weighs heavily on women's shoulders and decreases their human security.

Environmental change is not gender neutral and often magnifies existing inequalities and reinforces the disparity between men and women in their vulnerability and ability to cope with environmental change. Disruption of the ecological sphere also destabilizes the social sphere as the degrading environment drives increased poverty and inequity. Environmental change threatens to increase existing inequalities, and gender inequality is the most pervasive of these. Women's access to and control over natural resources generally decreases, they often lose their livelihoods, and they slip deeper into poverty, becoming more marginalized. Because of their roles enumerated above, women also have to put more time and energy into meeting their families' needs and their workloads increase as resources become harder to find. They have to walk longer distances to secure fuel, fodder, water, and other household resources; in many countries experiencing water stress, women walk one to four hours per day to fetch water. Household members also have higher risk of exposure to diseases because of polluted water and women are primarily the ones who have to tend to the sick in their families.

Additionally, as resources become scarcer, men often migrate and leave women to take over their work. Although there tends to be a dramatic increase in the number of female-headed households during times of environmental stress or conflicts, women are often denied the right to



land ownership and access to natural resources. Without ownership or legal rights, women are systematically excluded from decision-making and it creates tremendous pressure on their workloads (Dankelman 2008; Dankelman 2010; Skinner 2011). This says nothing of the fact that in many societies, where women constantly bear children, the physical burdens and exhaustions of pregnancy, childbirth, and post-parturition are exacerbated by the increased strains put on women in times of environmental stress.

In instances of resource scarcity, girls often have to drop out of school to help their mothers with the increased workload. This decreases future opportunities as it results in loss of access to sources of production, technology, and training and leads to a breakdown of income-generating opportunities due to lack of time and resources. The UNDP Human Development Report (2007: 1) concludes,

Loss of livelihood assets, displacement and migration may lead to reduced access to education opportunities, thus hampering the realization of Millennium Development Goal 2 (MDG2) on universal primary education. Depletion of natural resources and decreasing agricultural productivity may place additional burdens on women's health and reduce time for decision-making processes and income-generating activities, worsening gender equality and women's empowerment (MDG3).

Increased workloads decrease women's ability to participate in politics and local movements or to organize against environmental degradation. Therefore, while women are the most concerned with the impacts of environmental change, they often are in weaker positions to do anything about it.

Women also have specific vulnerabilities to natural disasters, which increase with environmental stress and climate change. They often have less access to information and resources to help them prepare or cope afterwards. Additionally, men are often first to migrate, while socio-cultural norms and responsibilities often prevent women from migrating; increased

female-headed households caused by male migration also increases women's responsibilities and vulnerabilities during natural disasters. The disadvantaged position of women in many societies means greater difficulty coping with disasters because there are often inadequate assets available for women to manage the consequences; disaster relief efforts also often pay less attention to women's needs, particularly reproductive and sexual health needs (Dankelman 2008; Dankelman 2010; Skinner 2011).

A study conducted by the London School of Economics, the University of Essex, and the Max-Planck Institute of Economics analyzed a sample of 141 countries in which natural disasters occurred between 1981-2002. The main findings were: 1. Natural disasters lower the life expectancy of women more than of men; 2. The stronger the disaster, the stronger this effect on the gender gap in life expectancy; 3. The higher the socio-economic status of women, the weaker this effect on the gender gap in life expectancy. They concluded that it is the socially constructed gender-specific vulnerability of women and men that leads to the relatively higher female disaster mortality rates compared to those of men (Neumayer & Plümper 2007). Therefore, vulnerability to natural disasters, a recurrent consequence of increasing climate change, differs for men and women because of disparities in their access to certain resources and information, and also differences in their socially constructed roles and responsibilities. In sum, environmental stress reinforces social dysfunction, poverty, and inequality among men and women. The consequences of environmental change are not only relevant to the scientific field, but also at a social level.

### *II.iii Women's Agency, Coping Strategies, and Inclusion*

As with conflict, women are often perceived as victims of environmental stress and disasters. This is problematic because environmental responses and strategies often reproduce

and reinforce gender stereotypes, with women as a homogenous group of “victims” and men as a homogenous group of “heroes.” However, women are also positive agents of change. Because of their work on the land and dependency on natural resources, many women have acquired knowledge of local circumstances and changes and have created coping mechanisms and adaptation strategies that can mitigate environmental impacts. Too often, planners and decision-makers do not consider these contributions adequately; however, if adaptation to and mitigation of environmental change is to be successful, women must be included in decision-making structures, and policymakers must consider women’s knowledge and contributions.

According to the Food and Agriculture Organization (FAO), rural women are the main producers of the world’s staple crops (rice and wheat) and their contribution to secondary crops such as vegetables is even greater. In fact, women make up 51 percent of the agricultural labor force (FAO 2007). Through their daily work, women have developed a profound knowledge of the native plants and animals, as well as indigenous varieties of crops. Additionally, in many societies, women are exclusive suppliers of water for household use: they collect water for cooking, bathing, cleaning, and maintaining health and are also responsible for provision of water for animals and crops. They know where to collect water and how to draw, transport, and store it. Therefore, they have acquired specialized knowledge in the area of local water management and use (Dankelman 2010). In studies from areas where flooding was problematic, women’s adaptation, coping strategies, and mechanisms included saving assets, adapting agricultural practices by changing crops to varieties that are drought resistant, energy-saving, dietary adaptations, promoting alternative healthcare and medicine practices, organizing collective action, and creating networks of women and self-help groups (Dankelman 2010).

Additionally, as highlighted by Enarson (2000) and O'Brien (2007) natural disasters can also provide women with an opportunity to challenge and change their gendered status in society. Women have been willing and able to take an active role in what are normally considered men's tasks in responding to disasters and have proven effective in mobilizing the community to respond to change. Despite the fact that women usually have fewer assets than men to recover from natural disasters, and usually do not own land that can be sold to secure income in an emergency, women worldwide are starting to adapt to a changing climate and can articulate what they need to secure and sustain their livelihoods more effectively.

This shows that there is ample room for adequate policy interventions to support women, and women can be instrumental in environmental policymaking and contribute to security. However, women's decision-making power and participation in important governing bodies are still limited, despite gender mainstreaming efforts. The new Gender Action plan of the United Nations Environment Programme (UNEP) alerts that the little progress which has been achieved is in danger of reversal and highlights that the environment sector in particular "is among those in which gender mainstreaming has taken place in a fragmented, superficial and inconsistent manner [and that] environmental policies that do take gender into account have only been partially implemented" (UNEP 2006: 4). Dankelman (2010) argues that in arenas that deal with the environment, there is still too limited reference made to the gender dimensions. However, she cites many examples that show that if women participate in environmental action, planning and decision-making, they contribute valuable knowledge, experiences, and perspectives, and they can take on more important leadership roles.

It is important, however, to remember that participatory approaches are not intrinsically gender-aware and inclusive. If not sensitively designed, they can exclude or marginalize women

by allowing more powerful male voices to dominate, or by failing to take into account specific gendered needs. As with conflict, environmental policies cannot just “add women and stir;” responses must avoid being gender-blind so that policies and strategies address the needs of women and transform gender relations. Skinner (2011) argues that as well as representing a challenge to women’s equality, environmental change can also offer an opportunity to transform existing power imbalances. She advocates for an approach in which women and men have equal voices in decision-making and governance processes, and are given equal access to resources. This way, both men’s and women’s concerns will be taken into account. She writes that there is potential for newly emerging institutions and processes to work in innovative, gender-aware ways that tackle the root causes of inequality and by doing so, contribute to the realization of greater gender equality, women’s rights, and social change.

### **III. Bridging the Gap: A Gender Analysis of Environmental Conflict**

The previous two sections have provided a gendered lens of both conflict and environmental change. There are several parallels between the two: women have specific vulnerabilities in both conflict and in relation to environmental change, as well as local knowledge to contribute to conflict resolution and environmental policy. Moser and Moser (2005) identify that a gender analysis is an important instrument of gender mainstreaming, because it helps to identify and understand the socially constructed roles of men and women and how they shape social processes and relations. A gender-based analysis can challenge the assumption that conflict and environmental change—and the subsequent policies and programs—affect everyone in the same way regardless of their gender. Gender analysis is critical in overcoming gender bias or gender blindness in research or policymaking. For this reason, it is important to include a gender analysis of environmental conflict specifically. Much research

highlights the negative effects of conflict and environmental change on gender relations and the way it can exacerbate existing inequalities and create new vulnerabilities; however, little is known at this point about the gender dimensions of environmental conflict.

This thesis postulates that any understanding of environmental conflict needs to look at the human dimensions and recognize that its dynamics are not gender neutral. Analyses of environmental conflict need to look at gender aspects in order to prevent negative consequences for gender equality. This means taking into account the underlying power differentials between women and men and examining how men and women are impacted differently, and how the types of responses that are developed will impact these gender relations. Studies need to recognize that gender equality can significantly contribute to the resolution of these conflicts, as women's rich contributions in this area can have positive impacts.

### *III.i The Analytical Framework*

Davids and Van Driel (2002) distinguish different dimensions of gender that constantly interact with each other: the individual (the way an individual expresses her identity), the symbolic (cultural texts, representations, stereotypes), and the structural/institutional (distribution of resources, political power, rights). Similarly, in finding a methodology to analyzing gender and conflict, Reimann (2002) outlines three similar dimensions of gender to be mapped in conflict analyses: individual gender identity, symbolism of gender, and structure of gender.

*Individual gender identity* refers to the individual experiences of people based on their gender, which is usually a product of social norms and their socially constructed roles. The central question is: "How do I define myself as a man or woman in the society in which I live?"

*Symbolism of gender* refers to stereotypical gender dichotomies, which have little in common

with actual sexual differences. The central question is: “How are masculinities and femininities defined in the given society?” *Structure of gender* refers to the organization and institutionalization of social action in the public and private spheres. The analytical focus is on theorizing about hierarchical power structures and taken-for-granted power distribution (Reimann 2002).

The three dimensions are highly interdependent. The individual gender identity is a fluid construction derived from certain notions of femininity and masculinity (the gender symbolism), which, in turn, are very much based on the distribution of labor in the public and private sphere (the gender structure). The same holds true with the definition of the gender symbolism and the gender structure: certain notions of masculinity and femininity are highly dependent on the distribution of labor in the public and private sphere (the gender structure) and the socially expected behavior and interpretation of social norms (the individual gender identity). The distribution of labor in the public and private sphere (the gender structure), in turn, affects both the construction of certain notions of masculinity and femininity (the gender symbolism) and the socially expected behavior of a man or a woman (the individual gender identity).

Individual gender identity, gender symbolism, and gender structure are interdependent within any particular cultural setting: each category takes different forms across cultures. These three categories of gender, and their differing patterns across societies, imply that gender is not static; rather, the concept is complex and changes in different sets of social and cultural relationships. Utilizing these three categories avoids limiting the analysis to one conception of gender.

Reimann argues that in order to create “gender as an analytical category,” any gender-sensitive approach needs to take into account all three gender dimensions. Thus, in what follows,

“gender as an analytical category” is used to analyze two case studies—the Cauvery River Dispute in India and pastoralist conflicts in Turkana, Kenya—in order to reveal the significance of gender in environmental conflict. Each case follows a modified version of Reimann’s methodology.

First, *individual gender identity* looks at how individuals are impacted by both environmental stress and conflict based on their socially constructed roles and responsibilities. This is dependent on perceptions of masculinity/femininity (gender symbolism) in each case, and highlights the specific needs of individuals based on their socially constructed roles and social norms.

Second, *gender symbolism* not only includes an explanation of how the culture in question defines masculinity and femininity, and thus how roles and responsibilities are understood, but also the relation of those perceptions to the resources that the parties are fighting over. Exploring the gender symbolism in relation to natural resources is of particular interest here because it may shed light on patterns of violence.

Third, *structure of gender* looks at how structural barriers at an institutional or community level prevent women’s participation, as well as how structural opportunities and gender mainstreaming transform gender relations and allow for women’s contributions to both environmental management and conflict resolution. These structural components depend heavily on both the socially constructed roles and responsibilities of women (individual gender identity) and the conceptions of masculinity and femininity (gender symbolism) in each case.



### **3. The Cauvery River Dispute**

This chapter examines the significance of gender in the Cauvery River dispute in South India, an ethno-political conflict between the two states of Tamil Nadu and Karnataka. It begins by tracing the history of the dispute and the roots of conflict as they relate to environmental change. Subsequently, the chapter explores the gender dimensions of environmental change and conflict in South India using the three conceptual lenses: individual gender identity, gender symbolism, and structure of gender. The chapter concludes with an examination of how gender mainstreaming can be more substantially integrated into decision-making bodies and policies in order to improve water management and prevent violence in the future.



Map of Cauvery River Basin. Source: BBC News

#### **I. Background**

In December 1991, the Cauvery Water Dispute Tribunal released an interim order regarding the amount of water Karnataka must release to Tamil Nadu. This resulted in violent

riots between the Tamils and Kannadigas in Karnataka.<sup>5</sup> On December 13, the Karnataka government ordered the closure of all schools and colleges and there was a massive procession in Bangalore, the capital city, and stray incidences of civilian violence. Over the next three days, violence escalated, including arson attacks and the eviction of people from their homes, especially Tamils living in slum areas. By the end of December, the conflict had spread to parts of Mysore and Mandya districts and to districts bordering Tamil Nadu. In this second phase of violence, Tamils were beaten, tortured, raped, and murdered; their houses were looted and burned. Fearing for their lives, Tamils fled Karnataka to Tamil Nadu or the neighboring Kerala State with only what they could carry (Guhan 1993).

The third phase of violence began in the beginning of January when retaliatory violence spread to Tamil Nadu. In this phase, Kannadiga homes were attacked and Kannadiga landowners were killed, beaten, or driven out of Tamil Nadu. By the end of January, violence diffused after the governments of each state called for an end to the violence and police were able to better control the situation (Guhan 1993; Swain 1998). According to Tamil Nadu Chief Minister Jayalalithaa and the Indian People's Human Rights Commission, 100,000 Tamils fled Karnataka and they lost over three billion rupees worth of property. It was estimated that about fifty Tamils were murdered and many more beaten, stabbed, tortured, or raped (Guhan 1993; Nalankilli 1998). The following sections will show how this violent incident is rooted in a historical rivalry between Karnataka and Tamil Nadu, and its effects span over twenty years. More recently, it has been exacerbated by climate change trends and environmental changes that will only continue to increase stress. There are also important gender implications of the violence and for the future of this dispute.

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<sup>5</sup> Tamil refers to the ethnic group that originates from Tamil Nadu and Kannadiga refers to that from Karnataka, however there are members from each group that live in either state.

### *1.i The Cauvery River and a Brief History of the Dispute*

The Cauvery River is the fourth longest river in southern India and lies between the Indian states of Karnataka and Tamil Nadu and is used primarily for agricultural purposes. Sixty percent of Karnataka's population is engaged in agriculture as farmers or laborers and seventy percent of Tamil Nadu's population is engaged in agriculture, highlighting the importance of this river in both states. The major crops grown in the Cauvery region are rice, sugarcane, ragi, jowar, and cash crops such as coffee, pepper, and bananas. The staple crops such as rice and sugarcane, as well as the cash crops, are water-intensive in cultivation and therefore the Cauvery's waters are important to farmer's livelihoods (Ravindranath & Bala 2011). Reservoirs from the Cauvery are mainly meant for agricultural purposes, but research shows that they also provide other socioeconomic uses and ecological functions that benefit sectors of the society beyond farmers. In their research on local perceptions of the use of Cauvery waters, Reyes-Garcia et al. (2011) found that the river is a repository of religious symbolism and is a central element of village culture. Water from the river is also used for economic purposes such as fishing, and is available to the entire population for domestic uses, such as washing clothes, bathing, and fresh water for household use.

The Cauvery River dispute is an environmental conflict, as it is the result of diverging positions over the use of a natural resource. The dispute over this river can be traced back to an agreement made in 1892, which specified that Karnataka could not construct new irrigation systems and gave Tamil Nadu veto power over all irrigation projects. Tamil Nadu was able to enact such restrictions on Karnataka because it had acquired rights over Cauvery waters by prescription from a medieval ruling dynasty in South India and Karnataka had no choice but to accept this arrangement. In 1909, Karnataka proposed the construction of the Krishna Raja Sagar

(KRS) dam across the Cauvery that would help them with their agricultural production. Tamil Nadu, fearing that this would affect the Thanjavur delta, protested against the construction of the dam. From the second half of 1921 to early 1924, exchanges were pursued through correspondence and technical meetings. But during the course of these negotiations, no consensus could be reached (Richards & Singh 1996).

In 1924, an agreement was finally reached that Karnataka was entitled to extend irrigation and Tamil Nadu would approve of the construction of the dam. In 1972, substantive dam development and over-utilization of the Cauvery waters resulted in a collapse of this fifty-year old agreement. This led to continued political disputes and negotiations until the Cauvery Water Dispute Tribunal was created in June 1990 to address the disputes (Richards & Singh 1996). The Tribunal heard arguments from both states, and reached the decision that Karnataka must release 205 thousand million cubic feet (TMCft)<sup>6</sup> of water from the Cauvery reservoirs to Tamil Nadu on a monthly basis. This interim order resulted in the worst episode of violence in the history of this dispute, as enumerated above.

### *I.ii Environmental Change and the Current Situation*

The effects of environmental change have exacerbated this water conflict, as changes in precipitation patterns and overuse of the resource has led to inadequate water supplies and growing tension in the region. Failed monsoons in 1995 reignited debates between the two states over water access. Between 1995-1996, farmers in Tamil Nadu did not receive enough water for their fields and crops began to wither, resulting in food insecurity and inflamed tempers. They began to threaten Karnataka with violence, which transformed into aggressive protests that ended in several deaths. As a response, students from colleges in Bangalore, the capital of Karnataka,

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<sup>6</sup> TMCft is the unit used to measure volume of water. 1 TMCft = 28,316,846,592 liters

rioted, smashed windows of Tamil Nadu government buildings, and attacked Tamil populations. The violence continued when officials from Karnataka threatened to block any release of water to Tamil Nadu. The route of water flows through several dams before reaching the delta regions of Tamil Nadu. Water is released from the KRS dam toward Mandya, Mysore, and Bangalore for drinking purposes and then goes through subsequent dams that release to Tamil Nadu. Farmers in Mandya besieged the area around the dams as a precautionary measure to assure that no water was released. Subsequently, Tamils attacked Kannadigas in their state and vehicles with Karnataka license plates entering or leaving Tamil Nadu were burned (Pereria 1998).

In July 2002, due to a continuous three-year drought, Karnataka was unable to release even three TMCft of water because all four of its reservoirs were low and rainfall had been inadequate. Because of the drought, neither state received enough water for farming and household purposes. The problem was complicated by increasing agricultural development in Karnataka, which required more water-use as water became scarcer (Economic and Political Weekly 2002). Here, we see both the effects of climate change (unexpected drought), as well as non-climate related changes as a result of human activity (overuse of water). For this reason, the term environmental change is used to describe the situation in Tamil Nadu and Karnataka, as periods of tension take place both before the climate change era—when researchers and policymakers began to understand the effects of climate change—as well as after.

These dynamics have the potential to worsen, as climate change projections for the Cauvery River (2021-2050) are not positive. During the monsoon season, the percentage decline in rainfall is projected to be twenty percent for all districts in the Cauvery Basin by 2021. Similarly, rainfall is projected to decrease by twenty percent for the post monsoon season (Ravindranath & Bala 2011). Additionally, overall decreases in evapotranspiration and increases

in runoff due to climate change is projected at fifty percent in the Cauvery basin, which could be a cause of concern for the nearby districts. These projections imply that the average water yield will decrease greatly in the Cauvery basin in the next ten years, which will affect the crops cultivated in that region (Ravindranath & Bala 2011). Since a large percentage of the population of both states is dependent on agriculture for their livelihoods, and many of the staple crops are incredibly water-intensive, increasing water stress in the region is of great concern to farmers, as water scarcity will impact their livelihoods and increase food insecurity in the region.

Increased water stress and food insecurity has the potential to once again excite violence in the region. In October 2012, protests reemerged in the Cauvery basin district of Karnataka for several days after the Karnataka government started releasing 9,000 cusecs of water to Tamil Nadu. Chief Minister Jagadish Shettar said that the decision to release water was unavoidable and Karnataka could not go against the Supreme Court order asking the state to adhere to the directions of the Cauvery Water Dispute Tribunal. Groups of farmers forced their way into Cauvery water pumping station in Mandya district and switched off the pumps, preventing water from flowing to Tamil Nadu. Over 5,000 Karnataka activists and farmer groups laid siege to the KRS dam. Additionally, police took about one hundred people into custody after they squatted on tracks and detained the Mysore-Shirdi express at Gejjalagere village. Counter protests have erupted in Tamil Nadu as water releases continue to be threatened and several farmers in both states have committed suicide (NDTV 2012).

Furthermore, on February 20, 2013, the Cauvery Water Dispute Tribunal issued what is supposed to be the final notification regarding the sharing of waters between Tamil Nadu and Karnataka. The award gives the majority of the water (419 TMCft) to Tamil Nadu, while Karnataka is allotted 270 TMCft. The Karnataka state government is worried about the impact

this will have on Bangalore and drinking water requirements throughout the state. On the day of the notification, at least seventy people were arrested for protesting at the Bangalore International Airport and protests continue to erupt around the state (Sharma 2013; Sharma et al. 2013).

The Cauvery dispute is difficult because it requires negotiating the allotment of water from a heavily used river, involving difficult adjustments as environmental change takes effect. Tamil Nadu as the lower riparian fears a disruption of patterns of irrigation and a related way of life that have a long history; additionally, it will become more and more vulnerable as it depends on diminishing flows as a result of both climate change and increased upstream development. Karnataka as the upper riparian feels that it should not be prevented from using the waters that flow through the state for the purposes of development merely because the lower riparian has a history of irrigated agriculture; moreover, as water yield decreases in the coming years, Karnataka releasing the amount of water mandated by the Tribunal may be at the expense of not only its economic development, but its own people's security (Guhan 1993). The current protests have not yet spiraled into violence as they had in the 1990s, but there is potential for renewed violence. In Ted Gurr's words (1970: 13),

The primary causal sequence in political violence is first the development of discontent, second the politicization of the discontent, and finally its actualization in violent action against political objects and actors. Discontent arising from the perception of relative deprivation is the basic, instigating condition for participants in collective violence.

Therefore, as citizens of each state increasingly see themselves as deprived, the potential for violence increases.

These dynamics can be better understood through Homer-Dixon's model of three different types of scarcity. First, excess use of water for irrigation and urbanization as well as

population growth has made demand exceed supply. Second, decreased supply due to reduced rainfall and increases in rainfall irregularity have exacerbated this gap. Third, unequal distribution of water between the two states results in structural scarcities. The intersection of these three types of scarcity leads to resource capture, as each state attempts to secure resources that may become more scarce in the future. As state elites try to manipulate policies in their favor, social grievances and fear of losing livelihoods increase, and so too does the likelihood of violence. Additionally, as Dinar (2011b) points out, asymmetries between the two riparians (Karnataka with the advantage of geography, and Tamil Nadu with the advantage of political power and Supreme Court support) make conflict more likely. The dispute has become enmeshed in electoral party politics in both states, making mutual accommodation and adjustment (essential for the settlement of any dispute) very difficult. Additionally, experts indicate that the prospect of a water war over the Cauvery will only become more likely (NDTV 2012).

The Cauvery is a river with strong historical and religious associations in both Tamil Nadu and Karnataka, and a dispute regarding such a river tends to arouse strong emotions that make rationality difficult (Iyer 2003). When a conflict is tied so closely to history, culture, religion, and social structures, it is hard to imagine that gender would be irrelevant in analyzing the conflict. The following section offers an integrative analysis which explores how water scarcity and conflict impact individuals differently based on gender, how the gender symbolism of water in India impacts the type of violence used, and how gender structures in the political and social realm act as a barrier or impetus for women's participation and action.



## II. Gender in The Cauvery River Dispute

In order to better understand the three points of gender analysis in the Cauvery River case, it is important to understand some basic tenets of sex and gender in India. The Indian sex/gender system is structured primarily through a division of social spaces. There is a gender-specific division of labor in the private sphere of the household and the public sphere of agricultural work and government. In addition to the public/private sphere division, sex segregation is also meant to be observed even within these spheres: in some parts of India, women and men often eat separately in the home, ride on separate sides of the local buses, and watch movies in different halves of the theater (Seizer 2008).

This strict social division of the sexes is invoked to define virtue. According to the Hindu worldview, women embody the virtue and honor of their families. As we will see later, a woman has the ability to use her sexuality to either lure or nurture, to bring honor or shame to the men in her family, and this results in men's control over women and their bodies. Following the Laws of Manu, Hindu women are expected at all times to be reserved, chaste, and virtuous. Because a woman's sexuality is considered both valuable and dangerous, her appearance and behavior in public become extremely important (Miller 2012). Additionally, in Tamil culture, any interaction with an unknown person is guarded against, and tremendous emphasis is put on strengthening the connectedness of kin. Thus, women must regard known men as their protectors and men limit women's outside interactions as a way to ensure their physical safety and moral reputation (Seizer 2008). These dynamics are particularly relevant when discussing gender-based violence in the Cauvery dispute, as men systematically targeted women's virtue as a strategy of violence. All of these perceptions of sex and gender in India influence the individual gender impacts, the symbolism of gender, and the structure of gender.

## *II.i Individual Gender Identity*

Because of the separate roles and responsibilities of men and women in India, water commands more of the daily life of women than of men. Women are generally responsible for household tasks like fetching water, washing, cleaning, and cooking, thus water is central to their daily tasks and their livelihoods are greatly hampered by water scarcity. The Second Citizen's Report on the state of India's environment points out that no other group is more affected by environmental destruction than poor village women. As ecological conditions worsen, the long march for resources (especially water) becomes longer. In some cases, the distance has quadrupled from two to eight kilometers, and the extended time spent collecting resources has both cut the time available to earn wages elsewhere and increased the normal working day to 14-15 hours (Kumar 1993).

Decreased agricultural productivity affects both male and female farmers; but one notable feature is the increasing number of women reporting housework as their major occupation at present as compared to two decades ago. For instance, in Palayaseevaram, Tamil Nadu, sixty-five women reported housework as their major occupation in 1985 and this number increased to 233 in 2005. In Magaral, also in Tamil Nadu, this number went from 76 to 181 between 1985-2005. Similarly, there is a large number of people reporting to be unemployed in both villages, the majority of whom are women (Butterworth et al. 2007). According to the Butterworth et al.'s study on water stress in Tamil Nadu, this is the result of both decreased supply and over-exploitation of water resources. Therefore, the effects of water scarcity are disproportionately affecting women's livelihoods in agriculture. When they must fall back on housework as their occupation, their work is further hampered by water scarcity.

Women not only lose their agricultural employment, but are also not as free as men to

seek alternative urban employment (Butterworth et al. 2007). Women's mobility is increasingly constrained according to social and ritual status in order to safeguard both their honor as women and their ritual purity (Miller 2012). Women's place in society, religion, and the family limits their ability to migrate to find new livelihoods. When men migrate, women are left to take on the role of heads of households, with few customary rights, and their workload increases. They are forced to take on jobs for meager wages and opportunities for a decent living are as scarce as water. The increased workload combined with the hampering effects of water scarcity can lead to physical and psychological problems, and women suffer more from disease, hunger, and depression (Butterworth et al. 2007).

In addition to being more vulnerable to the impacts of water scarcity, women are also disproportionately affected by violence that results from water and food stress. During the riots of 1991-1992, it was mostly women who were the victims of violence, and they were subjected to gender-based violence including rape and sexual harassment (Fleischli 2006). Tamil women particularly were the targets of mobs. According to Gouri Chowdhury, a feminist activist from New Delhi, the violence in Bangalore was very systematically planned. The day before violence broke out, Kannadiga men walked through the town spreading rhetoric against Tamils and organizing groups to identify Tamil women as targets. They planted false media reports about the molestation of Kannadiga women in Tamil Nadu in order to justify their attacks. Rape and molestation of women was used as a terrorizing tactic to force Tamils to return to Tamil Nadu and to shame Tamil culture. This tactic was reciprocally adopted in Tamil Nadu, where some Kannadiga families returned to Karnataka for fear of violence against the women in their family (Chowdhury et al. 1996).

According to a correspondent from the British paper Sunday Observer who reported from refugee camps outside Tamil Nadu, many Tamil women were killed after being gang raped, many were tortured and raped, and a number of Tamil women were missing. The report continues:

"Two dead bodies and another on the verge of death were found at one place. The dead bodies were that of the father and mother of a young girl whose breasts were chopped off and was still barely alive."

"A 14-year old girl was raped and murdered in front of her father."

"A group of Tamils were escaping to Kerala State from Karnataka. A mob of Kannadigas stopped them and took away ten women and girls between the ages of 15 and 25. They were never seen again."

Neither the women, nor their families spoke of the rapes, mainly out of shame. The police dismissed all of the cases of rape and molestation as false rumors. Additionally, the violence against women went largely unrecognized by investigation following the riots. According to Chowdhury et al. (1996), no records of the direct targeting of women were found either in the police records or in the government surveys for the purpose of compensation.

This blatant targeting of women is congruent with theories that gender-based violence is not an inevitable aspect of war, but rather a strategic weapon used to weaken and humiliate the enemy and to displace populations. The Kannadiga men excited passion in Karnataka based on aggressive masculinity in order to reclaim Kannadiga honor and diminish that of Tamil Nadu. However, in discussing gender-based violence in the Cauvery case it is crucial to look at the gender symbolism in order to analyze how it plays a role in the type of violence used.

### *II.ii Gender Symbolism*

In India, water has a very specific religious and cultural meaning. According to Hindu mythology, all rivers have their origins from the heavens, flowing from the sacred feet of Lord

Narayana. It is believed that all the major rivers are in fact manifestations of the Shakti—the mother goddess and the feminine source of all energy, power, and creativity—and are thus highly revered. The Cauvery River, among the sacred rivers, is venerated as a Goddess. The legend of Kaveri has its origins in the Puranas, a Hindu religious text. Lopamudra, the earthly feminine manifestation of Kaveri herself, was granted the form of a river by Brahma as an answer to tapas (spiritual suffering) she performed. After assuming the form of the river, Kaveri performed another tapas and was blessed by Lord Vishnu as the most sacred of rivers, more sacred than even the Ganges. It is even said that the Ganges comes underground once a year to cleanse herself at the Kaveri (Doniger 1999). It is clear that water, and specifically the Cauvery, has religious and cultural significance as feminine.

Water in Hindu tradition, like women, can be both purifying and destructive. This is evident through the myth of the Goddess Ganga, who was promised by Brahma to descend upon earth to purify the ashes of King Sagara's sixty thousand sons, who could otherwise not ascend to heaven. Ganga was the daughter of Himalaya, the Lord of Snow, and had held herself back from leaving the heavens. She would leave at Brahma's command, but her downward rush would be so great that it would destroy earth. However, the God Shiva agreed to receive her stream and break the fall of Ganga upon the earth (Doniger 1999). In a similar vein, women's sexuality can be either destructive or virtuous. In many Hindu myths, a woman who betrays a man sexually is defined by the man whom she betrays: if he is a hero, she is seen as wicked, but if he is the hero's enemy, she is regarded as helpful. Therefore, a woman's virtue is often a function of the status of her husband (Doniger O'Flaherty 1985). This assumption that women (and in a parallel manner, water) are potentially destructive results in men's need to control or protect women and

their bodies (and subsequently, water management). These parallels between water and women provide additional gender significance with regard to water disputes.

Another way water and women are connected in Hindu culture is that water is the symbol of purity and motherhood; women, as noted earlier, are expected to be virtuous and pure—like water (Fleischli 2006). Thus when gender-based violence is used, it is a systematic method of destroying not only women’s honor, but also the honor of her husband, family, and community. Gender-based violence is present not only in modern day India, but is also portrayed as a weapon against enemies in Hindu mythical history. When Ravana, the demon king, goes to war with Rama, an avatar of the God Vishnu, he captures Sita, Rama’s wife, and keeps her captive. When Rama finally kills Ravana and brings Sita back, he fears that his people would worry that her reputation and chastity had been sullied in the house of another man (Doniger 1999).

Additionally, one myth tells the story of Shiva and Parvati making love, when Parvati said, “It is the nature of women to wish to hide their sexual pleasure” (Doniger 1999: 267). As in most societies, sexual relations strictly fall into the domestic sphere and women are assumed to be sexually modest. Thus perpetrating acts of sexual violence in the public sphere of water disputes and riots adds to the shame placed on the family and results in underreporting of these crimes.

Sexual violence in the Cauvery case is also significant because of the symbolism of women’s bodies as representative of nationalism and territory. Throughout the nationalist movement of India, the image of Mother India (Bharat Mata) was invoked as the embodiment of national territory and liberation. The female body was historically used in Tamil representation of the nation. For example, a 1948 Tamil textbook depicts images of Mother India literally embodying the map of India with an accompanying poem that praises her for her beauty, achievements, and the wealth of her rivers (Ramaswamy 2010). Some depictions of Mother India

in the physical map include the separations of the secular states of the modern republic (Ramaswamy 2010: 105). This creates a visualization of the land of India as the dismemberment of the female body—a powerful image when the literal dismemberment of the female body is used as a weapon between secular states of the modern republic. Additionally, as nationalism gathered strength, the representative Indian woman’s dominant function was the production and reproduction of the nation itself, with her primary identity that of motherhood (Ramaswamy 2010). Thus, in India, and especially in Tamil Nadu, bodies are associated with territory and women’s bodies with the reproduction of culture. The association of women with the reproduction of culture and national identity is dangerous, as perpetrators often use gender-based violence as a means to destroy the very fabric of enemy society. This may relate to the high volume of gender-based violence targeted against Tamil women in the Cauvery disputes.

Joan Scott has argued that in modern times, “power relations among nations...have been made comprehensible (and thus legitimate) in terms of the relations between male and female” (qtd. in Ramaswamy 2010: 85). Therefore, the mastery of one state over another is as “natural” as the mastery of man over woman. The ownership of a territory, or in this case, the waters of the Cauvery River, can find expression in claiming ownership over female bodies, which is the result of the manner in which the female was configured to express notions of property in India. This relationship between the mastery of one state over another with the mastery of man over woman is also reminiscent of ecofeminist claims that the domination of man over nature is related to the domination of man over woman. In the Cauvery River case, it seems that the domination of men over women in the form of rape and molestation is related to the domination over the waters of the Cauvery.

In the riots over the Cauvery waters, gender-based violence was used systematically to displace Tamils and Kannadigas and to destabilize mainly Tamil communities through shame and humiliation. Kannadigas perpetrating the violence seem to have employed Enloe's "National Security Rape" in order to eliminate perceived threats to their security and identity: in this case, security being access to water. The religious and cultural symbolism of water as pure and feminine further enforces the root of why rape is used as a systematic tactic of war: women are virtuous and thus by targeting them, Kannadiga perpetrators could destroy the honor of their Tamil enemies.

This is not to say that the cultural symbolism of water in India *caused* gender-based violence; rather that the association of water with women and purity further perpetuated the social constructions that underlie the use of gender-based violence as a tactic of war. The cultural symbolism of the resource in question—in this case, water—*may* explain why sexual violence was so widely used and why women were the greatest victims of violence in the Cauvery conflict. However, this analysis does not presume that India is unique in its understanding of the relationship between women and water/land. Rather, it is meant to highlight the underlying gender assumptions that motivate violence such that interventions can address root causes and prevent violence against women in the future.

### *II.iii Structure of Gender*

In addition to determining the type of violence used, the symbol of gender in India also influences structural barriers to women and may hinder equal participation in adaptation policies as well as conflict resolution and peacebuilding. The valorization of motherhood at the time of independence did not mean that women's public powers and privileges were correspondingly enhanced. Their primary place remained the home and any kind of public prominence was only



possible after tending to their domestic and spiritual responsibilities and their duties to their male kin. They were to complement, rather than compete, with men for public resources and responsibilities (Ramaswamy 2010).

Accordingly, men dominate water management in India and women are for the most part excluded from these power structures. Many people in India make the common assumption that women would not speak up in public and would refrain from having an active role (Fleischli 2006). This construct, relating to the assumption that women are passive, results in exclusion of women from the public sphere and from decision-making structures and conflict management.

The low representation of women at higher levels of water and conflict management is also due to structural barriers throughout their lives including inequality in education, family responsibilities and decision-making, and religious practices (Fleischli 2006). Therefore, Tamil Nadu and Karnataka need policies to address these root causes in addition to simply including women in decision-making structures.

Policies and initiatives to promote the involvement of women barely exist in Tamil Nadu. They are slightly more present in Karnataka, though women in Karnataka still require significant efforts to have their voices heard. Findings from the Fourth Gender Forum in March 2012 found an insignificant presence in the National Parliament and the Council of Ministers. The same position is reflected at the state level, though local self-administration found significant active participation by women (Tiwari 2012). However, simply creating a quota for women in Parliament or governing structures will not suffice, as policies may still be gender-blind. As an example, although Tamil Nadu's Chief Minister Jayalalithaa is the only woman in high office, greater consideration of women's issues with regard to water scarcity or conflict has still not been part of the agenda (Fleischli 2006).

Women are represented at higher proportions in grassroots organizations such as farmers' associations. In April 2003, the Madras Institute of Development held a multi-stakeholder dialogue in Chennai. About one hundred people were present, mainly farmers—both men and women—from Tamil Nadu and Karnataka (Iyer 2003). Women actively participated in this dialogue, advocating strategies for demand management, water harvesting, and recycling as a means of conserving the resource base. They also vocally opposed desalination as a proposed way of augmenting supply (Butterworth et al. 2007). However, there was no mention of gender-specific concerns at the meeting. Women, while holding relatively important positions in these farmers' organizations, represent mainly the interests of the farmers and do not pursue gender-specific needs including addressing the root structural causes of inequality mentioned earlier (Fleischli 2006). The fact that Tamil Nadu's Chief Minister is a woman and women are represented in farmers' associations, yet women's specific vulnerabilities are still not addressed highlights the reason why “add women and stir” is not an effective means of gender mainstreaming. Gender-blindness, or even the participation of some individual women, will not lead to a holistic approach to conflict resolution and resource management that includes the specific needs of marginalized populations, particularly women.

### **III. Looking toward the future**

In his book *The Cauvery River Dispute: Toward Conciliation*, Sanjivi Guhan advocates for the allocation of water in terms of shares, not quantities. He says that there should be an integrated operation of the basin reservoirs and that the two states should both separately and together do all that they can to augment the available supplies through conservation and pollution control. In the multi-stakeholder dialogue, some Karnataka farmers argued that Tamil Nadu wastes water, has the benefit of North Eastern monsoons, and a good endowment of

groundwater, and therefore it is their responsibility to reduce their water use from the Cauvery. Tamil Nadu farmers have responded that the monsoon is only of limited use and that they are already extremely careful with water use because of reduced rainfall. However, the Cauvery must be shared equally regardless of the amount each state may be accustomed to consuming; each state needs to improve their water-use further and adapt to the lower availability (Iyer 2003).

While the practical methods to prevent further conflict and adapt to water shortages are important, they often ignore the specific needs and opinions of women. There is a long history of women's activism in India: women were active in the nationalist movement, women's political activism, fighting against dowry, Sati, and the prevalence of rape (Kumar 1993). Most notably related to the environment was the Chipko movement, starting in the early 1970s, in which women practiced methods of nonviolent resistance to prevent the felling of trees and rapid deforestation. The Chipko movement was primarily a livelihood movement rather than a strictly environmental movement. Above all, it stirred up the existing civil society in India, which began to address the issues of marginalized people, including women (Kumar 1993).

In the wake of the Cauvery disputes, despite the issue being mostly tied in the court system and politics, women have taken action outside these often structurally inaccessible domains. Women have staged protests and demonstrated in the streets with empty water containers on their heads. They have also created powerful self-help groups that aim to tackle sand mining and water transport. A women's water forum formed in Chennai and is still active (Fleischli 2006). These forms of agency allow women to voice their concerns outside of the traditional avenues that are often dominated by men and have the potential to allow for a more qualitative integration of women's needs into water management.

Outside of efforts related to the Cauvery River dispute, the Vimochana forum for women's rights provides a means for strengthening women's resistance to violence both within the home and within communities and politics. Vimochana lobbies on issues related to women's human rights at the local, national, and international levels and uses theater, song, film, and other creative media to infuse aesthetics into their political expression (Vimochana, Activities 2013). Vimochana began to work on the Cauvery dispute after the riots in 1991-1992 by organizing meetings between farmers in Karnataka and Tamil Nadu. However, very few women participated in these meetings (Fleischli 2006). Currently, though Vimochana's initiatives do not directly address the Cauvery River dispute, they provide both a model and a mechanism for agency related to the Cauvery River dispute.

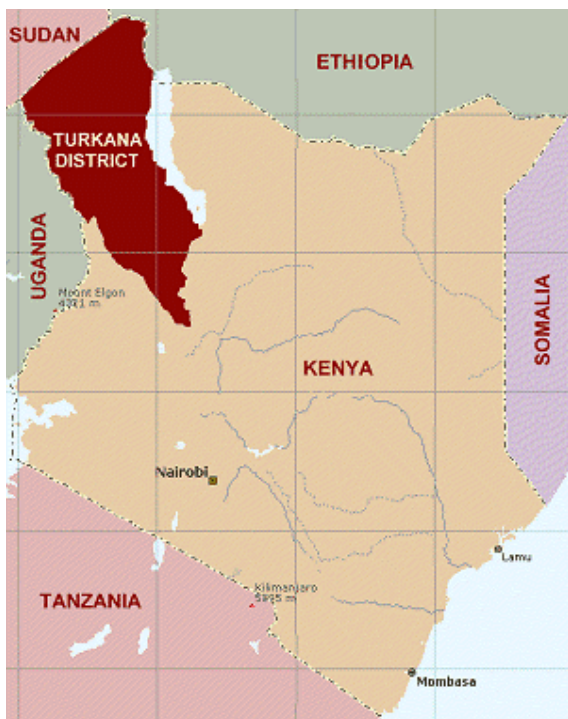
In addition to these non-conventional forums, gender mainstreaming needs to be more systematically integrated into policies related to water use, climate change, and conflict resolution. This includes promoting women-focused activities, including improving the political rights, property/water rights, and livelihood opportunities for women. Additionally, the Cauvery Water Dispute Tribunal must implement gender-aware policies that consider how environmental stress and violence impact women differently than men and how to address these gender-specific vulnerabilities. It is specifically important to bring issues of gender-based violence to light to ensure that these crimes do not go unpunished, and also to prevent impunity in the future. Lastly, Tamil Nadu and Karnataka need to engage in strategic transformation of gender relations and overturn the perception of women's passivity or purity that pervades Indian society. They can principally achieve this by promoting the active participation of women in governing bodies and raising awareness of women's needs as well as women's agency.

#### **IV. Conclusion**

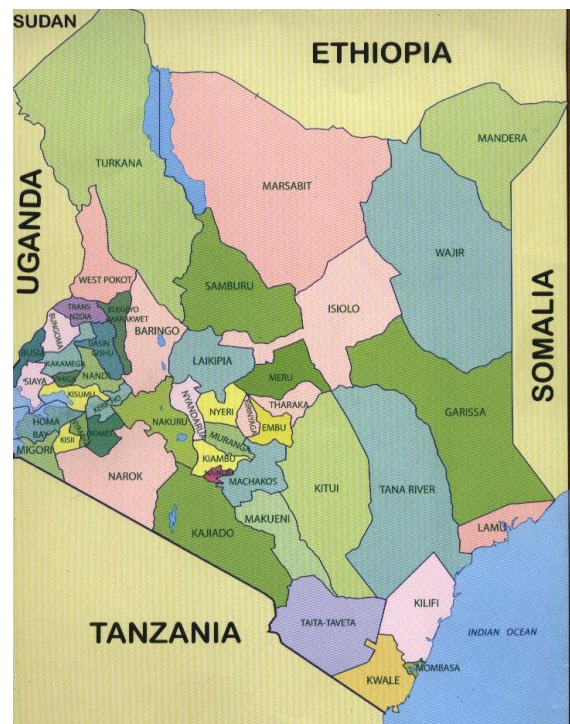
Gender determines the way men and women are impacted by environmental stress and conflict, and also the way they are involved in resource and conflict management. If there is potential for violence in the future of the Cauvery dispute, then consideration of gender may contribute to improved management of the dispute by promoting the involvement of all stakeholders, especially women who are often marginalized in conflict management. There is a need to recognize the capacity of women to contribute important insights into environmental change adaptation and conflict resolution so processes can reflect local realities. Taking a gender-conscious approach rather than gender-blind analysis sheds light on inequalities and discrimination against women and pays closer attention to the private sphere and specific needs of the population. In order for Tamil Nadu and Karnataka to reach an equitable settlement of this dispute that addresses the needs of all stakeholders, women's presence needs to not only be visible in numbers but also in content and composition of the agenda.

#### 4. Pastoralist Conflicts in Turkana, Kenya

Pastoralist conflicts in Kenya have become increasingly prevalent as climate change takes hold and droughts prolong. This chapter focuses on pastoralist conflicts in Turkana, a district situated in northwestern Kenya. It begins with an overview of the demographics of Turkana as well as of the roots of violence as they relate to environmental change. Subsequently, the chapter explores the gender dimensions of environmental change and conflict in Turkana using the three lenses of individual gender identity, gender symbolism, and structure of gender. The chapter concludes with an overview of women's roles in environmental adaptation and conflict resolution, as well as a vision for the future through integrated policies and programs that promote gender mainstreaming.



Map of Kenya with Turkana  
Source: Taste of Turkana



Map of Kenya with Districts.  
Source: Taste of Turkana

## **I. Background**

Pastoralist communities are largely nomadic and live primarily in arid or semi-arid areas and depend on livestock for their livelihoods. Pastoral lands occupy more than eighty percent of Kenya and are home to about four million pastoralists who constitute about ten percent of Kenya's population. The Turkana district has a large pastoralist practice and pastoralism constitutes a major part of people's livelihoods. In Turkana, only about fourteen percent of the population lives in urban areas, and the rest are either pastoralists or farmers (Omolo 2010b).

### *I.i Environmental Change in Turkana and its Impact on Livelihoods*

Over the past few decades, Turkana—as well as Kenya in general—has experienced climate variability, specifically increases in drought. Temperatures in Kenya have risen by 1°C over the past fifty years and warming is expected to accelerate, with temperatures rising nearly 3°C by 2050. Absent and unpredictable rains are more common, wet seasons are becoming shorter, and droughts have increased from one per decade to every two or three years, with eighty-seven percent of the population being severely affected by drought. The recent prolonged and severe drought in Kenya is widely perceived to be symptomatic of climate change (Campbell et al. 2009). Droughts have led to food insecurity, migration, and violence. Additionally, erratic rainfall has led to flash floods, which have resulted in loss of property, destruction of infrastructure, and disease (Omolo 2010b).

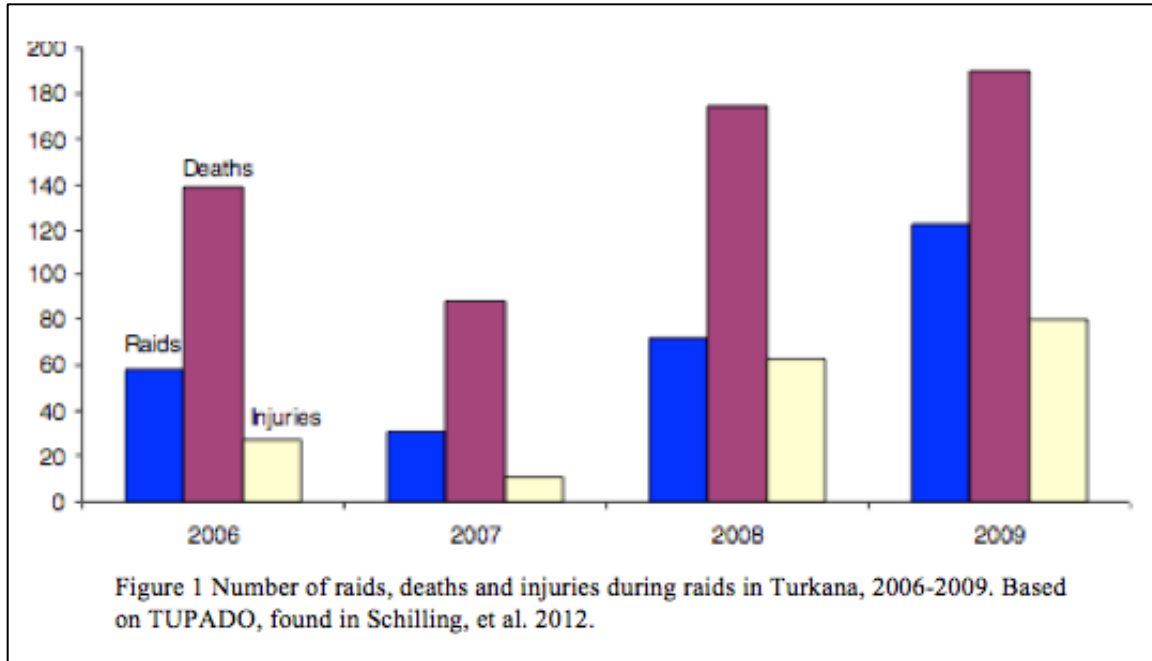
The climate impacts affect Turkana's pastoralist livelihoods and are exacerbated by structural challenges and poverty. Pastoralists in Turkana are politically, socially, and economically marginalized, as the central government exerts little influence and the delivery of public services is weak (Devereux & Tibbo 2012). Turkana is one of the poorest districts in Kenya, with the overall poverty level at seventy-four percent and food poverty at eighty-one

percent, compared with Kenya's overall poverty level of forty-six percent in 2005 (Omolo 2010a). This increases pastoralist vulnerability to drought and environmental change in Turkana and increases competition over resources.

### *I.ii Livestock Raiding and Insecurity in Turkana*

Resource competition between Turkana and pastoralist groups in neighboring countries and districts increases the prevalence and risks of violence, which usually takes the form of livestock raiding. Raiding was previously a means of expanding grazing lands, gaining access to new water sources, and improving social status by acquiring livestock from defeated enemies and increasing bridewealth (Omolo 2010b). However, raiding has transformed to a predatory activity, increasingly carried out by young men as a means to amass resources in a climate of ever-increasing resource scarcity. The situation has been made more violent by the proliferation of small arms and light weapons. In *Tropic of Chaos*, Parenti (2011) attributes the increased ferociousness of violence in Kenya to post-Cold War proliferation of small arms. What was once limited to low-intensity cultural cattle-raiding incidents has transformed into large-scale violent clashes, killing from dozens to hundreds at a time and resulting in lasting hostilities between the Turkana and neighboring people (Campbell et al. 2009). Figure 1, with data recorded by the NGO Turkana Pastoralist Development Organization (TUPADO), shows that not only is the number of raids generally increasing, but also that the high number of deaths in relation to the number of injuries indicates that the availability of small arms has made raiding more deadly (Schilling et al. 2012: 10). Moreover, in interviews conducted in Turkana, ninety-six percent of people felt insecure or highly insecure, and when asked about the reason, their replies were raiding and violence (Schilling et al. 2012).





There is a variation in the size and impacts of livestock raids in Turkana. Based on the interviews with the communities, three types of livestock raids can be identified according to their number of participating raiders. First, in highly organized ‘mass raids,’ several hundreds to even thousands of raiders attack a neighboring community either in areas within Kenya or in neighboring countries. These large raids result in relatively many human casualties (though typically less than one hundred in any given attack), the destruction of property over a wide area, and the loss of several thousand livestock. Second, in ‘adakar’a raids, several dozens and occasionally up to a few hundred raiders from nearby villages come together to raid one village, also known as kraal, of a rivaling community. The third type of raid is the lowest scale, with mostly a handful to less than fifteen participating raiders, known as *ngoroko* (bandits). The targets of these raids are usually small, unprotected kraals or a group of animals, which is only accompanied by one pastoralist or herder (Eriksen & Lind 2005; Schilling et al. 2012).

### *1.iii Linkages between Environment and Violence*

The increasing violence in Turkana is correlated with environmental change in the area, particularly ecological marginalization. In response to increasing droughts and depleted resources, the people of Turkana migrate to search for pasture and water—integral resources for pastoralist livelihoods. Many migrants encroach on the land of farmers or other pastoralist communities, causing tension that can lead to violence, often in the form of livestock raiding (Parenti 2011, Campbell et al. 2009). The Greater Horn of Africa Food Security Bulletin of April 2005 wrote,

The root causes of conflicts in pastoral areas of the GHA are principally competition for shrinking pasture and water resources. They revolve around livestock and the use of arms (which makes the conflicts more violent than in the past and result in indiscriminate killing)...Over the years, pastoral conflicts have become more frequent and unpredictable, exhibiting a marked escalation in violence and geographic distribution (qtd. in Witsenburg & Adano 2009: 515).

Violence in Turkana can be characterized by Lee's hot wars, in that increased temperatures cause decreased water supply and grazing land, resulting in displacement and migration.

Risk of conflict has enhanced during times of stress, particularly drought. Between 1972-1999, the Turkana experienced fourteen years of drought and famine that wiped out nearly their entire stock and increased pressure on them to raid other communities in order to restock. The incidences of drought continue to increase as well as incidences of raids (Juma 2000). To illustrate this, the memories of 'peaceful' years in south Turkana, as recalled by respondents to a household survey carried out by Lind (2005), are concentrated between the 1950s and early 1970s. After 1981, no years are recalled as being 'peaceful.' Additionally, several large raids occurred in the 1990s, a period in which the level of insecurity is ranked as high by local elders (Buchanan-Smith & Lind 2005).

It is difficult to know the extent of violence in this period because many victims remain undocumented and areas where clashes occurred are difficult to reach. The most cited estimates of clash victims in this period of drought indicate 1,500 by early 1993 (Juma 2000; HRW 1997). Between 1997-1998 the Pokot–Turkana conflicts left about one thousand victims. Between January and March 1998, clashes between the Turkana and Laikipia displaced and disrupted the lives of many. Estimates show that between July 1999 and January 2000, raiding increased significantly and hundreds of people were killed, thousands displaced, livestock was stolen, and property was destroyed (Juma 2000).

This helps demonstrate that times of environmental stress are related to times of violence. One might point to the fact that this is not necessarily climate change, but may be the cyclical nature of weather patterns in the area. However, even though droughts took place before the so-called climate change era, they still show the relationship between environmental stress and violence. The variable is not necessarily average levels of rainfall or temperature over a long period of time and their relation to violence; rather, the important variable is how parties construct the situation at that moment and respond to increasing stress, regardless of whether it is technically climate change or not.

The incidences of drought may be cyclical but as noted earlier in this chapter, they are increasingly prolonged and more severe than in previous decades as the time period moves to the climate change era. In this period, violence continues to increase in relation to increased stress. Conflict Early Warning Network estimates that from 1996 to 2002 about 300,000 cattle were raided on the Turkana side of the Sudan-Kenya-Ethiopian border, killing 1,200 people (Campbell et al. 2009). Clashes in 2009 between the Turkana and the Toposa (from neighboring Sudan), both seeking to access grazing land and water, left more than twenty people dead and 60,000 animals stolen within three months (Omolo 2010a). Similarly, in July 2009, when competition

over access to pasture and water between Samburu, Turkana, Borana, and Somali groups was not resolved peacefully, the resulting violence led to thirty-two deaths, the displacement of thousands of people, and extensive livestock theft. The problem was compounded when the government supplied three hundred guns to residents in the name of bolstering security (Campbell et al. 2009). Incidences of violence in the past decade have increased, due to several variables including increasing competition over shrinking resources, the availability of small arms, and economic opportunities.

Violence in Turkana is not only exacerbated by climate change, but also non-climate related changes in the environment as a result of human activity—the combination of which is environmental change, as defined in the introduction. Violence further restricts mobility, leading to overgrazing and soil degradation. The Kenya Vulnerability Research Team (KVRT) found that there is a rapid change in Turkana’s lifestyle from nomadic to semi-permanent settlement. At two sites of study, Katilu and Kapua, 97.7 and 92.2 percent of households reported staying permanently, respectively (Omolo 2010b). Additionally, research conducted by Climate Change Adaptation in Africa found that in Turkana, ninety-three percent of residents cite that conflict over land and livestock are factors restricting herd movement and contributing to further overgrazing and destruction of vegetation (Ndaruga 2011). This has negative implications for herds and resource procurement, as it depletes resource availability further, resulting in cycles of degradation and violence.

There are some scholars who argue that rather than drought being the driving force of violence, increased rainfall contributes more to violence. Witsenberg and Adano (2009) from the Max-Planck Institute for Social Anthropology conducted a study examining the relationship between rains and violence among pastoralists in Turkana by measuring the intensity of violence

(quantified by number of absolute deaths in a given period) in relation to seasonal fluctuations.

They found that water scarcity and crowding pastures increase tension between groups to such an extent that violence is often used to scare off the other. However, their results also show that the intensity of violent conflicts increased during the rainy season as opposed to the dry season.

They hypothesize that a probable explanation is that people might postpone violence until the first wet year after a drought year. Their interviews with the Turkana people indicate that during droughts, people are more inclined to cooperate and use wells together. When a drought is expected, warring communities often reconcile in order to use water and pasture together. On the other hand, violence increases in the wet years, when the livestock is stronger and fatter, and vegetation and surface water are more readily available. Though this result may be contrary to what one may expect, it still indicates that violence in Turkana is influenced by climate fluctuations, which implies that climate change and environmental stress will have an impact on insecurity. Since drought and rainfall have become so irregular, it is also possible that violence increases because communities try to take advantage of an abundant resource before it becomes scarce again.

Natural resource competition and scarcity, while highly significant, are not the only factors that drive conflict in Turkana, as the region is marginalized in a number of ways. It is isolated by its topography and poor infrastructure, especially roads that serve it. It is compounded by ineffective security provision, and many roads are considered unsafe due to the threat of attacks by *ngoroko*. The region is not well integrated into the national economy, the poverty levels are high, and it has very limited political leverage. Conflicts are exacerbated by socio-economic marginalization, especially among unemployed male youth. High levels of youth unemployment give rise to a cheap and accessible pool of recruits for raids or longer-term

induction into armed groups (Campbell et al. 2009). In addition, as elsewhere in the country, ethnic identities and divisions often intensify conflict. Among pastoralist groups in particular there is a significant interplay between group identities and historical feuds. This generates cycles of attacks and revenge attacks that can lead to embedded ethnic hatreds between groups (Campbell et al. 2009).

As droughts and floods increase due to continued environmental stress, people living in poverty will be the most vulnerable, particularly women. Since violence is not caused by scarcity alone, the levels of violence may largely depend on the political, demographical, and institutional changes in the region. Therefore, it is important to look at the individual gender impacts of both environmental change and conflict; the gender symbolism of water and grassland in Turkana; and the structural barriers and impetuses to women's participation, which are crucial in determining the political, social, and institutional changes required to prevent violence and adapt to environmental change.

## **II. Gender in Turkana, Kenya**

In order to understand the three points of gender analysis, it is important to outline some of the gender dynamics in Turkana. Traditionally, there is a division between the roles of men in Turkana's pastoral societies and those of women. Women take care of animals; carry out domestic duties such as cooking, childcare, and water and firewood collection; and are involved in farming. Men are involved in herding and marketing animals, farming, and digging water wells (though fetching water remains a woman's role) (Omolo 2010a). Polygamy is common and some men have up to five wives. In many cases, the first wife encourages her husband to marry a second wife when her workload becomes too much to manage. Women are married for both their productive labor in the house, as well as for producing children. According to interviews

conducted in Turkana, the ideal wife is one who can work hard (Juma 2009).

Structural barriers exist that limit women's access to education, and thus information and employment. In Turkana, 96.5 percent of women reported not having attended school, compared with eighty-nine percent of men. In Turkana, illiteracy rates are high overall, but are higher among women. Eighty-four percent of Turkana respondents are illiterate. For women, illiteracy rates are about ninety-two percent, while for men it is closer to eighty percent. Literacy and education in Turkana is lacking overall, but the situation for women is worse (Omolo 2010a). As of 2005, only 18,000 girls in Turkana were enrolled in primary school, as compared to nearly 30,000 boys, and many girls are married in their teens and do not continue their education (Livingstone & Ruhindi 2012). Sons are preferred over daughters and males receive higher allocation of food as well as access to education and healthcare. These gender inequalities result in lower life expectancy and higher child mortality rates for females than males in pastoral societies, and overall increased vulnerability (Devereux & Tibbo 2012).

These inequalities are important in order to understand women's vulnerability to a changing climate as well as violence, as decreased opportunities often contribute to cycles of poverty and vulnerability. This overview is not meant to devalue the tasks of women in comparison to the income-generating tasks of men, and as we will see, women's roles in society actually give them advantages as it equips them with distinct adaptation skills; rather it is meant to give a picture of women's lives in Turkana as opposed to men in order to provide a basis for the following analysis.

The situation of women in Turkana's pastoral communities, however, is not static, and incidences of drought have led to transformations in the socio-cultural and socioeconomic organization of pastoral societies. Women play an active role to ensure family survival through

engagement in diversified income generating activities. Diversification of livelihoods in Turkana as a means to cope with environmental change has created significant changes in gender relations. Control of livestock assets once was the basis of patriarchy within Turkana's pastoral societies. But the widespread loss of livestock and grazing land has significantly disempowered men, leaving women to take up many of the newly important non-livestock activities for income (Livingstone & Ruhindi 2012). These dynamics are explored further in this chapter.

### *II.i Individual Gender Identity*

Though climate change and environmental stress have led to social transformations, men and women still have different vulnerabilities based on gender, mostly due to their socially constructed roles and responsibilities. For men, the challenge is acquiring water to keep their source of income secure by keeping their animals alive. As noted before, the inability to provide for their families often disempowers men. Livingstone and Ruhindi (2012) state that this may result in men being more inclined to resort to violence. Several studies conducted in Turkana found evidence that suggests that a number of *ngoroko* are hired by local elites who exploit their poverty by paying them to carry out their raids. Increased competition over resources and loss of livelihoods has resulted in increases in economically-motivated crime, where unemployed men who cannot provide for their families provide good recruits (Bevan 2007; Buchanan-Smith & Lind 2005; Campbell et al. 2009).

For women, vulnerability is rooted in their responsibility to the family, as well as their hampered daily activities. First, as resources become scarce, women's workloads increase. Since they are responsible for resource procurement for household work as well as caring for livestock, they must walk further distances to find water and fodder, and to secure food and water for their livestock. Often, the journey to find water can take between two and six hours round trip, and



since they can only take what they can carry, they often have to do multiple trips per day.

When women in Turkana spend more time doing household chores, their opportunities for employment decrease. Additionally, when livestock die due to lack of food and water, household incomes suffer. When this happens, girls are often forced to drop out of school to help their mothers in the home (Omolo 2010b). This leads to a cycle of uneducated women who neither have the resources or access to information that can help them cope with environmental stress, nor the ability to participate in local governing structures to give input on adaptation and conflict resolution.

The story of Elisabeth, a 48-year-old woman from Turkana, illustrates these dynamics well. She used to be a pastoralist and depended on her livestock to feed her eleven children and grandchildren. However, all of the animals died in the drought and now her family depends on what she makes from selling charcoal and emergency aid. She also has to walk twelve kilometers every day to collect charcoal and sell it in the nearby village. She has been forced to pull her daughters out of school. “I am struggling to make sense of what is happening,” she told an Oxfam correspondent. “Just ten years ago, everything was green. We had plenty of milk and meat thanks to our cattle. Now it’s all dry. The lack of water is making our lives harder and harder” (Christensen 2012).

Environmental change also impacts health. As water sources decrease, people are forced to share water sources with their animals, resulting in contaminated water. This, together with lack of good hygiene due to shortages of clean water, can cause parasitic infections and waterborne diseases like skin infections and diarrhea. Since women are required to take care of ill household members, their workload increases even more, contributing to a cycle of poverty, lack of education, and poor health.

With regard to raiding, women also have different vulnerabilities than men. Since women are responsible for children, they cannot flee during times of raiding. Often during raids, *ngoroko* enter homes and demand food from women, threaten them, and sometimes take girls away as wives. This creates an atmosphere of intimidation and fear and has detrimental impacts on women's livelihoods (Eriksen & Lind 2005). However, with regard to direct violence, men are more vulnerable to injury and death from raids. Several studies in the region have reported that men are the primary victims of violence from raiding and that sexual violence is not systematically carried out (KVRT 2009, Omolo 2010b, Campbell et al. 2009). This also may be due to the fact that women have coped with violence by remaining in their houses more. Schilling et al. found that women in Lokirama and in the nearby villages Lobei and Urum reported that they have reduced the picking of wild berries because they are afraid of violence. Though this may reduce women's direct interaction with violence, it does undermine their ability to adapt to drought, as the picking of wild berries was reported to be an important strategy to adapt to water and pasture scarcity (Schilling et al. 2012).

Additionally, men's vulnerability to violence directly relates to women's vulnerability. When women lose their husbands in raids, there is an increase in female-headed households. This makes women more vulnerable to poverty, as they have poor customary rights to land, wells, and livestock. In Turkana, once married, a woman belongs to her husband's clan, but when her husband dies, the clan is often less inclined to provide assistance. Sometimes women have to move to urban areas to find alternative livelihoods. However, their vulnerability to food insecurity does not necessarily decrease, and they often turn to prostitution to survive (Omolo 2010b). These individual gender impacts relate to the structural barriers for women in society, which will be discussed later in this chapter.

## *II.ii Gender Symbolism*

Men and women have different vulnerabilities to environmental change and violence in Turkana. However, unlike the Cauvery River case, men are the primary victims of violence and are more often killed than women. Additionally, sexual violence has not been reported as a widespread or systematic tactic of war as it has been in Tamil Nadu and Karnataka. This is not to say that sexual violence is not a part of conflict in Turkana, but it is not as pervasive and systematized. It is possible that this difference exists due to the differences in the gender symbolism of water and pasture in Turkana culture.

In Turkana, life is seen as originating from grass (symbolic of sperm) and water (symbolic of blood), but these sources are not assigned to man or woman. Additionally, the physiology of the female, like the male, is understood as capable of producing enough semen to support her own wellbeing as well as that of her fetus. In order to conceive, she needs surplus semen from a male donor to be combined with her own semen and blood. Sex is seen as an exchange between bodies, a transaction as equal as others (Broch-Due 1993). This view of sex differs from many societies, where sex is characterized by male domination over women and leads to a gender paradigm of inequality and sexual exploitation.

Additionally, male and female are seen as two halves of an androgynous whole and gender is more fluid in Turkana. For example, gender does not determine the direction for giving or receiving, both in sex and everyday transactions. As in many societies, the act of giving is considered masculine and receiving as feminine. However, these attributes are not assigned to men and women. When a man or a woman give and receive at the same time, they are both simultaneously engaged in masculine and feminine acts. Gender is not a fixed property based on bodies, but rather a collection of attributes that are open to contextual transformations. Turkana

construct maleness and femaleness defined by cultural acts of giving and receiving, not by “unchangeable essences” based on anatomy or biological sex difference (Broch-Due 1993: 82).

Additionally, men and women both play roles in the reproduction of Turkana culture. Women play the initial role of birthing and raising children and socializing them into the Turkana way of life. They also prepare food and sing during rituals such as child naming and weddings. Men organize family meetings to deliberate on matters relating to the family. They also socialize young boys and girls into their adult roles in society, including teaching them skills they will need when they take over the clan or get married. Additionally, men make all decisions related to animal slaughter and other rituals, making them the protector of cultural values (Wawire 2003).

The way that men and women’s bodies are represented in Turkana culture in relation to water and grass, as well as the shared responsibilities in physically and culturally reproducing their society, *may* explain why sexual violence is less widespread. Sexual violence as a strategy of war to weaken the enemy or to attack the cultural bearers of the enemy society is not necessarily applicable to women in Turkana, but rather both men and women. This is not to say that the absence of systematic sexual violence is solely due to the cultural symbolism of gender in Turkana; rather, looking at these variables highlights the case-specific gender dynamics that have a relation to the gender symbolism in each case. These factors, combined with the conventional roles of men as warriors, may contribute to higher levels of men’s deaths, as men more often find themselves in the line of fire.

### *II.iii Structure of Gender*

Despite increases in female-headed household in Turkana, inclusion of women in decision-making with regard to coping with environmental change and conflict resolution has not

increased. Decisions are made by clans through appointed elders referred to as “the tree of men” and women do not attend meetings conducted by these elders (KVRT 2009). At the national level, women have even less political capital, as all three Turkana representatives in the Kenyan Parliament are men. Women are also not allowed to address public gatherings, and even in cases referred to the tree of men, a male relative of the offended woman must present her case for her. As women in general have less access to control over various assets, it becomes harder for them to achieve political capital through the accumulation of assets (Juma 2009). Additionally, Juma notes that according to his interviews, one of the reasons Turkana women are often excluded from decision-making is that men marry women from outside the clan, and since they are viewed as outsiders by the clan, their influence in decision-making is limited (Juma 2009).

Often, women are not allowed to leave their villages and fear beatings by their husbands if they talk to strangers. Despite seemingly egalitarian sexual relations in Turkana’s rituals and in the way they perceive bodies and sexuality, there is still patriarchal domination in the public and private sphere. This makes it difficult for women to create peacebuilding networks and also to receive the education or experience necessary to be effective leaders. This is unfavorable, as women in Turkana have very valuable insights and skills when it comes to adaptation and conflict resolution.

However, despite structural barriers, women have successfully contributed to conflict resolution as well as adaptation to drought. A growing body of work suggests a nuanced perspective to show the very important role women play in Turkana’s pastoralist societies and the multiple subtle ways women exercise power. Though they do not participate in public discussions, they are assertive through means alternative to established decision-making bodies by way of their own networks (KVRT 2009; Omolo 2010b; Livingstone & Ruhindi 2012).

In many pastoral areas in Turkana, women are diversifying their income to cope with the changing environment. They have opened tea shops and retail stores that employ other women in the communities. Additionally, new private and public educational and training institutions have been set up to provide opportunities for women to set up their own businesses and confront structural barriers head-on (Livingstone & Ruhindi 2012).

Women in Turkana are extremely skilled at finding ways to ensure that the household has access to food and water through customary water purification processes and food preservation methods. For example, women decant water with part of the dorm palm plant called Akaburkunyait, which they beat with a stone and stir with water. Dirt then collects at the bottom, leaving the water clean. Herbs like *etula* are also used to disinfect water. Some food preservation and storage methods can keep food like fish and grains viable for up to a year, and women even have drying methods for milk to keep it in storage for up to five years (Wawire 2003). These local pieces of knowledge can contribute important insights and skills to policies and aid projects.

One example of a local women's conflict resolution network is the Rural Women's Peace Link (RWPL), which has trained and connected women in Turkana with women of other communities who are exposed to violence and expanded their typical roles for peace. At first, RWPL had trouble meeting with women in Turkana because of the barriers to women leaving villages and talking to strangers. However, members of RWPL approached village elders to ask permission to speak to their wives and invited them to join. They began small, with income-generating projects, and gradually, as they began building trust with the elders, were granted permission to expand their work and include more women.

As a result of RWPL, women came together from many ethnic groups across the region

to address issues of governance. In 2002, prior to national elections, they trained women as election monitors. The women in each district asked officials, candidates, and police to sign a pledge not to use violence during elections. Women have also found that they can negotiate with cattle raiders, as they can approach young men who promote violence and talk to them more easily than men because of the respect given to women.

There is a long history of violence between the Turkana and other groups in the region and local women have begun uniting people on both sides to work together for community development. Groups are cooperating to lobby the government to modify hydroelectric projects so that it no longer cuts off supply of clean water to communities. Women also use nonviolent tactics. For example women in Turkana organized a nonviolent protest to get the attention of their government representatives by blocking a major road and refusing to let traffic through until the government minister came to hear their security concerns regarding raids, jobs for widows, and reduction of arms in the region (Beghtol 2004).

Women from areas neighboring with Uganda met with Ugandan rural women to promote friendship and share strategies. This advanced the notion of seeing each other as allies rather than enemies, an important strategy that can be transferred to men in the region and deconstruct enemy images. Additionally, when local rural women meet with women from other areas, their desire for literacy and education increases. They see role models in women with education and begin to believe they can also become educated (Beghtol 2004).

Women are learning how to advocate for the needs of women and promote peace by stretching previously accepted cultural norms. For example, one woman from Turkana went directly to her Member of Parliament and asked to be invited to speak in his church. Usually, neither clan leaders nor the church would allow women to speak, but since the Member of

Parliament invited her, she was allowed. Additionally, several women in Turkana have been elected as local councilors and have outwardly advocated specifically for the needs of women. In some areas of Turkana, women are still not allowed to own land, so one group of women pooled their resources and bought land under the name of one of their husbands for cooperative income-generating projects. Previously women were not as educated as men, but after the advocacy of local women's groups, women are becoming paralegals, and know the law to advocate for justice. Usually, women could not ride bicycles, but group leaders needed mobility to report approaching attacks and also to contact groups in other areas. The women bought bicycles with money from their income-generating projects. This also increases their ability to procure scarce resources, decreasing their time spent collecting water and fodder (Beghtol 2004).

Another example of a program that strategically incorporates women in conflict management is the United Nations Development Program (UNDP) and Arid Lands Resource Management Project (ALRMP) in the Kakuma community in northern Turkana. In August 2005, UNDP/ALRMP conducted training sessions to create peace facilitators in Turkana to empower them to successfully carry out peace initiatives. The program aimed to equip community members with proposal development and report writing skills, and a structure for peacebuilding committees. It also focused greatly on capacity building for women. It trained thirty-three participants, ten of whom were women, and all of whom are now actively involved in peace education in their communities (UNDP & ALRMP 2006).

Through trainings like RWPL and other similar programs, mostly uneducated women are gaining the training and skills necessary to actively contribute to peacebuilding initiatives, even if it is outside conventional institutions. In an increasingly violent atmosphere, the techniques of women are making remarkable changes in situations of violence in their communities. Women



have learned they can speak with conviction and that they can join together to improve their own lives and those of their communities, using both local and adopted techniques. What is clear from the Turkana case is that if women build networks and find alternative methods for agency, they can find more equal standing in their communities and can effectively contribute to the mitigation of environmental change and conflict resolution.

### **III. Looking Toward the Future**

Conflict-mitigating institutions do exist at local and national levels, as well as district peace committees. However, their effectiveness in identifying early warning of conflicts and rapid response is hampered by lack of funding and resources from government. Environmental change, therefore, is likely to increase drivers of conflict leading to increased vulnerability (Omolo 2010b). There are several drought risk management efforts in Turkana, such as the Drought Cycle Management approach that was developed during the 1980s (Devereux & Tibbo 2012). However, efforts need to not only focus interventions on drought, but also on the root causes of vulnerability. Those who plan and implement participatory approaches to adaptation and conflict resolution need to recognize the necessity for women and other marginalized groups to be actively engaged in decisions that affect their lives. Additionally, drought, conflict, and poverty do not independently affect people's lives. Therefore, the various uncoordinated policies, projects, and programs that currently run parallel to each other need to intersect and include substantive efforts to address all the intervening variables to vulnerability.

In order to cope with environmental change, the Turkana are diversifying their livelihoods. Strategies include herd splitting, increasing mobility, redistributing surplus livestock, diversifying livestock, diversifying income sources including fishing, gathering wild fruits, and basket weaving (Omolo 2010b). For example, Ekope Imo, a Turkana resident,

reported at Oxfam hearings, “I have resorted to keeping camel and...goats as they are hardier than cattle” (Whitaker 2011). The Turkana people are trying to manage their vulnerability to poverty by increasing the reliability of their income, and women can be an integral part of this. The small number of women entrepreneurs who are engaging in small-scale enterprises have the potential to become significant providers of employment for women and others in pastoral areas. Additionally, the women engaged in peacebuilding contribute significant skills and perspectives to conflict resolution.

As mentioned earlier, the gender relations in Turkana are evolving. However, these dynamics can also disempower women if they involve additional burdens without any change in social status. Therefore, local decision-makers and elders need to reconcile formal and customary laws in ways that establish women’s equality before the law. Legal empowerment is integral to economic and political empowerment, and if gender mainstreaming is to be successful, it must include provisions for expanded access to capital, education, and specific skills trainings. It is also equally important to address the situation of men—such as the disempowering effects of environmental change on their livelihoods—in efforts to strengthen the position of women. When men are unemployed and disempowered by their inability to bring income into the home, this may contribute to a cycle of violence that can impact women’s livelihoods and ability to cope economically.

#### **IV. Conclusion**

Sufficient evidence exists that climate variability and environmental change exacerbate conflicts in Turkana. When pastoralists lose their livelihoods, through loss of access to pastures and water due to climate variability and change, destitution threatens their lives and they often turn to violence. This is exacerbated by other intervening variables, including proliferation of

small arms, breakdown in customary control, increased poverty, and absence of state government in remote areas.

There is a need to recognize the capacity of women to contribute important knowledge and insights to environmental change adaptation and conflict resolution so processes can respond to local realities. Women in Turkana are extremely skilled at finding ways to ensure the household has access to food and water. However, policies need to support income-generating activities targeting women that can provide women with income and allow them to better access necessities and fulfill the basic needs of the household. This can reduce vulnerabilities and increase adaptive capacity to environmental change. Furthermore, as people's ability to cope with environmental stress and poverty increases, they will no longer need to resort to violence.

## **Conclusion**

Environmental conflict is one of the most profound challenges facing international security in the 21<sup>st</sup> century. It threatens the livelihoods, health, and wellbeing of billions of people worldwide, particularly the poorest and most vulnerable groups, including women. Tremendous strides have been made over the years to understand the scientific and human processes driving environmental change, as well as the linkages between environmental change and violence. But much less is understood about how these dynamics interact with those of gender, what the consequences will be for women, and how best to address them.

The two case studies have provided a basis for using gender as an analytical category in order to focus attention on previously neglected and poorly understood gender dimensions of environmental conflict and to create a more comprehensive understanding of the subject. In environmental conflicts, women have specific vulnerabilities based on their socially constructed roles and responsibilities, as well as knowledge and experiences that can contribute to conflict resolution and environmental mitigation and adaptation. This conclusion synthesizes the key findings from the case studies and shows why gender as an analytical framework is an important tool for gender mainstreaming in order to achieve gender equality in environmental conflict management and women's empowerment.

### **I. Key Findings and Patterns**

The three dimensions of gender (individual gender identity, gender symbolism, and structure of gender) were applied to both the Cauvery River dispute in India and pastoralist conflicts in Turkana, Kenya. In each case, all three dimensions interacted with one another. The two cases also promote some points of comparison that are worth identifying and exploring further.

### *1.1 Individual Gender Identity*

The individual gender identity refers to the individual experiences of people based on their gender. In both the Cauvery case and the Turkana case, women have specific vulnerabilities to environmental stress and violence due to their socially constructed roles and responsibilities in society, highlighting their specific needs in interventions. In both cases, women are particularly dependent on environmentally sensitive sectors, such as agriculture, water collection, and household tasks. However, gender inequalities in the distribution of assets and opportunities mean that their choices are constrained when resources are scarce or violence strikes.

In both cases, the general pattern is that women are responsible for most of the unpaid tasks—including fetching water for household chores, procuring fuel and fodder, taking care of children and elderly, and in Turkana, caring for livestock—and thus their workloads increase when resources are scarce. Since they are often responsible for children and elderly, women cannot migrate as men can, either in cases of intense water stress or raiding. Women’s workloads also increase when they must take over men’s tasks when men migrate, or when they must spend more time caring for sick family members due to contaminated water or malnutrition. Increased workloads reduce opportunities for education or income-generating activities, further decreasing women’s already constrained access to policy or decision-making bodies and further entrenching unequal gender relations.

However, with regard to vulnerability to violence, there are differences between the two cases. In the Cauvery case, it was clear that women were systematically targeted and sexual violence was used strategically. However, in Turkana, women’s vulnerability to violence is rooted in their poor customary rights and clan traditions. In Turkana, men’s socially constructed role as the “warrior” renders them more susceptible to attack and death during raiding;

meanwhile, women are left as heads of households without the resources to care for their families and are often abandoned by their husbands' clans. While violence against women still occurs in Turkana, it does not occur as a systematic tactic by the enemy. This difference between the Cauvery case and the Turkana case may be attributed, at least in part, to the gender symbolism of the sought after natural resources in each culture.

### *1.ii Gender Symbolism*

The symbolism of gender refers to how masculinity and femininity are defined in a society, which has little in common with actual sex differences. The symbolism of gender often defines how men's and women's roles and responsibilities are understood, and in the case studies, also sheds light on the perceptions of masculinity and femininity as they relate to the natural resources over which parties are fighting.

In India, water has a cultural and religious significance as feminine. Femininity is defined as potentially purifying or destructive, as a woman can use her sexuality to either shame or honor her family, and thus must be controlled by men. Additionally, women's bodies are associated with the reproduction of culture. Thus, it is compatible with the literature on sexual violence in conflict that Kannadiga men systematically perpetrated sexual violence against Tamil women in order to shame and weaken the enemy. Additionally, they were able to reinforce their own identity and eliminate threats to their security, which in this case is their access to water.

In Turkana, by contrast, different pastoral groups are fighting over water and grassland for their livestock, but water and grass do not have specific gender assignments as water does in India. In Turkana, water is symbolic of blood and grass of semen, which together are seen as the source of all life—for both men and women. Anthropological studies in Turkana show that masculinity and femininity are more fluid and are not necessarily assigned to men or women.

Sex is not seen as a male-dominating act, but as an equal transaction between men and women, and women's bodies are not constructed as something to control. Additionally, both men and women are responsible for "reproducing" culture and traditions. Thus the way that men's and women's bodies are represented in Turkana culture may explain why sexual violence is less widespread as a systematic tactic of violence.

As noted earlier, the symbolism of gender does not cause gender-based violence nor necessarily determine the course of violence in any conflict. These two case studies show that the symbolism of gender, particularly with relation to natural resources, may contribute to a better understanding of the type of violence used. However, there are several other conflicts where sexual violence is widespread and there is not gender symbolism of a resource, nor are there necessarily clashes over a resource. I understand that there is a gap between the incidences of violence and the presumed correlation of gender symbolism. Due to the limitations of the scope of this research, this section is meant to be more suggestive and exploratory than conclusive. There are ways to explore deeper into the data in order to find more connections or to disprove these connections, whether through a more quantitative analysis or a qualitative approach through conversations with people who experienced it. The hope here is that by exploring the gender symbolism of the resources in these two cases, I can show how this component of gender as an analytical category is relevant and potentially useful in looking at other cases of environmental conflict. Additionally, it may shed light on the underlying gender dynamics of violence such that interventions can address the root causes or even prevent violence against women by understanding its symbolism in a given culture.

### *I.iii Structure of Gender*

The structure of gender refers to the institutional and hierarchical power structures at the national and community level that either prevent women's participation in governance and decision-making or provide opportunities for transforming gender relations through women's active participation. This structural component is dependent on both the socially constructed roles and responsibilities of women (individual gender identity) as well as the conceptions of masculinity and femininity as it relates to those roles (gender symbolism).

In both cases, structural barriers exist that limit women's participation in decision-making structures. In the Cauvery case, the conception that women are submissive and their place is in the home as mothers, rather than as policymakers and advocates, creates barriers to women's participation in governance. In Turkana, women customarily do not participate in the meetings of "the tree of men" and have little political capital, as they are primarily concerned with duties of the home and caring for livestock. However, in Turkana, there are more examples of women finding alternative approaches to take active roles in helping their communities adapt to droughts and mitigate conflict. It is possible that different gender constructions in each society contribute to this difference in women's activism. That is not to say that women in Tamil Nadu and Karnataka do not voice their opinions. However, as we saw in that case, women's advocacy generally comes in the form of advocating for farmers' needs, rather than women's needs.

In terms of environmental conflict, pre-existing gender inequalities mean that women and men experience the effects of both environmental stress and conflict differently, and thus interventions and policies must be sensitive to both of their needs. However, when structural barriers prevent women from voicing their needs, policies are insufficient and have the potential to create lasting instability if not designed sensitively. Furthermore, the discriminatory access to



land and resources becomes an obstacle to peace-building and economic recovery in conflict zones. It prevents women from occupying key positions and hinders overall economic productivity. Gender inclusiveness in the access to, usage, and ownership of natural resources can lead to greater equality in other areas like governance. Ultimately, stable peace can only be achieved when women and men have equal rights over resources that are necessary for survival.

However, simply including women in government or decision-making bodies does not always achieve genuine gender sensitivity. As we see in the Cauvery case, even when women were included, policies tended to be gender-blind. Additionally, policies that do take a gender perspective often do so in ways that draw on assumptions and generalizations about women's abilities. Too often, policies treat women only as vulnerable parties or beneficiaries that need protection. Not enough attention is paid to women's capacities and agency, or the role they can play as leaders and innovators of adaptation. Women's experiences in managing natural resources and the strong social networks in which they may engage mean that they often hold knowledge, skills, and experience that are fundamental for successful adaptation and conflict resolution. For this reason, gender mainstreaming needs to be part of every policy made with regard to environmental conflict.

Gendered knowledge and empowerment of women are shaped by relations of power and the cultural context. How much gender equality and women's empowerment are part of policy-making is determined by the structures and processes of governance within a society. Power relations are institutionalized, and internalized by both women and men and power inequalities come to be accepted as normal. However, these two cases show that there is much to learn from innovative, gender-aware approaches that are slowly emerging at community, national, and regional levels and that are rooted in women's lived experiences of environmental conflict.

## **II. Gender Mainstreaming: Present and Future**

These cases highlight the need for more systematic gender mainstreaming in the management of environmental conflicts. There are various mechanisms that could remedy the general neglect of gender mainstreaming and gender equality in governments and decision-making bodies more generally. First, gender equality units can be established within higher levels of government to provide policy leadership and to broaden the gender agenda in policymaking. Second, “gender budgeting” can be used to integrate gender in the budget framework in order to analyze the impacts of national budgets on gender fairness (Sloane 2008). Third, the use of gender analysis and the collection of gender-disaggregated data are critical for more effective and equitable adaptation, mitigation, and conflict resolution policies. Obviously, some of these mechanisms are more difficult for community-level decision-making such as “the tree of men” in Turkana, and more suitable to cases like the Cauvery River dispute, where decisions are made by the Cauvery River Authority.

In a gender mainstreaming training in which I participated in April 2013 at the Fletcher School of Law and Diplomacy, Marcia Greenberg highlighted three main steps for effective gender mainstreaming: observe, analyze, and innovate. After observing and analyzing some of the gender dynamics in the Cauvery River dispute and in Turkana, we can begin to think about what steps are necessary to “innovate” gender mainstreaming in the context of these cases.

One way to innovate is to promote women-focused activities, including improving political rights, property or water rights, and increasing livelihood opportunities for women. Ensuring women’s political rights requires attention to the number of women in decision-making, their capability in such positions, and their commitment to supporting gender equality. Though controversial, quotas can be the first step to ensuring women’s increased political

participation. Quotas need to be paired with trainings that not only create more opportunities for women, but also ensure qualified women candidates who will be gender-conscious in their pursuits. Once more gender-conscious women are involved in the political system, they can begin to address areas of inequality, including property rights, discrimination in education and the workplace, and violence against women.

Second, it is important that in conjunction with these activities, efforts also remove obstacles and additional burdens placed on women to ensure that activities do not have the opposite effect of what is intended. To achieve this, local and national decision-makers need to reconcile formal and customary laws in ways that establish women's equality before the law. Legal empowerment is integral to economic and political empowerment, and if gender mainstreaming is to be successful, it must include provisions for expanded access to capital, education, and specific skills trainings. Additionally, in implementing gender-aware policies that consider how environmental stress and violence impact women differently than men, policymakers need to assess and revise plans and procedures. Even in gender mainstreaming efforts, there can be unintended negative consequences and policymakers should not shy away from identifying and remedying mistakes.

It is specifically important to bring issues of gender-based violence to light to ensure that these crimes do not go unpunished, and also to prevent impunity in the future. In this vein, it is also equally important to address the situation of men—such as the disempowering effects of environmental change on their livelihoods—in efforts to strengthen the position of women. If women are expected to live and work in settings with men, it is crucial for men to understand the importance of gender mainstreaming and its components.

Lastly, local women's movements and other activists can engage in strategic transformation of gender relations and overturn the perception of women's passivity or purity that pervades many societies. They can principally achieve this by promoting the active participation of women in governing bodies and raising awareness of women's needs as well as women's agency.

These are general recommendations, and more research and information is needed for policymakers, aid workers, and local organizations to create and implement more specific efforts in each case. Additionally, gender mainstreaming efforts are not straightforward nor easy to implement. Even in places that have dedicated themselves to these goals, women are often excluded from decision-making, and international agreements have a long way to go before achieving genuine gender mainstreaming. For example, Australia claims to be internationally committed to the pursuit of gender equality and women's empowerment and the government has reported to the United Nations Environment Programme that "gender analysis and mainstreaming are embedded within its government policies, all departments are encouraged to ensure that gender issues are considered throughout the policy process" (UNEP 2006: 11). However, several analyses have pointed out that these claims cannot be substantiated and that there is much rhetoric about the extent of gender mainstreaming in government policies that does not reflect reality (Donaghy 2003; Alston 2006; Wanner 2009).

As the Gender in Agriculture Sourcebook shows, "women are still absent from the climate change and natural resource-related decision-making processes at all levels" (World Bank, FAO, & IFAD 2009: 425-426). What we see from these case studies and Australia is that gender mainstreaming is not only problematic in developing countries and the road to genuine mainstreaming will be difficult and require years of concentrated effort and programs.

### **III. Concluding Remarks**

The World Bank highlights that a better understanding of the relationship between gender and environmental management is important for “designing effective policies and programs for environmental sustainability” (World Bank 2003: 20). If environmental management is key for preventing conflicts, then a gender-neutral policy approach to environmental conflict is flawed from the outset to achieve sustainable peace and security and can undermine efforts for gender equality. This thesis seeks to establish a framework for research and action built on an enhanced understanding of the relationship between environmental conflict and key gender dimensions. Through an exploration of two case studies, it is clear that women and men experience conflicts differently. Their experiences, vulnerabilities, needs, rights, and options available to them differ according to their socially and culturally defined gender roles. Additionally, men and women relate to and deal with natural resources differently, and this contributes to both gendered vulnerabilities and gendered adaptive capacities and knowledge.

It is important to keep in mind that gender mainstreaming must include targeted, women-focused policies and programs, as the overall goal is gender equality and women’s empowerment. Within these overarching goals are several sub-goals to be achieved by greater gender-sensitivity in environmental conflict management. First, that women and men have equal voices in decision-making on environmental mitigation and conflict resolution and broader governance processes, and are given equal access to the resources necessary to respond to the negative effects of environmental conflict. Second, situations in which both women’s and men’s needs and knowledge are taken into account, and decision-making institutions and processes at all levels are not biased toward men or women. And finally, where the broad social constraints that limit women’s access to strategic and practical resources no longer exist.

Gender equality does not mean that women and men will be same but that both have equal rights, responsibilities, and opportunities. Gender equality implies that the interests, needs and priorities of both women and men are taken into consideration in policy-making, and that the diversity among different groups of women and men is taken into account. This is crucial for successful management of environmental conflicts and for creating sustainable peace and security.

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