

# Gender, climate change and REDD+ in the Congo Basin forests of Central Africa

H.C. PEACH BROWN

*Environmental Studies, University of Prince Edward Island, Charlottetown, PEI, Canada, C1A 4P3*

Email: hcpbrown@upei.ca

---

## SUMMARY

The Congo Basin region of Central Africa contains the second largest contiguous tropical rainforest in the world, which is an important source of livelihood for millions of people. It is also important for climate change adaptation, as well as mitigation policies on Reducing Emissions from Deforestation and Forest Degradation (REDD+). Men and women relate to and use the forest differently and so may experience the effects of climate change and REDD+ policies differently. Investigations through semi-structured interviews and document reviews in three countries of the region revealed that women have had limited participation in discussions on issues of climate change or REDD+. There is some evidence that gender consideration will become part of future national REDD+ strategies. Strategies to foster the effective participation of all stakeholders are essential to ensure that gender dimensions are addressed in issues of climate change, forest access, forest management and distribution of carbon benefits.

Keywords: Africa, Congo Basin, climate change, REDD+, gender

## Sexe, changement climatique et REDD+ dans les forêts du bassin du Congo en Afrique Centrale

H.C. PEACH BROWN

La région du bassin du Congo en Afrique Centrale contient la seconde forêt tropicale contiguë du monde, une importante source de revenus pour des millions de personnes. Elle est également importante pour l'adaptation au changement climatique, ainsi que pour les politiques d'atténuation comme la réduction des émissions de la déforestation et de la dégradation des forêts (REDD+). Hommes et femmes ont une relation à la forêt différente, tout comme l'usage qu'ils en font, et ils ont par conséquent une expérience différente du changement climatique et de la politique de la REDD+. Une enquête à travers des interviews à demi structurés et une étude de documents dans trois pays de la région révéla que les femmes ont une participation limitée dans les débats sur les questions du changement climatique ou de la REDD+. Certaines preuves apparaissent qu'une prise en compte du sexe va devenir partie prenante des stratégies nationales de la REDD+ futures. Des stratégies pour encourager une participation efficace de toutes les parties prenantes sont essentielles pour assurer la prise en compte de la question du sexe des participants dans les questions de changement climatique, d'accès à la forêt, de gestion forestière et de distribution des bénéfices du carbone.

## Género, cambio climático y REDD+ en los bosques de la cuenca del río Congo en África Central

H.C. PEACH BROWN

La región de la cuenca del río Congo en África Central posee el segundo bosque lluvioso tropical contiguo más grande del mundo, el cual es importante como medio de subsistencia para millones de personas. También es importante para la adaptación al cambio climático, así como para políticas de mitigación como la Reducción de Emisiones por Deforestación y Degradación Forestal (REDD+). La relación con el bosque y el uso del mismo es diferente para hombres que para mujeres por lo que podrían experimentar de manera diferente los efectos del cambio climático y las políticas de REDD+. La investigación realizada mediante entrevistas semiestructuradas y revisión de literatura en tres países de la región reveló que la mujer había participado de manera limitada en las discusiones sobre temas relacionados con el cambio climático y REDD+. Existen pruebas de que la consideración del género será parte de las futuras estrategias nacionales de REDD+. Las estrategias para velar por la participación efectiva de todas las partes interesadas son esenciales para asegurar que se trata el tema de género en todas sus dimensiones en asuntos relacionados con cambio climático, acceso al bosque, gestión forestal y reparto de los beneficios de carbono.

---

## INTRODUCTION

It is now widely accepted that increases in anthropogenic greenhouse gas concentrations are the cause of increasing global average air and ocean temperatures, widespread melting of snow and ice and rising global average sea level (Intergovernmental Panel on Climate Change (IPCC) 2007). Predicted future changes in climate, with consequent impacts on ecosystems and physical systems, pose significant challenges for society. Such future changes will have a strong impact on natural resource-dependent communities through a multitude of primary and secondary effects in both natural and social systems (Adger 2003). People who are already poor and marginalized will experience the impacts of climate change most acutely, particularly in the global south. African populations are widely expected to be more vulnerable to climate change as a result of the conflation of three factors: a higher than the global average degree of change, high levels of dependence on natural resources and forest goods and services, and a low degree of adaptive capacity (Dixon *et al.* 2003, Toulmin 2009, Demetriades and Esplen 2010, Eastaugh 2010).

Vulnerability to climate change is shaped by gender roles and relations, with poor, rural women in developing countries generally being considered to be the most vulnerable to climate change. This is deemed to be a result of pervasive gender inequalities in society which lead to a greater number of women living in poverty relative to men, and with a more severe experience of poverty relative to men. Climate change can exacerbate existing inequalities between and among women and men and intensify gendered experiences of poverty (Demetriades and Esplen 2008, Demetriades and Esplen 2010). According to Annecke (2002), societal systems and structures exercise various forms of power to perpetuate the subordination of women in all spheres. However, the accepted generalization of the 'feminization of poverty' is a contested concept (Chant 2010). Furthermore, it is difficult to generalize about a direct link between poverty and climate change vulnerability as vulnerability is generated by multiple processes and different situations (Arora-Jonsson 2011). Also, in some contexts men may bear the brunt of climate change impacts (Terry 2009). Any consideration of gender effects on climate change vulnerability needs to be combined with an examination of the complex linkages of class, ethnicity and context.

Apart from the discussion of the complex interaction between gender, poverty and climate change vulnerability, some feel that women in the developing world are most likely to be affected by increasing environmental degradation and depletion of natural resources due to climate change, because of their involvement in, and reliance on livelihood activities which depend directly on the natural environment (Denton 2002, Nelson *et al.* 2002, Terry 2009). Climate change is expected to affect all areas of women's lives adversely due to social and cultural norms surrounding the gendered division of labour, physical mobility and access to decision-making at household and community levels (Nelson *et al.* 2002, Terry 2009). Others feel that given their dependence on

natural resources, women may be adversely affected by new international climate change policies, on Reducing Emissions from Deforestation and Forest Degradation (REDD+) that may limit women's access to forest resources (Gurung and Quesada 2009, Terry 2009).

Despite their strong links with the environment, women often do not control land and related natural resources such as forests and are discriminated against in the provision of services (Chitiga and Nemarundwe 2003, Mwangi *et al.* 2011). In areas where women and girls have less access to decision-making and control over resources and assets (natural, financial, and human), this undermines their capacity to adapt to climate change (The World Bank *et al.* 2009, Demetriades and Esplen 2010). The important knowledge and insights about natural resources that women can contribute to adaptation and mitigation decision-making processes are also often neglected. This then reduces the overall adaptive capacity of the society.

Forests are expected to face significant pressure from climate change over the next century which will potentially disrupt the important ecological, economic, social, and aesthetic services that forests provide to other natural systems and humankind (Intergovernmental Panel on Climate Change (IPCC) 2007, Bonan 2008, Eastaugh 2008). Forest ecosystems, particularly in the tropics, influence the global climate as major contributors to the global terrestrial carbon sink which absorbs about 30 percent of all CO<sub>2</sub> emissions every year (Canadell and Raupach 2008). However, it is estimated that between 10–25% of anthropogenic emissions worldwide result from loss of natural forests, which is larger than the entire global transportation sector (Fry 2008, Streck *et al.* 2008, Meridian Institute 2009). Therefore, measures to reduce deforestation are considered by some to be one of the quickest and least expensive ways of achieving large emissions cuts. Consequently, international climate negotiations have focused on ways to mitigate climate change through maintenance and restoration of forest carbon sinks.

The Congo Basin of Central Africa, containing the second largest area of contiguous rainforest in the world, is estimated to contain between 25–46 billion metric tons of carbon in its vegetation (Hoare 2007, de Wasseige *et al.* 2009). Conversion of these forests through deforestation and degradation is a source of carbon emissions (Hoare 2007, Streck *et al.* 2008, Sonwa *et al.* 2011). However, deforestation and forest degradation rates in Central Africa, estimated at 0.21 percent and 0.15 percent respectively, are lower than other parts of the world (Duveiller *et al.* 2008, Hansen *et al.* 2010). Based on the estimation of deforestation between 1990 and 2005 it is estimated that the region has released approximately 0.63 billion metric tons of carbon in 15 years (de Wasseige *et al.* 2009).

While the Kyoto Protocol acknowledged the role that forests play in the global climate, the targets of individual countries are calculated without taking into account forestry and land use related emissions. However, there is provision for the crediting of afforestation and reforestation projects through the Clean Development Mechanism (CDM) (Fry 2008, Streck *et al.* 2008, Newell 2009). The Bali Action Plan

which emerged from the 13<sup>th</sup> Conference of the Parties (COP) to the United Nations Framework Convention on Climate Change (UNFCCC) in 2007, decided to consider policy approaches and positive incentives on issues relating to reducing emissions from deforestation and forest degradation in developing countries as part of enhanced international action on mitigation of climate change (Cléménçon 2008, Depledge 2008, Humphreys 2008, Novotny Couto Pereira 2010). From this beginning a new mechanism has evolved which is known as Reducing Emissions from Deforestation and Forest Degradation (REDD+) and is under negotiation to become part of a new international climate change agreement (United Nations Framework Convention on Climate Change (UNFCCC) 2009, UN-REDD Programme 2010). At COP 16, held in Cancun, Mexico in 2010, it was agreed that developing country parties should be encouraged to contribute to mitigation action in the forest sector by undertaking reduction of emissions from deforestation, reduction of emissions from forest degradation, conservation of forest carbon stocks, sustainable management of forests and enhancement of forest carbon stocks (United Nations Framework Convention on Climate Change (UNFCCC) 2011).

REDD+ is an effort to create a financial value for the carbon stored in forests, offering incentives for developing countries to reduce emissions from forested lands and invest in low-carbon paths to sustainable development. This flow of funds from the North to the South could reward reduction of carbon emissions as well as contribute to pro-poor development, and be a strategy for maintenance of biodiversity and vital ecosystem services (Luttrell *et al.* 2007, Streck *et al.* 2008, UN-REDD Programme 2010, Richards and Jenkins 2007). With its vast carbon stores, the Congo Basin forest has come to the forefront in the implementation of REDD+ strategies. Beyond the potential co-benefits from such policies, there are many concerns that have been raised regarding not only the challenges to implementation, but also the potential effect on the livelihoods of forest-dependent communities (Angelsen 2008, Fry 2008, Humphreys 2008, Rights and Resources Initiative 2008).

According to the World Bank, more than 1.6 billion people worldwide depend on forests for their livelihoods, the majority of whom live in extreme poverty. Of that number it is estimated that 60 million indigenous people are totally dependent on forests, 350 million are highly forest dependent, and 1.2 billion are dependent on agroforestry (The World Bank 2008). In Africa, over two-thirds of the population of approximately one billion people, rely directly or indirectly on forests and woodlands for their livelihood, as well as medicinal plants and common pool forest resources for meeting essential fuel wood, grazing, and other needs (The World Bank 2004). Similar patterns of dependency are observed in the Congo Basin forests whose over 30 million inhabitants, representing over 150 ethnic groups, depend on the forest for food, shelter, and other livelihood activities (Congo Basin Forest Partnership 2006, Nkem *et al.* 2010). However, there are gender differences in how men and women relate to forests and forest resources. While like men, women in the Congo Basin are very dependent on forest resources as a

source of livelihood, similarly to women in other parts of the world, they continue to be disadvantaged by insecure access and property rights to land, forest and tree resources and to discrimination and male bias in the provision of services (Gurung and Quesada 2009, Bandiaky and Tiani 2010, Mwangi *et al.* 2011).

According to Denton (2002), women have often been absent from the climate change decision-making process at all levels, although recent climate summits have showed modest progress in the participation of women in the negotiations and the integration of gender concerns (Hemmati and Rohr 2009, Rietbergen-McCracken 2011). Feminists are lobbying for gender-equality concerns to be integrated fully into a new international climate change agreement to ensure that new mitigation and adaptation policies do not disadvantage poor women and also deliver them some benefits (Terry 2009). Gender advocates have been calling for an emphasis on the inclusion of women in climate change and REDD+ discussions, not on the basis of being victims of climate change, but as stewards and managers of forest resources (Gurung and Quesada 2009). The UN-REDD program states in its draft of social and environmental principles and criteria for the implementation of REDD+ that it will promote gender equality through consideration of different gender roles and women's empowerment (UN-REDD Programme 2011).

Gender is a main organizing principle of social relations and the power of asymmetries associated with gender relations is the central focus of feminist critique (Kronsell 2005). Gender-equality and gender mainstreaming are terms that are commonly used in development organizations but often lack clarity and meaning. The word 'gender' is often used to mean 'women' (Smyth 2007). In the 1980's the concept that women have a special relationship with the environment began to be highlighted in development circles. Critiques from feminist political ecologists in the 1990's cast women's and men's relationships with the environment as emerging from the social context of dynamic gender relations and challenged any notion that women *a priori* have a special relationship with the environment (Rocheleau *et al.* 1996, Leach 2007). Gender has come to be seen as a variable that shapes environmental rights of control, access and responsibility that interacts with class, race, caste, culture, or ethnicity to shape ecological change and sustainable livelihoods.

Given the importance of forests to the livelihoods of women and their marginalization from decision-making processes on climate change and forests, it is important to understand how to foster their inclusion in decision-making and benefiting from such important policy discussions. While statements concerning the importance of the promotion of gender-equality are necessary and important, such recognition or potential invitation to participate in a process is not sufficient to ensure effective participation. Being involved in a process is not equivalent to having a voice or the ability to influence outcomes (Cornwall 2008). Agency requires that an actor that participates in decision-making have the capacity to make decisions or influence the decisions of others. It intersects with issues of power, norms and knowledge (Biermann *et al.* 2009).

Studies have shown that just increasing the numbers of women in political circles does not necessarily lead to the pursuit of policies of gender equality by these same women due to a complex set of reasons (Cornwall and Goetz 2005). 'Women' are also not a homogenous group but differ according to class, race, culture and ethnicity (Rocheleau *et al.* 1996, Cornwall *et al.* 2007, Agarwal 2009). While increasing the number of women in forest and climate change discussions may be important, increasing the effective voice or agency of all those most affected by these discussions is also important. However, gender equality cannot be simply dictated but emerges from sustained and continuous efforts to encourage a transformation of people's views and actions. Empowerment of any marginalized group is an ongoing and complex process rather than a product (Smyth 2007).

Research was conducted in three countries in the Congo Basin forest region, Cameroon, Central African Republic and the Democratic Republic of Congo, to ascertain if and how gender considerations were being integrated into discussions or decision-making on climate change and REDD+ in these countries. Using a qualitative approach in data collection, insight was gained into national policies, processes and strategies to address gender equity concerns and women's empowerment. First a general overview is given on gendered differences in relating to the forest of Central Africa. Following an outline of the methodology, the results of interviews with key actors and a review of relevant documents are presented. The paper ends with a discussion of the results in the context of the gender, development and forestry-related literature. Suggestions are made as to how issues of agency, equity and fairness concerns can be addressed in the design and implementation of climate change and REDD+ policies.

## Gender and Forests

Research has shown that there are gender differentiated rights, roles and responsibilities related to use of forests and forest resources. Forests are important for the collection of non-timber forest products (NTFPs), which is done throughout the world by both men and women (Neumann and Hirsch 2000). In Africa, however, the types of products collected and collection sites may differ on the basis of gender (Dianzinga and Yambo 1992, van Dijk 1999, Dkamela 2001, Tiani 2001, Timko *et al.* 2010). In Cameroon, NTFP exploitation is closely related to the task and activities of different members of a household, with women tending to collect more food products in the fields, fallows and secondary forests. Men, in general, are more aware of primary forest species which they collect while on hunting trips (van Dijk 1999, Russell and Tchamou 2001). The products that women collect generally contribute to satisfying the food needs, medicinal needs and practical needs of daily life, such as firewood (Tobith and Cuny 2006).

Markets for NTFPs in the Congo Basin are organized and dominated by women, representing the traditional division of labour in a household, where women specialize in the sale of NTFPs and food crops while men specialize in the marketing of cocoa and coffee (Ndoye *et al.* 1997/98, Nkem *et al.* 2010).

A study of 25 markets in the humid forest zone of Cameroon showed that 89 percent of the NTFP traders were women, although those men who sold NTFPs typically had larger businesses (Ruiz Pérez *et al.* 2002, Awono *et al.* 2010). In sub-Saharan Africa, in general, often women from the poorest households obtain a major source of their subsistence from a diverse set of forest products (Timko *et al.* 2010). The commercialization of some products is also exclusively the domain of women (Brown and Lassoie 2010). Dkamela (2001), in research in eastern Cameroon, found that only palm wine was sold by men. Ruiz Pérez *et al.* (2002) noted from their market surveys that, although most products were sold by both men and women, some such as palm nuts, were sold only by women. Women also trap small animals and fish and sell smoked meat or dried fish (Tiani *et al.* 2004, Tobith and Cuny 2006).

Although women often dominate the collection and commercialization of NTFPs they do not have security of access to these products or land and natural resources in general. In the humid forest zone of Cameroon, a woman has access to forest products in most cases by virtue of her relationship to the men of the family. While still a child, a girl helps her family with crops and collecting NTFPs on land that her father holds in the traditional tenure system (Guyer 1984, Diaw 1997). Marriage is a radical change in the life of a girl, at which time she loses all usufruct rights to the goods and resources she spent her life gathering or developing, and she leaves her village and joins her husband's family. There she acquires a share in the usufruct rights to the forest resources of her mother-in-law and those left behind by her sisters-in-law, who have left in marriage. The situation of access to resources is even more unstable if the woman is divorced, never marries or only bears girls (Tiani 2001). While the traditional tenure system persists in Cameroon, there is some evidence that this may be changing in some areas.

In the Congo Basin forest, the management of timber and wildlife generally falls under the responsibility of men (Tiani 2001, Tiani *et al.* 2004). Policies on decentralization of forest management have been implemented with the expectation of giving marginalized groups more influence on local policy and forest management. In Cameroon, research showed that in many cases community forest management committees have been dominated by local elites and other groups have been excluded (Oyono 2004, Oyono 2005, Oyono *et al.* 2005). Women often have only a token representation on these committees and do not hold important decision-making roles (Tobith and Cuny 2006, Bandiaky and Tiani 2010). Traditional rules and norms also sometimes exclude women from accessing or being involved in managing forest resources. For example, in northwest province of Cameroon, women are prevented from planting or harvesting certain species of trees and are excluded from traditional sacred societies, like the *Kwifon*, which make major decisions about resource management (Fonjong 2008).

In the Congo Basin, forest agriculture is practiced with a system of shifting cultivation of which the main crops are food crops (Congo Basin Forest Partnership 2006, de



Wasseige *et al.* 2009). Men play a predominant role in opening the primary forest for cultivation while women generally prepare the soil, plant, tend and harvest the crops planted in successive years. Women play the dominant role in the production of food crops for household consumption as well as sale. While producing some food crops, men also engage in cultivation of cocoa and coffee as cash crops (Brown and Lapuyade 2001, Brown and Lapuyade 2001). These cash crops are normally grown in small-holder agroforestry systems containing a diversity of NTFPs (Sonwa *et al.* 2007, Sonwa *et al.* 2011).

## METHODOLOGY

This research was carried out in the Republic of Cameroon, the Central African Republic (CAR) and the Democratic Republic of Congo (DRC), three countries in Central Africa whose land surface area contains the greater majority of the Congo Basin forest (Figure 1). This research was conducted as part of a larger study on climate change mitigation and adaptation in the Congo Basin.

While there are many institutions at different levels, for the purposes of this research we focused on formal national, regional and international institutions because of their decision-making role in climate change or forest issues or because of the impact climate change might have on them in the future. The selected institutions represented various government ministries, regional and international institutions, the private sector, civil society and indigenous peoples (Table 1). The representatives of the institutions were chosen for interviews because of their knowledge or involvement in climate change and forestry issues. Where there was no active institutional participation on climate change issues, the positions of those chosen exposed them to the issues in general terms. Efforts were made to obtain interviews with the government ministries that had particular responsibility for issues related to gender but this was not possible in every country. Non-governmental organizations which had a stated mandate to address women's concerns were also targeted.

Semi-structured, open-ended interviews were conducted and one aspect of the interview process sought to ascertain the nature of the involvement of men and women in discussions related to climate change or the REDD+ process. Use of this qualitative approach in data collection allows the interviewer to use a guide to explore similar questions with all the institutional representatives, with the flexibility necessary to ask further questions in order to elucidate the subject (Patton 2002). In most cases, one respondent from each institution was interviewed; however, sometimes several representatives of an institution participated in a group interview. Twenty-seven interviews were conducted in Cameroon in September and October 2008. In December 2009, 26 interviews were conducted in CAR. Forty-five interviews were conducted in November 2009 and January and February 2010 in DRC. Interviews were conducted in French or English, depending on the preference of the person being interviewed and were

digitally recorded for later transcription. Informal conversations with key informants in each country provided additional information.

Interview data were supplemented by a review of relevant documents related to climate change, particularly the National Adaptation Program of Action (NAPA) and those related to the REDD+ preparation process of the Forest Carbon Partnership Facility (FCPF), a multi-donor initiative led by the World Bank. Only DRC and CAR had developed NAPAs. The REDD+ documents examined included the Readiness Planning Idea Note (R-PIN) for all three countries, the Readiness Preparation Proposal for CAR, the Readiness Preparation Plan of DRC (R-PP), and progress reports until June 2011.

## RESULTS

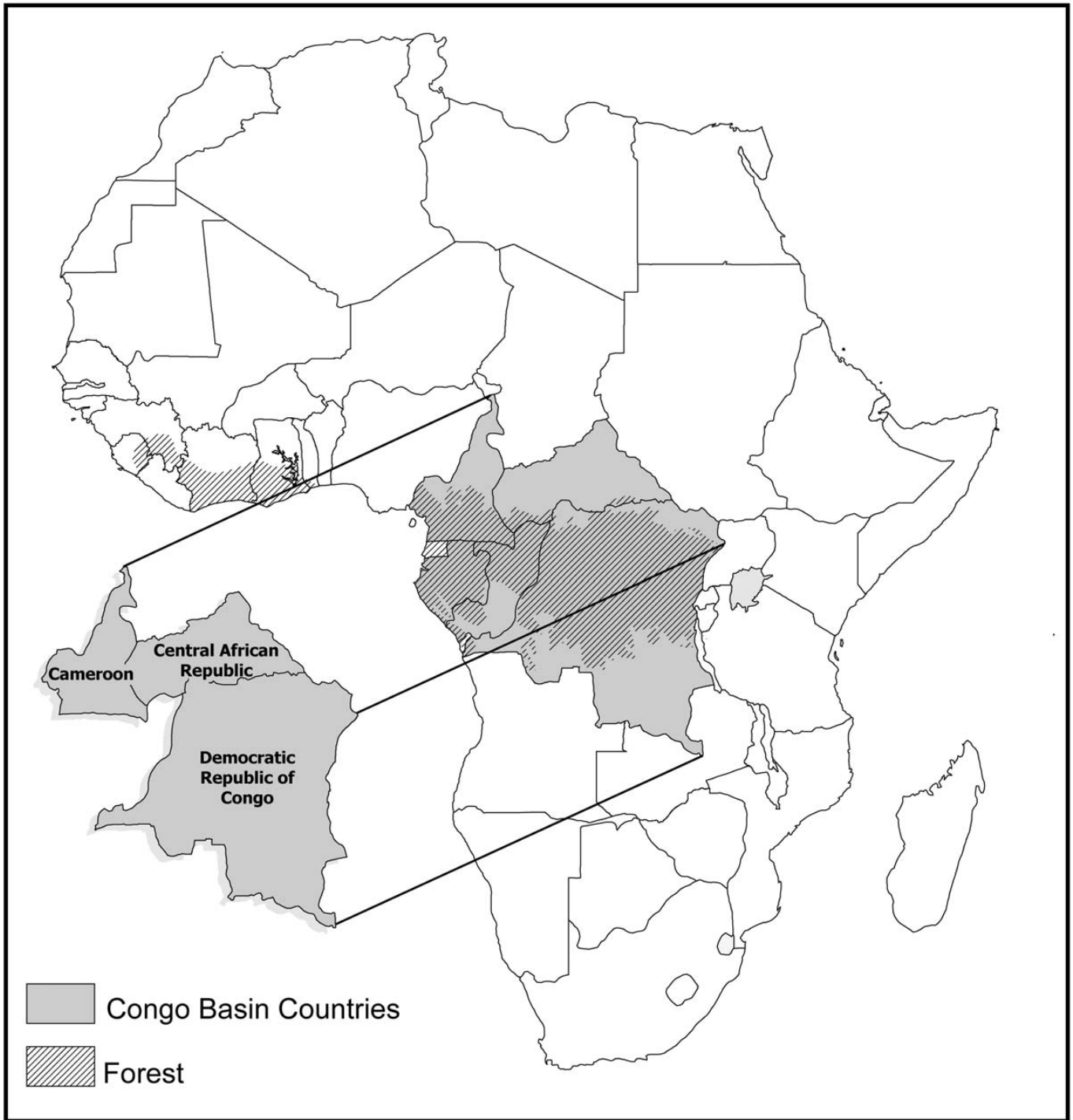
### **Inclusion of Gender Concerns in NAPA Documents and Process**

Review of the NAPA documents produced by CAR and DRC revealed that there was a stated concern to have a gender sensitive approach in the development of the NAPA and to climate change adaptation (Table 2). It was not clear, however, exactly what was meant by such an approach or how it would be fostered to ensure a gender sensitive approach to climate change adaptation. The NAPA for CAR states that it followed a participatory approach in development of the document including the involvement of all stakeholders, particularly at the community level. Specific mention is made of the need to involve both men and women at this level and the importance of the consideration of gender equity in the process. The strategies that were followed to facilitate an effective participatory process were not outlined (Minister of Water Forests Hunting Fishing and the Environment of the Central African Republic 2008). Women, particularly pregnant women, are named in the NAPA of CAR as being among those most vulnerable to the health impacts of climate change. The need to involve women's groups in health and sanitation projects was also mentioned. The NAPA of DRC notes that women are dependent on natural resources for their livelihood through agriculture, collection of forest products or fishing (Minister of Environment Democratic Republic of Congo 2006). The need to develop projects to build women's knowledge and capacity in these natural resource areas in order to improve their livelihood is stated. Women are identified as being disadvantaged in relation to opportunities for education or capacity-building related to improved techniques. The NAPA also states that such lack of access and resulting poverty among women is caused by institutions and customs which maintain married women's dependence on their husbands.

Interview results showed that government ministries with particular responsibility to address gender issues were not involved in climate change discussions. In DRC it was not evident that the Ministry of Gender, Family and Children was

FIGURE 1 Map of Africa showing location of the three research countries

ONLINE  
COLOUR  
ONLY



part of the National Climate Change Committee, which has representation from various departments and the President's office to discuss climate change issues. In DRC and CAR, they were not listed as being included in the development of the NAPA (Minister of Environment Democratic Republic of Congo 2006, Minister of Water Forests Hunting Fishing and the Environment of the Central African Republic 2008). While the active involvement of government 'gender' departments were not part of the development of these documents,

there did appear to be some involvement of women at the community level. In CAR, interview respondents said that the development of the NAPA followed the required participatory process and so input was sought at the community level including that of village women. It is difficult to tell how this was done, however, or determine if this was an in-depth participatory process for either local women or men. The NAPA process in DRC appeared to include very limited participation of any stakeholders at the community level.

TABLE 1 Summary of participating institutions by country

Country	Government	International NGO	National Organization	Private Sector*	International Organization	Other**
Cameroon	6	4	4	6	3	1
CAR	5	1	8	0	3	3
DRC	14***	5	8	4	7	1
Total	25	10	20	10	13	5

\* In Cameroon, six private forestry companies were interviewed. In DRC three private forestry companies as well as the General Secretary of the Forest Industries Federation, which represents most of the approximately 20 forestry companies in DRC, was interviewed. Information on the forestry sector in CAR was obtained from the internationally funded Forest Management Plan Implementation Support Program which provides support for the development of forest management plans. This is included under International Organizations.

\*\* Includes regional organizations and universities.

\*\*\* Since the Ministry of Environment, Nature Conservation and Tourism is composed of multiple branches, each of the six branches interviewed was counted as a separate institution.

TABLE 2 Summary of the inclusion of gender considerations in selected policy forums and processes

Policy Forum or Process	DRC	CAR	Cameroon
NAPA	+	+	NA
R-PIN	-	-	-
R-PP	+	+	NA
REDD+ Workshops	+	NA	NA
National Committee	-	NA	NA
'Gender' Departments	Not included in climate change or REDD+ processes	Not included in climate change or REDD+ processes	Not included in climate change or REDD+ processes

NAPA National Adaptation Program of Action; R-PIN Readiness Planning Idea Note; R-PP Readiness Preparation Plan or Proposal; NA Not Apply; + gender consideration included; - no evidence of inclusion of gender concerns.

### Inclusion of Gender Concerns in REDD+ Documents and Processes

Consideration of the different relationship of men and women to the forest did not appear to be part of the initial REDD+ readiness process in all three countries (Table 2). Government institutions with responsibility for gender were not listed as being part of the development of the R-PIN in CAR and Cameroon (Ministry of the Environment and Nature Protection of the Republic of Cameroon 2008, Ministry of Water Forests Hunting Fishing and the Environment of the Central African Republic 2009). Nor were they part of the development of the R-PIN and Readiness Preparation Plan (R-PP) in DRC (Ministry of Environment Nature Conservation and Tourism of the Democratic Republic of Congo 2008, Ministry of Environment Conservation of Nature and Tourism Democratic Republic of Congo 2010). However, the focal point for gender and the promotion of women, as well as representatives of several women's organizations are listed as participants in workshops that were held to develop the Readiness Preparation Proposal (R-PP) of CAR (Ministry of Water Forests Hunting Fishing and the Environment of the Central African Republic 2011).

While the importance of stakeholder involvement in the process is mentioned as part of the R-PINs, for the most part, gender concerns as a specific category was not evident. However, in the final R-PP for DRC it states that a Thematic Coordination Group (TCG) will be established to address various concerns, one of which relates to the barriers of the participation of women in the REDD+ process. The TCG will be charged to make sure that issues of gender are streamlined throughout the REDD+ readiness process to make sure that gender dimensions are addressed in community forest management and the distribution of carbon benefits (Ministry of Environment Conservation of Nature and Tourism Democratic Republic of Congo 2010). CAR's Readiness Preparation Proposal states that a gender sensitive approach needs to be fostered in the development of the Readiness Preparation Plan that considers gender differences in relation to the environment (Ministry of Water Forests Hunting Fishing and the Environment of the Central African Republic 2011). Specific strategies for inclusion of gender concerns in the REDD+ process in CAR or DRC were not elaborated.

The R-PINs in all three countries and the R-PP in DRC did not appear to seek input from the community level stakeholders in all three countries. However, some women's groups

were involved in the REDD+ workshops held at the provincial level in DRC which sought to inform people about REDD+. The REDD Readiness Progress Fact Sheet for DRC also indicates that the work of the various TCGs has begun and includes extensive involvement of key stakeholders (Democratic Republic of Congo 2011). Ten workshops were held in CAR as part of the process to develop the Readiness Preparation Proposal, however, all except one were held in the capital city which limits community participation. While representatives of women's organizations participated in these workshops, a statement of Central African Civil Society, including those groups representing women, criticized the process as not being representative of the views of all of civil society or indigenous peoples (Central African Republic Civil Society representatives 2011).

## DISCUSSION

The acknowledgement of the importance of taking a gender sensitive approach in NAPA documents and the later REDD+ documents are indicative of what has become a common concern in development circles. Inclusion of participatory and gender sensitive language is often dictated by donors. It reflects a general and important recognition that women and men differ in how they will be affected by climate change and REDD+ policies which has been developing in recent meetings of the UNFCCC (Hemmati and Rohr 2009). In development organisations, so called 'gender mainstreaming' grew out of a concern that women and gender issues not remain marginal to their ideas and practices, but should be central to them (Smyth 2007). It is also reflective of the recent framing of gender and environment concerns in relational and rights-based terms (Leach 2007). However, the strategies and processes for implementing such gender sensitive approaches in the Congo Basin remain vague. It is evident that in many cases the language has promised more than has been the reality. This is perhaps not surprising as Cornwall et al. (2007) caution that large bureaucracies tend to incorporate information on their own terms, privileging that which fits in with their own views of the world and shared analytical framework. The concept of 'gender' becomes a technical fix that is divorced from its historical, political and cultural context. The history of other policy processes shows, however, that despite the challenges of vagueness, it is only if gender language and aspects are integrated into documents, that there will be a chance to refer to them and hold governments or other institutions accountable to their commitments to gender equity (Hemmati and Rohr 2009).

The low level of gender consideration and women's participation in policy forums and processes related to climate change or REDD+ in Cameroon, CAR and DRC is not necessarily surprising given other studies which have highlighted women's low level of involvement in decision-making related to climate change or forest resources (Denton 2002, Tobith and Cuny 2006, Fonjong 2008, Hemmati and Rohr 2009, Bandiaky and Tiani 2010, Demetriades and Esplen 2010, Mwangi *et al.* 2011). Bandiaky and Tiani (2010) state that

women's exclusion from decision-making circles regarding forest management in Africa is only one of many examples of their exclusion from political life in general. This limited level of involvement of women in forestry management has been found in other countries as well (Agarwal 2001, Reed and Varghese 2007, Mwangi *et al.* 2011). While some increased level of women's involvement in climate change conferences at the international level has been observed, the overall influence of women in the climate change negotiations appears to be limited (Hemmati and Rohr 2009, Demetriades and Esplen 2010, Rietbergen-McCracken 2011).

While recent indications of a concern for gender equity and women's empowerment in international climate change documents address an important aspect of climate justice, it is also important to consider how such commendable goals can be accomplished. Studies on increasing the number of women in politics shows that there is not a direct connection between an increased number of women and pursuit of policies of gender equality (Cornwall and Goetz 2005). Just having more women involved will not necessarily lead to better, fairer and more responsive government. In Africa, while there is a gender gap in participation in the political sphere, there have been some examples where women's participation has had a transformative effect on politics in general (Coffe and Bolzendahl 2011). However, particularly in places, such as Africa, where masculinist political cultures mediate participation in the public sphere, women's influence is constrained (Cornwall and Goetz 2005). It is important to increase the number of women participating in various institutions in the Congo Basin, and that those government and non-governmental institutions that are charged with the gender file be explicitly brought into the climate change and REDD+ process. However, any consideration of increasing gender equity in climate change or REDD+ policies and processes needs go beyond just increasing the number of women at the table, to taking into account the power relations and cultural norms which influence the agency of actors once they are there.

The history of participatory development and resource management has shown that despite inclusive language, efforts are not always successful in engaging marginalized groups. Traditionally powerless groups, like women and minorities, are often limited in their access and effectiveness by informal rules, norms, and bias that act as barriers to participation in decision-making (Agarwal 2001, Odebode 2005, Tobith and Cuny 2006, Bandiaky and Tiani 2010). Reed and Varghese (2007) argue that attention needs to be paid not only to nominal participation, but also to effective participation that is influenced by informal processes and power relations in local and organizational culture. Studies on decentralization of forest management in Africa have stated the importance of making explicit the needs and interests of women within the agendas, budgets and development plans of decentralized institutions (Bandiaky and Tiani 2010). It is also important to assess formal and customary laws which may have an impact on women's participation and the implementation of policies (Aguilar and Sasvari 2009). Striving for



gender equity or women's empowerment in relation to climate change and REDD+ in the Congo Basin will require an examination of the power relations that sustain inequity to be part of the process (Cornwall 2007).

A concern for gender equity and women's empowerment should reflect not only a recognition of the right that both men and women have to participate in decision-making on climate change and forests, but also the diversity of knowledge that they bring. If both women and men are not involved in developing national adaptation and mitigation strategies this could undermine the effectiveness of projects at the local level. Studies have shown that women and men have distinct and valuable knowledge about how to adapt to the adverse impact of environmental degradation which can be leveraged to better prepare for climate change (Nelson and Stathers 2009, Demetriades and Esplen 2010). Increasing the diversity of knowledge that is available in policy forums and processes could ultimately improve the outcomes and increase the resilience of the social-ecological system. Some studies have shown that increased involvement of women in forest governance leads to better resource conservation and regeneration (Agarwal 2009, Agarwal 2009) and so it might be expected that further involvement of women in climate change and REDD+ discussions could improve the overall outcomes. A study in Cameroon found that women have many assets to contribute to the management of community forests (Brown *et al.* 2007). While Mwangi *et al.* (2011) caution against portraying women as 'natural conservators', their study does suggest that mixed groups responsible for forest management offer an avenue for exploiting the strengths of women and men, while tempering their individual shortcomings.

As mitigation and adaptation to climate change ultimately happens at a local level, explicit attempts to increase participation at the local level must also be made. Effective participation in natural resource management has been shown to be increased by deliberate facilitation of the social learning process of institutional change (Röling and Jiggins 1998, Buck *et al.* 2001, Buck 2002, Brown *et al.* 2008, Streck *et al.* 2008, Brown *et al.* 2010). Such facilitation requires a diversity of approaches that include gender-sensitive awareness campaigns involving the design of information and communication channels, the timing and location of meetings, specific financing, as well as training and capacity-building programs (Odebode 2005, Tobith and Cuny 2006, Fonjong 2008, Aguilar and Sasvari 2009, Gurung and Quesada 2009, Bandiaky and Tiani 2010). Institutional change does not happen quickly and so investment in the process is needed in the long term.

An important limiting aspect of women's involvement in forest management decision-making at the local level is their insecure access to land and resources (Fonjong 2008, Bandiaky and Tiani 2010). In the Congo Basin, as in many African countries, the state is the sole guardian and chief manager of all forests in the country (German *et al.* 2010). In many places the traditional system of inheritance still predominates on a daily basis, which generally favours men (Diaw 1997, Tiani 2001, Fonjong 2008). Therefore, increased consideration of gender interests in the REDD+ process

should necessitate land tenure reform that takes aspects of gender into consideration. The potential of REDD+ to address broad issues of tenure concerns in all three countries has been mentioned in other research (Cotula and Mayers 2009, Brown *et al.* 2010, Brown *et al.* 2011). This will be challenging and so there is a need to incorporate a gender analysis from the beginning in any redesign of the system (The World Bank *et al.* 2009).

With a focus on gender equity and women's empowerment it is also important to recognize that women are not a homogeneous group (Cornwall 2003, Arora-Jonsson 2011). As with men, women differ on the basis of socio-economic status, ethnicity, education, household and family. The construct of 'women' also neglects the interests women have in common with some of the men in their lives, whether as member of generations, families or economic groups as well as the lack of common interest women may experience with other women (Cornwall 2007). Ensuring increased participation of women in climate change policy debates does not guarantee that issues faced by women in poverty will be addressed (Denton 2002). Agarwal (2009) points out that differences in forest management outcomes can be a reflection of differing characteristics and assets of different groups of women involved in the process. Given their reliance on shifting cultivation for food production and the harvesting of NTFPs, REDD+ policies could reduce women's effective access to forest resources. Therefore, care will need to be taken in ensuring that the women most affected by climate change and REDD+ outcomes are part of decision-making at all levels and that their agency is fostered.

While increasing gender equity and women's empowerment in relation to the climate change and the REDD+ process is the subject of this study, it is important to recognize that in the move toward more equitable, appropriate and effective climate change policies and programs, other forms of disadvantage and exclusion based on power, class, age and ethnicity must also be overcome (Demetriades and Esplen 2008, Demetriades and Esplen 2010). There is a need to see women and men as capable agents in mitigating and adapting to climate change without losing track of the power relations involved (Arora-Jonsson 2011). Therefore, rather than the "add women and stir" approach, strategies and tactics that take account of the power effects of difference and combine advocacy with processes that enable all people to recognize and use their agency are needed (Cornwall 2003). In this way women, and other marginalized groups, will have the skills and confidence to contribute to the climate change and REDD+ process at the local, national, regional and international levels. It will address equity and fairness concerns and ultimately increase the potential success of these important policies and programs at all levels.

## CONCLUSION

Increasing global average air and ocean temperatures will have an effect on those in the global south who are already

poor and marginalized. African populations are expected to be more vulnerable because of a higher than the global average degree of change, high levels of dependence on natural resources, and a low degree of adaptive capacity. Vulnerability to climate change is also a function of differences in gender and, while it is a contested concept, many feel that poor, rural women will be most vulnerable due to a dependence on natural resources, gendered divisions of labour, physical mobility and access to decision-making at household and community levels. Women are also dependent on forest resources as a source of livelihood and will be impacted by a changing climate as well as new international policies on REDD+. However, they often do not control land and related forest resources and are discriminated against in the provision of services. Recognition of the vast carbon stores of the Congo Basin rainforest of Central Africa has increased its profile in international mechanisms to address mitigation of climate change through reduction of deforestation and forest degradation. Given the differences in the relationship of men and women to forest resources in the Congo Basin, and its importance for climate change adaptation and mitigation, it is important to understand how to foster gender equity in decision-making and benefiting from such important policy discussions. This research sought to ascertain if and how gender considerations were being integrated into discussions or decision-making on climate change and REDD+ in three countries; Cameroon, DRC and CAR. A qualitative approach in data collection was followed and included conducting semi-structured interviews with institutions of the state, the private sector, civil society and indigenous peoples, as well as a review of climate change and REDD+ documents.

Results indicated that while NAPA documents stated the need for a gender sensitive approach to climate change adaptation, it did not appear that there had been broad participation in the development of the documents. Any strategies to address gender concerns were vague. For the most part, government departments with a mandate to address issues of gender were not included in climate change and REDD+ policy forums and processes. Initial REDD+ documents did not address gender equity concerns but development of some later documents have indicated a concern to increase the participation of women in the process. The R-PP of DRC pledges to make sure that issues of gender are streamlined throughout the REDD+ readiness process to make sure that gender dimensions are addressed in community forest management and the distribution of benefits. While inclusion of language to address a concern for gender equity and women's empowerment in climate change and REDD+ policies and processes is welcome, translating it into reality is a complex process. Approaches, strategies and tactics that take into account the power effects of difference and combine advocacy with processes that enable all people to recognize and use their agency are needed. This will ultimately lead to better outcomes for both adaptation and mitigation of climate change.

## ACKNOWLEDGEMENTS

I would like to thank all the participating institutions for giving time from their busy schedules for the interviews. I also appreciate the help of the research assistants in each country. I am also grateful to three anonymous reviewers for their valuable comments which have substantially improved this paper. Helpful comments were also received from the panellists and participants at the 2011 Colorado Conference on Earth System Governance: Crossing Boundaries and Building Bridges. This research was conducted under the International Development Research Centre (IDRC) funded Congo Basin Forest Climate Change Adaptation project of the Center for International Forestry Research and a Social Sciences and Humanities Research Council of Canada Postdoctoral Fellowship. The research was also supported by the Global Environmental Change Group in the Department of Geography at the University of Guelph.

## REFERENCES

- ADGER, W.N. 2003. Social capital, collective action, and adaptation to climate change. *Economic Geography* **79**(4): 387–404.
- AGARWAL, B. 2001. Participatory exclusions, community forestry, and gender: An analysis for South Asia and a conceptual framework. *World Development* **29**(10): 1623–1648.
- AGARWAL, B. 2009. Gender and forest conservation: The impact of women's participation in community forest governance. *Ecological Economics* **68**: 2785–2799.
- AGARWAL, B. 2009. Rule making in community forestry institutions: The difference women make. *Ecological Economics* **68**: 2296–2308.
- AGUILAR, L. and SASVARI, A. (2009) Gender equality within the REDD and REDD-plus framework. 10.
- ANGELSEN, A. 2008. *Moving Ahead with REDD: Issues, Options and Implications*. Bogor, Indonesia, CIFOR.
- ANNECKE, W. 2002. Climate change, energy-related activities and the likely social impacts on women in Africa. *International Journal of Global Environmental Issues* **2**(3/4): 206–222.
- ARORA-JONSSON, S. 2011. Virtue and vulnerability: Discourses on women, gender and climate change. *Global Environmental Change* **21**(2): 744–751.
- AWONO, A., NDOYE, O. and PREECE, L. 2010. Empowering women's capacity for improved livelihoods in non-timber forest product trade in Cameroon. *International Journal of Social Forestry* **3**(2): 151–163.
- BANDIAKY, S. and TIANI, A.-M. 2010. Gender representation and participation in decentralized forest management: Case studies from Cameroon and Senegal. *Governing Africa's Forests in a Globalized World*. L.A. German, A. Karsenty and A.M. Tiani. London, Earthscan: 144–159.
- BIERMANN, F., BETSILL, M.M., GUPTA, J., KANIE, N., LEBEL, L., LIVERMAN, D., SCHROEDER, H. and SIEBENHUNER, B. 2009. Earth System Governance:

- People, Places, and the Planet. *Earth System Governance Project Report No. 1*. Bonn, International Human Dimensions Programme on Global Environmental Change: 148.
- BONAN, G.B. 2008. Forests and climate change: forcings, feedbacks, and the climate benefits of forests. *Science* **320**: 1444–1449.
- BROWN, D.R., DETTMAN, P., RINAUDO, T., TEFERA, H. and TOFU, A. 2010. Poverty alleviation and environmental restoration using the Clean Development Mechanism: A case study from Humbo, Ethiopia. *Environmental Management* on line 10.1007/s00267-010-9590-3.
- BROWN, H.C.P., BUCK, L. and LASSOIE, J.P. 2008. Governance and social learning in the management of non-wood forest products in community forests in Cameroon. *International Journal of Agricultural Resources, Governance and Ecology* **7**(3): 256–275.
- BROWN, H.C.P. and LASSOIE, J.P. 2010. The interaction between market forces and management systems: A case study of non-wood forest products in the humid forest zone of Cameroon. *International Forestry Review* **12**(1): 13–26.
- BROWN, H.C.P., NKEM, J.N., SONWA, D.J. and BELE, Y. 2010. Institutional adaptive capacity and climate change response in the Congo Basin forests of Cameroon. *Mitigation and Adaptation Strategies for Global Change* **15**: 263–282.
- BROWN, H.C.P., SMIT, B., SONWA, D.J., SOMORIN, O.A. and NKEM, J.N. 2011. Institutional perspectives of opportunities and challenges of REDD+ in the Congo Basin. *The Journal of Environment & Development Under review*.
- BROWN, H.C.P., WOLF, S.A. and LASSOIE, J.P. 2007. An analytic approach to structuring co-management of community forests in Cameroon. *Progress in Development Studies* **7**(2): 135–154.
- BROWN, K. and LAPUYADE, S. 2001. Changing gender relationships and forest use. *People Managing Forests: The Links between Human Well-being and Sustainability*. C.J.P. Colfer and Y. Byron. Washington, D.C., RFF Press & CIFOR: 90–115.
- BROWN, K. and LAPUYADE, S. 2001. A livelihood from the forest: Gendered visions of social, economic and environmental change in Southern Cameroon. *Journal of International Development* **13**: 1131–1149.
- BUCK, L. 2002. Facilitating the co-evolution of land use practice and institutions: Insights from an agroforestry initiative in Northeastern USA. *Wheelbarrows full of frogs: Social learning in rural resource management*. C. Leeuwis and R. Pyburn. Assen, The Netherlands, Koninklijke Van Gorcum: 349–363.
- BUCK, L., WOLLENBERG, E. and EDMUNDS, D. 2001. Social learning in the collaborative management of community forests: Lessons from the field. *Social Learning in Community Forests*. E. Wollenberg, D. Edmunds, L. Buck, J. Fox and S. Brodt. Jakarta, Indonesia, CIFOR: 1–20.
- CANADELL, J.G. and RAUPACH, M.R. 2008. Managing forests for climate change mitigation. *Science* **320**: 1456–1457.
- CENTRAL AFRICAN REPUBLIC CIVIL SOCIETY REPRESENTATIVES. 2011. Statement of Central African Civil Society concerning the REDD Readiness Preparation Proposal (R-PP) of the Central African Republic. Bangui: 5.
- CHANT, S. 2010. Gendered poverty across space and time: Introduction and overview. *The International Handbook of Gender and Poverty: Concepts, Research, Policy*. S. Chant. Cheltenham, UK, Edward Elgar: 1–26.
- CHITIGA, M. and NEMARUNDWE, N. 2003. Policies and gender relationships and roles in the miombo woodland region of Southern Africa. *Policies and Governance Structures in Woodlands of Southern Africa*. G. Kowero, B.M. Campbell and U.R. Sumaila. Jakarta, Indonesia, CIFOR: 186–211.
- CLÉMENÇON, R. 2008. The Bali road map: A first step on the difficult journey to a post-Kyoto protocol agreement. *The Journal of Environment and Development* **17**(1): 70–94.
- COFFE, H. and BOLZENDAHL, C. 2011. Gender gaps in political participation across sub-Saharan African nations. *Soc Indic Res* **102**(245–264).
- CONGO BASIN FOREST PARTNERSHIP. 2006. The Forests of the Congo Basin: State of the Forest 2006.
- CORNWALL, A. 2003. Whose voices? Whose choices? Reflections on gender and participatory development. *World Development* **31**(8): 1325–1342.
- CORNWALL, A. 2007. Myths to live by? Female solidarity and female autonomy reconsidered. *Development and Change* **38**(1): 149–168.
- CORNWALL, A. 2008. Unpacking ‘participation’ models, meanings and practices. *Community Development Journal* **43**(3): 269–283.
- CORNWALL, A. and GOETZ, A.M. 2005. Democratizing democracy: Feminist perspectives. *Democratization* **12**(5): 783–800.
- CORNWALL, A., HARRISON, E. and WHITEHEAD, A. 2007. Gender myths and feminist fables: The struggle for interpretive power in gender and development. *Development and Change* **38**(1): 1–20.
- COTULA, L. and MAYERS, J. 2009. *Tenure in REDD: Start-point or afterthought?* London, International Institute for Environment and Development.
- DE WASSEIGE, C., DEVERS, D., DE MARCKEN, P., EBA’A ATYI, R., NASI, R. and MAYAUX, P. 2009. Les Forêts du Bassin du Congo - État des Forêts 2008: 426.
- DEMETRIADES, J. and ESPLÉN, E. 2008. The gender dimensions of poverty and climate change adaptation. *IDS Bulletin* **39**(4): 24–31.
- DEMETRIADES, J. 2010. The gender dimensions of poverty and climate change adaptation. *Social Dimensions of Climate Change: Equity and Vulnerability in a Warming World*. R. Mearns and A. Norton. Washington, DC, The World Bank: 133–143.
- DEMOCRATIC REPUBLIC OF CONGO. 2011. REDD Readiness Progress Fact Sheet. Kinshasa: 3.
- DENTON, F. 2002. Climate change vulnerability, impacts, and adaptation: Why does gender matter? *Gender and Development* **10**(2): 10–20.



- DEPLEDGE, J. 2008. High politics, high theatrics in Bali. *Environmental Policy and Law* **38**(1/2): 14–19.
- DIANZINGA, S. and YAMBO, P. 1992. Les femmes de la forêt: utilisation et conservation des ressources forestières autre que le bois. *Conservation of West and Central African Rainforests*. K. Cleaver, M. Munasinghe, M. Dyson et al. Washington, DC, The World Bank/IUCN: 233–238.
- DIAW, M.C. 1997. Si, Nda Bot and Ayong: Shifting cultivation, land use and property rights in Southern Cameroon, Rural Development Forestry Network: 21e: 1–28.
- DIXON, R.K., SMITH, J. and GUILL, S. 2003. Life on the edge: Vulnerability and adaptation of African ecosystems to global climate change. *Mitigation and Adaptation Strategies for Global Change* **8**(2): 93–113.
- DKAMELA, G.P. 2001. Les Institutions Communautaires de Gestion des Produits Forestiers Non-Ligneux dans les Villages Périphériques de la Réserve Biosphère du Dja. Kribi, Cameroon, The Tropenbos-Cameroon Program: 72.
- DUVEILLER, G., DEFOURNY, P., DESCLÉE, B. and MAYAUX, P. 2008. Deforestation in Central Africa: Estimates at regional, national and landscape levels by advanced processing of systematically-distributed Landsat extracts. *Remote Sensing of Environment* **112**: 1969–1981.
- EASTAUGH, C. 2008. Adaptations of forests to climate change: A multidisciplinary review. Vienna, IUFRO Secretariat: 18.
- EASTAUGH, C. 2010. Climate Change Impacts on African Forests and People Vienna, Austria, International Union of Forest Research Organizations. **24**: 99.
- FONJONG, L.N. 2008. Gender roles and practices in natural resource management in the North West province of Cameroon. *Local Environment* **13**(5): 461–475.
- FRY, I. 2008. Reducing Emissions from Deforestation and Forest Degradation: Opportunities and Pitfalls in Developing a New Legal Regime. *RECIEL* **17**(2): 166–182.
- GERMAN, L.A., KARSENTY, A. and TIANI, A.M., Eds. 2010. *Governing Africa's Forests in a Globalized World*. The Earthscan Forest Library. London, UK, Earthscan and CIFOR.
- GURUNG, J.D. and QUESADA, A. 2009. Gender-Differentiated Impacts of REDD to be addressed in REDD Social Standards, Women Organizing for Change in Agriculture and Natural Resource Management and Global Gender and Climate Alliance: 13.
- GUYER, J.I. 1984. *Family and Farm in Southern Cameroon*. Boston, Boston University.
- HANSEN, M.C., STEHMAN, S.V. and POTAPOV, P.V. 2010. Quantification of global gross forest cover loss. *PNAS* **107**(19): 8650–8655.
- HEMMATI, M. and RÖHR, U. 2009. Engendering the climate-change negotiations: Experiences, challenges and steps forward. *Gender and Development* **17**(1): 19–32.
- HOARE, A.L. 2007. *Clouds on the Horizon: The Congo Basin Forests and Climate Change*. London, The Rainforest Foundation: 26.
- HUMPHREYS, D. 2008. The politics of 'Avoided Deforestation': historical context and contemporary issues. *International Forestry Review* **10**(3): 433–442.
- INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE (IPCC). 2007. *Climate Change 2007: Synthesis Report*. Cambridge, Cambridge University Press.
- KRONSELL, A. 2005. Gender, power and European integration theory. *Journal of European Public Policy* **12**(6): 1022–1040.
- LEACH, M. 2007. Earth mother myths and other ecofeminist fables: How a strategic notion rose and fell. *Development and Change* **38**(1): 67–85.
- LUTTRELL, C., SCHRECKENBERG, K. and PESKETT, L. 2007. The implications of carbon financing for pro-poor community forestry, Forestry Briefing 14. *Forest Policy and Environment Programme, Overseas Development Institute, Forestry Briefings Series*. London: 1–5.
- MERIDIAN INSTITUTE. 2009. Reducing Emissions from Deforestation and Degradation (REDD): An Options Assessment Report, Prepared for the Government of Norway by Arild Angelsen, Sandra Brown, Cyril Loisel, Leo Peskett, Charlotte Streck and Daniel Zarin.
- MINISTER OF ENVIRONMENT DEMOCRATIC REPUBLIC OF CONGO (2006) National Adaptation Program of Action to Climate Change of the Democratic Republic of Congo. 96
- MINISTER OF WATER FORESTS HUNTING FISHING AND THE ENVIRONMENT OF THE CENTRAL AFRICAN REPUBLIC. 2008. National Adaptation Program of Action to Climate Change. Bangui: 67.
- MINISTRY OF ENVIRONMENT CONSERVATION OF NATURE AND TOURISM DEMOCRATIC REPUBLIC OF CONGO (2010) Readiness Plan for REDD 2010–2012.
- MINISTRY OF ENVIRONMENT NATURE CONSERVATION AND TOURISM OF THE DEMOCRATIC REPUBLIC OF CONGO. 2008. Forest Carbon Partnership Facility (FCPF) Readiness Planning Idea Note (R-PIN): 34.
- MINISTRY OF THE ENVIRONMENT AND NATURE PROTECTION OF THE REPUBLIC OF CAMEROON. 2008. The Forest Carbon Partnership Facility (FCPF) Readiness Planning Idea Note (R-PIN). Yaoundé, Cameroon: 31.
- MINISTRY OF WATER FORESTS HUNTING FISHING AND THE ENVIRONMENT OF THE CENTRAL AFRICAN REPUBLIC. 2009. Forest Carbon Partnership Facility (FCPF) Readiness Planning Idea Note (R-PIN): 34.
- MINISTRY OF WATER FORESTS HUNTING FISHING AND THE ENVIRONMENT OF THE CENTRAL AFRICAN REPUBLIC. 2011. Forest Carbon Partnership Facility (FCPF) Proposition de préparation à la readiness (R-PP). Bangui, CAR: 150.
- MWANGI, E., MEINZEN-DICK, R. and SUN, Y. 2011. Gender and sustainable forest management in East Africa and Latin America. *Ecology and Society* **16**(1): 17.



- NDOYE, O., RUIZ PÉREZ, M. and EYEBE, A. 1997/98. The markets of non-timber forest products in the humid forest zone of Cameroon. *Rural Development Forestry Network Paper 22c*(Winter): 1–20.
- NELSON, V., MEADOWS, K., CANNON, T., MORTON, J. and MARTIN, A. 2002. Uncertain predictions, invisible impacts, and the need to mainstream gender in climate change adaptations. *Gender and Development* **10**(2): 51–59.
- NELSON, V. and STATHERS, T. 2009. Resilience, power, culture, and climate: A case study from semi-arid Tanzania, and new research directions. *Gender and Development* **17**(1): 81–94.
- NEUMANN, R.P. and HIRSCH, E. 2000. *Commercialisation of Non-Timber Forest Products: Review and Analysis of Research*. Bogor, Indonesia, CIFOR.
- NEWELL, P. 2009. Varieties of CDM governance: some reflections. *The Journal of Environment & Development* **18**(4): 425–435.
- NKEM, J.N., KALAME, F.B., IDINOBA, M., SOMORIN, O.A., NDOYE, O. and AWONO, A. 2010. Shaping forest safety nets with markets: Adaptation to climate change under changing roles of tropical forests in Congo Basin. *Environmental Science & Policy* **13**: 498–508.
- NOVOTNY COUTO PEREIRA, S. 2010. Payment for environmental services in the Amazon forest: how can conservation and development be reconciled? *The Journal of Environment & Development* **19**(2): 171–190.
- ODEBODE, S.O. 2005. Gender issues in community forestry: Lessons from Nigeria. *Journal of Food, Agriculture and Environment* **3**(2): 307–312.
- OYONO, P.R. 2004. Institutional Deficit, Representation, and Decentralized Forest Management in Cameroon. *Environmental Governance in Africa Working Papers*. J.C. Ribot. Washington, D.C., World Resources Institute: 1–36.
- OYONO, P.R. 2005. From diversity to exclusion for forest minorities in Cameroon. *The Equitable Forest: Diversity and Community in Sustainable Resource Management*. C.J.P. Colfer. Washington, DC, Resources for the Future/CIFOR: 113–130.
- OYONO, R.P., KOUNA, C. and MALA, W. 2005. Benefits of forests in Cameroon. Global structure, issues involving access and decision-making hiccoughs. *Forest Policy and Economics* **7**(3): 357–368.
- PATTON, M.Q. 2002. *Qualitative Research and Evaluation Methods*. Thousand Oaks, Sage Publications.
- REED, M.G. and VARGHESE, J. 2007. Gender representation on Canadian forest sector advisory committees. *The Forestry Chronicle* **83**(4): 515–525.
- RICHARDS, M. and JENKINS, M. 2007. Potential and Challenges of Payments for Ecosystem Services from Tropical Forests, Forestry Briefing 16. *Forest Policy and Environment Programme, Overseas Development Institute, Forestry Briefing Series*. London: 8.
- RIETBERGEN-MCCRACKEN, J., EDITOR. 2011. Gender in Cancun. *Arborvitae*, IUCN. **43**: 3.
- RIGHTS AND RESOURCES INITIATIVE. 2008. Seeing People Through the Trees: Scaling Up Efforts to Advance Rights and Address Poverty, Conflict and Climate Change. Washington, DC, Rights and Resources Initiative: 56.
- ROCHELEAU, D., THOMAS-SLAYTER, B. and WANGARI, E., Eds. 1996. *Feminist Political Ecology*. International Studies of Women and Place. London, Routledge.
- RÖLING, N.G. and JIGGINS, J. 1998. The ecological knowledge system. *Facilitating Sustainable Agriculture*. N.G. Röling and M.A.E. Wagemakers. Cambridge, Cambridge University Press: 283–311.
- RUIZ PÉREZ, M., NDOYE, O., EYEBE, A. and LEMA NGONO, D. 2002. A gender analysis of forest products markets in Cameroon. *Africa Today* **49**(2): 97–126.
- RUSSELL, D. and TCHAMOU, N. 2001. Soil fertility and the generation gap: The Bënë of southern Cameroon. *People Managing Forests: The Links between Human Well-being and Sustainability*. C.J.P. Colfer and Y. Byron. Washington, DC, RFF & CIFOR: 229–249.
- SMYTH, I. 2007. Talking of gender: words and meanings in development organizations. *Development in Practice* **17**(4–5): 582–588.
- SONWA, D.J., NKONGMENECK, B.A., WEISE, S.F., M., T., ADESINA, A.A. and JANSSENS, M.J.J. 2007. Diversity of plants in cocoa agroforests in the humid forest zone of southern Cameroon. *Biodiversity Conservation* **16**: 2385–2400.
- SONWA, D.J., WALKER, S., NASI, R. and Kanninen, M. 2011. Potential synergies of the main current forestry efforts and climate change mitigation in Central Africa. *Sustainability Science* **6**(1): 59–67.
- STRECK, C., ROBERT, O.S., JANSON-SMITH, T. and TARASOFSKY, R., Eds. 2008. *Climate Change and Forests: Emerging Policy and Market Opportunities*. London, Royal Institute of International Affairs.
- TERRY, G. 2009. No climate justice without gender justice: an overview of the issues. *Gender and Development* **17**(1): 5–18.
- THE WORLD BANK. 2004. *Sustaining Forests: A Development Strategy*. Washington, DC, The World Bank.
- THE WORLD BANK. 2008. *Forests Sourcebook: Practical Guidance for Sustaining Forests in Development Cooperation*. Washington, DC, The World Bank.
- THE WORLD BANK, FOOD AND AGRICULTURAL ORGANIZATION OF THE UNITED NATIONS (FAO) and INTERNATIONAL FUND FOR AGRICULTURAL DEVELOPMENT. 2009. *Gender in Agriculture Sourcebook*. Washington, DC, The World Bank.
- TIANI, A.M. 2001. The place of rural women in the management of forest resources: The case of Mbalmayo and neighboring areas of Cameroon. *People Managing Forests: The Links between Human Well-being and Sustainability*. C.J.P. Colfer and Y. Byron. Washington, D.C., RFF Press & CIFOR: 72–89.
- TIANI, A.M., AKWAH, G. and NGUIBOURI, J. 2004. Women in Campo-Ma'an National Park: Uncertainties and adaptations in Cameroon. *The Equitable Forest: Diversity and Community in Sustainable Resource Management*. C.J.P. Colfer. Washington, DC, Resources for the Future/CIFOR: 131–149.

- TIMKO, J.A., WAEBER, P.O. and KOZAK, R.A. 2010. The socio-economic contribution of non-timber forest products to rural livelihoods in sub-Saharan Africa: Knowledge gaps and new directions. *International Forestry Review* **12**(3): 284–294.
- TOBITH, C. and CUNY, P. 2006. Genre et foresterie communautaire au Cameroun. Quelles perspectives pour les femmes? *Bois et Forêts des Tropiques* **289**(3): 17–26.
- TOULMIN, C. 2009. *Climate Change in Africa*. London, Zed Books.
- UN-REDD PROGRAMME. 2010. The United Nations Collaborative Programme on Reducing Emissions from Deforestation and Forest Degradation in Developing Countries. Retrieved December 7, 2010, from <http://www.un-redd.org/Home/tabid/565/Default.aspx>.
- UN-REDD PROGRAMME. 2011. UN-REDD Programme Social & Environmental Principles and Criteria, version 1. Retrieved April 22, 2011, from [http://www.un-redd.org/Newsletter17/Social\\_Environmental\\_Principles/tabid/54002/Default.aspx](http://www.un-redd.org/Newsletter17/Social_Environmental_Principles/tabid/54002/Default.aspx).
- UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE (UNFCCC). 2009. A Quick Guide to Reducing Emissions from Deforestation in Developing Countries: Approaches to Stimulate Action as an Agenda Item under the UNFCCC. Retrieved May 30, 2009, from [http://unfccc.int/methods\\_science/redd/items/4615.php](http://unfccc.int/methods_science/redd/items/4615.php).
- UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE (UNFCCC). 2011. Cancun Agreements. Retrieved June 27, 2011, from [http://unfccc.int/meetings/cop\\_16/cancun\\_agreements/items/6005.php](http://unfccc.int/meetings/cop_16/cancun_agreements/items/6005.php).
- VAN DIJK, J.F.W. 1999. Non-Timber Forest Products in the Bipindi-Akom II Region, Cameroon: A Socio-Economic and Ecological Assessment. Kribi, Cameroon, The Tropenbos-Cameroon Program: 197.