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Can climate finance achieve gender equity in developing countries?

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Abstract: We develop the climate finance-gender equity framework in this paper and use the ‘contextual-procedural-distributive’ equity as a lens of analysis to examine how climate finance helps challenge, and reinforce, gender inequities in the mitigation, adaptation and disaster management strategies. Focusing on the examples of tree-planting, smart-agriculture and disaster information dissemination projects, this paper argues that climate finance can achieve gender equity if three aspects are critically considered: (1) how different incentives and preferences, between men and women, are shaped by their livelihood experiences and priorities, and what factors enable, and restrict, their access to resources; (2) how formal and informal participatory arena offers a genuine space for women, and men, to make decisions that empower them; and (3) how women’s practical and strategic needs are met and the contradictions resolved. This paper also suggests that climate finance needs to address and challenge unequal socio-political arrangements, such as access to land rights, that help perpetuate gender inequities.

Keywords: climate finance, gender equity, access, land rights, Green Climate Fund

JEL classification: A14, B53, Q2, Q50

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1 Introduction

Climate finance is generally known as ‘the transfer of funds from the North to the South to help developing countries adapt to the unavoidable impacts of climate change, reduce greenhouse gas emissions and embark on clean energy development paths’ (Friends of the Earth 2010: 1). Climate Policy Initiative estimates that annual global climate flows reached US\$364 billion in 2012, rising from US\$97 billion in 2011 (Buchner et al. 2012).

The key objective of this paper is to explore the conceptual links between climate finance and gender equity. To be specific, it raises questions as to whether climate finance can be mobilized to tackle climate change and to address gender inequities simultaneously in the process. Literature points out that climate change and gender issues are intertwined (Paavola and Adger 2002). Tackling one, without paying attention to the other, could undermine the effectiveness of the interventions. Furthermore, climate resources are not gender-neutral. How they are allocated and distributed shape, and are shaped by, social institutions and politics that influence the livelihoods of men and women as well as their responses to changing climate (Bird et al. 2013).

To achieve these goals, conceptually, this paper draws on the equity framework by McDermott et al. (2013). Their framework focuses on three dimensions of equity: contextual, procedural and distributive, and examines how existing socio-economic and political conditions, governance structures and participatory processes mediate the distribution of costs and benefits. We find this framework highly relevant to our notion of gender equity. The contextual equity touches on how the social positions of men and women affect their entitlements to climate finance and how different actors negotiate the access. The procedural equity scrutinizes the process of public participation and analyses how previously-marginalized women and men make decisions. In contrast, the distributive equity examines whether the practical and strategic needs of women and men are met. Practical needs are a response to immediate perceived necessity, whereas strategic needs address the structural causes that lead to subordination and inequalities (Moser 1993).

Methodologically, in order to explore the mechanisms and outcomes of how gender relationships are evolved and reproduced when climate finance is channelled to the three climate change-related strategies of mitigation, adaptation and disaster management, we pick up tree-planting and forest-monitoring as an exemplar of mitigation, agriculture as an exemplar of adaptation, and information communication as an exemplar in disaster management. Through these case studies, we want to have a deep, detailed and contextualized understanding of gender dynamics and negotiation at the intra-household and community levels. In the latter section, we will scale up our investigation and look into three major climate funds: Climate Investment Fund, Adaptation Fund, and Global Environment Facility. The purpose is to evaluate if these funds help achieve gender equity at the organizational level. By combining the local and organizational levels of our analysis, we will make some suggestions and policy implications for the Green Climate Fund, since it is the first climate fund which underlines gender sensitivity as one of its key guiding principles.

The structure of this paper is as follows: it will first introduce the gender equity conceptual framework. It will then draw on mitigation, adaptation and disaster management case studies and examine the gender dynamics and outcomes through the contextual- procedural-distributive equity framework. This is followed by the organizational analysis of the three major climate funds. It will conclude by drawing some lessons for the implementation of the Green Climate Fund.

2 Conceptual framework

This paper draws on the equity framework by McDermott et al. (2013). Although the framework is originally applied in the context of payments for ecosystem services, it is very relevant to our conceptual links of climate finance and gender equity. In particular, the authors build on Sen's (1989) notion of capability and underline that it is people's abilities to convert resources that matters to any development interventions. For us, climate finance is one of many resources that relates to people's livelihoods. How it interacts with other resources, such as social, institutional, economic and legal, is equally important. Furthermore, climate finance is a means to achieving goals, such as gender equity. Questions, as to how differentials between men and women affect their command of resources and whether the distribution of climate resources challenges, or reinforce, gender discrimination, need to be answered.

There are three levels of analysis in the equity framework of McDermott et al. (2013); they are: contextual, procedural and distributive. Contextual equity touches on the capacities of different actors and examines how existing social and institutional conditions shape people's access to resources. The authors pay special attention to the processes of how the 'web of institutions', such as family ties, customary practices and community relations, interact with market networks, labour, technology and laws.

Procedural equity is concerned with decision-making process in participatory space. It examines the nature of authority structures and the rules of engagement. It highlights inclusion/exclusion, representation and accountability. Distributive equity explores how costs, benefits and risks are shared amongst group members and how fair the distribution process is.

The equity framework also seriously considers agency-structure duality. It examines how agents make use of their capabilities, resources and rights to make strategic decisions. Simultaneously, it examines how (un)equal power relationships are produced and reproduced by institutions and practices.

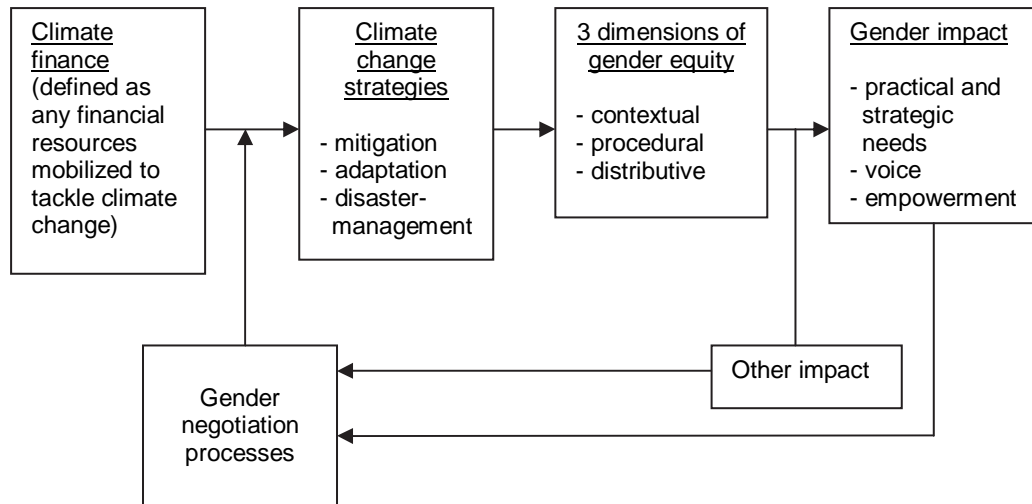
2.1 Climate change–gender equity framework

We add gender into their equity framework and develop our own climate change–gender equity model (see Figure 1). We define climate finance as any financial resources mobilized to tackle climate change. This broad understanding of climate finance shifts away from the current narrow focus on existing climate funds and on the commitment made by developed countries about offering finance of US\$100 billion per year by 2020 (Schroeder 2010). Our definition allows us to explore how agents make claims to financial resources and what differences this can make to their lives.

Our framework selects mitigation, adaptation and disaster-management as three climate change-related strategies that financial resources are channelled to deal with climate change. We choose three specific policies for each strategy.

In mitigation, we choose tree-planting and forest-monitoring. We select agriculture for adaptation, and communication dissemination for disaster management. We are aware that many other policies are available to evaluate the mitigation, adaptation and disaster management strategies. We choose the three specific policies as case studies in order to provide detailed mechanisms of how climate finance and gender interacts.

Figure 1: Climate change–gender equity framework



Source: Author’s own; inspired by McDermott et al. (2013).

We draw on the ‘contextual-procedural-distributive’ framework to analyse, what Schalatek (2009) calls, ‘mitigative and adaptive capabilities’ between men and women. In contextual equity, we focus on three dimensions: (1) incentives: what motivates women and men for taking certain climate actions, and how livelihood priorities explain the differences; (2) access: who can get access to what resources and what mediates the process of access; (3) processes of negotiation.

Increasingly, climate change projects advocate public participation and involvement of the previously-marginalized. In procedural equity, we examine the governance structures and the process of decision-making. We are particularly interested in exploring whether the engagement process is inclusive and democratic and how decisions are made in both formal and informal settings. With regard to distributive equity, we will examine if practical and strategic needs of women and men are met and whether they feel empowered. We are aware of the trade-offs that may happen when the three dimensions of equity are evaluated. For instance, when an increasing number of women participate in committees and groups, it may be seen as a positive sign of procedural equity. Yet, if the engagement is tokenistic, it can simply increase women’s workload, without addressing their strategic needs. From this perspective, achieving procedural equity may cause distributive inequity. We suggest that our analytical framework works at all levels, from intra-household to community, national and international, and that it interacts with other social factors, such as ethnicity, age, and class.

We will then use our framework to illustrate the complex mechanisms of how differences in and stereotypes about capabilities, priorities and incentives of men and women, affect their access to climate finance and other types of resources, and simultaneously, how that leads to gender (in)equities being ‘experienced, maintained and reinforced’ (Aikman et al. 2011: 45).

In the next section, we will focus on tree-planting and forest-monitoring policies and examine if, and how, climate finance helps achieve, or worsens, gender equity through the mitigation strategy.

3 Mitigation, tree-planting and forest monitoring

Climate finance promotes carbon sequestration and storage in forestry. Forests are targeted as a key mitigation strategy because 17 per cent of global emissions come from deforestation (IPCC 2007). Re-forestation has been advocated to facilitate bio-sequestration of atmospheric CO₂. The International Small Groups and Tree Planting Programmes have, for instance, worked with 50,000 farmers in Kenya, Tanzania, and Uganda and already managed to plant seven billion trees in these three countries (Castren and Pillai 2011). Modern technologies, such as digital images by satellites, have also been used to monitor forest stock in an attempt to avoid existing forests further degraded.

Forest protection and tree-planting are considered essential to improving livelihoods of local communities. Villagers obtain valuable resources from forests, such as fuel and fruit. Engaging communities in monitoring local forests, known as participatory forest surveillance, can also increase their incomes because some surveillance projects offer community members money for conducting on-the-ground carbon-stock assessment by using mobile mapping and hand-held devices.

Community forest projects are also often seen as ‘pro-woman’ since women are ‘primarily users and managers of forest resources’ (Mwakaje et al. 2013). More projects are keen to get women involved so as to make use of their specific knowledge of ecosystems, tree species, plant distribution, forest history and geography (Skutsch and Trines 2010). To promote good governance, community members, especially women, are encouraged to join forest councils, committees or groups. Based on their forest research in Uganda, Buyinza and Naguula (2007) claim that increasing women’s involvement in the decision-making process helps speed up forest regeneration and reduce illegal harvesting.

3.1 Contextual equity

Tree-planting is not a gender-neutral activity. Literature indicates two mistaken assumptions in tree-planting projects: first, men and women have the same motivations for tree-planting; second, they share the same preferences for tree species. Research by Djoudi and Brochkaus (2011) in northern Mali suggests that, women prefer planting fruit- and fuel-wood trees on farms, but men, in contrast, are more in favour of planting commercial timber. Their variations in tree selection reflect different priorities of livelihoods of women and men. Women consider food security as their primary duty at home. Fruit- and fuel-wood trees provide fruit for own consumption and income, also fuel, as well as materials for domestic handicraft production. To them, planting timber trees for timber takes much longer to reach harvest, and that does not meet families’ immediate needs. Furthermore, women face social constraints about which tree species they can choose. In their study, Banana et al. (2012) find that there is a belief in Uganda that if women plant ‘Mutuba’ trees,¹ their husbands will become impotent.

Another explanation for the differences between male and female preferences lies in their unequal access to land rights, entitlements and assets. According to Bernier et al. (2013), women are restricted¹ from access to certain tools that dig holes for trees. They face more obstacles in

¹ ‘Mutuba’ tree (*Ficus natalensis* in Latin) provides fodder for animals and makes bark cloth. According to Mwangwe Rural Development Association in Uganda, the bark cloth was traditionally used for making clothes for cultural ritual purposes. The introduction of foreign clothing fabric has, however, led to a decline of the demand for bark cloth (see: www.newforestsproject.org/pdfs/Projects%20Update%20-%202008.pdf). Yet, growing Mutuba trees has become popular recently. An increasing number of NGOs has encouraged local communities to grow Mutuba trees

accessing credit and cash, and that prevents them from replacing dead trees. They are also aware that they are deprived of land rights. They will lose all the benefits of tree-planting after divorce or widowhood. Quite a few studies also indicate that men control access to land through customary tenure (Agarwal 2009). They are the final decision-makers in crop management. With limited land ownership and control over productive resources, women, compared to men, do not have strong incentive to engage in tree-planting (Bolanos and Schmink 2005).

With respect to forest monitoring, women may like to offer their assistance. However, the social expectations around women being domestic carers reduce their chances of participation. Furthermore, they are not encouraged to make long journeys (Castren and Pillai 2011). Compared to men, women have lower levels in literacy and general education. The lack of human capital also undermines their confidence and capability in using advanced technology, such as hand-held devices, for surveillance.

3.2 Procedural equity

The motivations for community participation in forest governance can be diverse and complex. Researchers argue that public participation does not always lead to empowerment because forest managers and funders sometimes consider community forest surveillance to be a cost-saving exercise. In their research in Cameroon, Minang et al. (2007) find out that, compared to hiring professional or state forest personnel for forest monitoring, using local people can save 50 to 70 per cent of recruitment and labour costs.

Men and women do not have equal representation in forest committees. For example, in their study in Mexico, Peters-Guarin and McCall (2010) discover that only men take up senior management posts because women are not selected, or do not have time, to attend the necessary training courses. Furthermore, women are excluded from making decisions on communal sacred forests because these forests are controlled by male clan elders and village leaders.

3.3 Distributive equity

Tree-management is a gendered activity—while men are expected to take up tasks, such as pruning, thinning and digging, women are responsible for watering. Yet, trees require daily watering, especially during the period of establishment or during the dry seasons. Chant (2002) argues that the gendered division of labour and the social expectation trap women and girls at home and restrict their physical mobility. This further reinforces their subordination.

Forest monitoring, in contrast, should show the opposite impact—women and girls gain freedom by leaving their home and engaging with forest surveillance. Forest monitoring, however, poses serious threat to the personal safety of women and girls. They bear a high risk of assault and rape, if they are caught by illegal loggers.

In a nutshell, our analysis has shown that the benefits and costs of carbon storage and revenue-generation by tree-planting and forest monitoring are not evenly distributed between men and women. Women are expected to engage with both productive activities and their domestic responsibilities, but their access to forest resources is constrained by insecure land tenure and unequal intra-household power relations. Improving forest governance by getting more women

to feed animals. For example, the UK-based Faith Missions Trust has supported the JOY Goat Development Programme and encouraged local communities to grow Mutuba to feed goats (www.joygoats.org.uk/bark_cloth_fig.html).

involved does not necessarily meet their strategic needs, especially if the gender inequalities are not challenged.

4 Adaptation and smart agriculture

Adaptation is a process of adjustment to climate-related shocks and stressors (Okali and Naess 2013: 2). Climate finance helps enhance the adaptive capacity of vulnerable communities by ‘strengthening their coping strategies to withstand, recover from, and adapt to climate change’ (Ospina and Heeks 2010: 1). It also builds livelihood resilience with information, tools and support that will enable them to address long-term climate impact.

We select agriculture as an exemplar for three reasons: first, according to FAO (2002), agriculture is responsible for 14 per cent of global greenhouse gas emissions. Methane and ammonia, generated from dairy production and animal manure, are 20 times more powerful than CO₂ in its warming action. FAO predicts that, by 2030, emissions of methane and ammonia from the livestock sector in developing countries could be 60 per cent higher than at present.

Second, agriculture is particularly vulnerable to climate change. It consumes 70 per cent of total global water abstraction, but climate change brings about erratic climatic conditions and seasonal unpredictability (ITU 2009). Changing rainfall patterns result in both prolonged droughts and floods and can trigger shifts in agricultural processes. The reduction of agricultural productivity could lead to food shortage and malnutrition, and that worsens poverty and vulnerability (IISD 2011).

Third, enhancing farmers’ adaptive capacity by ‘smart agriculture’ is also considered ‘pro-women’ since women make up of 43 per cent of total agricultural labour force in the world. In sub-Saharan Africa, they make up 50 per cent of the agricultural labour force (Doss 2011). Changing farming and water management practices, induced by climate change, has significant gender impact as women and girls are expected to secure water, energy and food resources for their families. Water stress, caused by prolonged droughts, means that they have to walk greater distances to find water in rural areas or spend more time queuing for intermittent water supplies in urban areas. These changes have long-term implications for their health in light of the rising workload and physical exhaustion (Bathge 2010).

4.1 Contextual equity

Promoting and financing ‘smart agriculture’ by providing farmers with more climate information and climate-friendly innovations, such as drought-resistant seeds, does not necessarily achieve gender equity. A few studies show that women have limited access to loans, credit and agricultural extension services because they are not entitled to land rights (Bernier et al. 2013). A lack of power to make decisions arising from climate change for their own farms, Olson et al. (2010) argue, weakens women’s incentives in making long-term investments in land rehabilitation and engaging in environmentally sustainable farming practices. This widens the gaps of differential abilities of men and women to adapt to climate shocks.

Formalizing women’s legal land rights does not, however, provide a solution to enhancing their adaptive capabilities. Gladwin et al. (2001) suggest that women tend to accept the idea that land is not individually-owned. Instead, they view land as joint resources that share among family and kin members, so they are reluctant to fight for their individual land rights. In addition, women consider food provision as their primary role at home. This internalized, gendered stereotype places them under disproportionate pressure in balancing productive and domestic

responsibilities. Agarwal (2009) also suggest that access to land resources in rural communities is mediated with complex kinship ties and community relations. Formalizing land rights could reduce, not expand, women's room for manoeuvring in negotiating access to resource use through their social support systems.

4.2 Procedural equity

Successful adaptation policies need to recognize the contribution of women to, and involvement in, water management. In order to empower women to make their voice heard and to take leadership roles so as to influence adaptation plans and policies, many projects try to seek fair gender representation in water committees and farming groups. In the irrigation projects in Egypt, for instance, Deloitte (2012) report that, each village was asked to select at least one woman and one man to be trained as community facilitators so as to share the knowledge of smart farming with their community members.

Research, however, suggests that equal representation of men and women in governance structures may lead to greater gender equity if questions, as to who these women are, what interests they represent, and what they are expected to perform, are answered. In his trans-boundary water governance project in West Africa, Wong (2009) shows that villagers often chose their chieftains' wives to be the representatives because they were the authority figures in the villages. The chieftains' wives were also keen to partake because their involvement could further develop their husbands' social and political capital.

MacGregor (2010) also reminds us that, there is a mistaken assumption in adaptation projects that women are closer to nature, so they 'are predisposed to taking an environmental care-tending role'.

4.3 Distributive equity

Women may not receive fair return for public participation. Nelson et al. (2002), for example, suggest that many adaptation practices build on women's unpaid labour. Their involvement would simply increase their workload, without properly addressing their strategic needs. Another unintended consequence is that, in order to juggle increasing demands, these women may shift more domestic responsibilities to their daughters, and that could reproduce inter-generational inequalities (Oxfam 2011a).

5 Disaster management and information dissemination

Climate finance can help to develop stronger disaster response capacities by improving climate monitoring and detection. Yet, how to raise people's awareness of disaster preparation and how to disseminate information effectively to affected communities, during the occurrence of disasters, are equally important in disaster management.

Mobile phones and community radios are two common means in developing countries to create real-time disaster alerts. SMS messages about disaster early-warnings are sent to mobile-phone owners before disasters strike. Illiteracy and language barriers have long been seen as main obstacles for text-based messaging services. To address the constraints, the Community Flood Information System in Bangladesh, for example, simplifies the SMS services. Instead of sending word-based messages, the System uses simple symbols, such as +ve and -ve, to indicate flood intensity (IISD 2011).

Community radio offers another platform to launch public campaigns and education programmes. In North Nigeria, for instance, radio drama is used to enhance the interactive process of learning and dialogue with farming communities. It helps promote local adaptation strategies and link up audiences with local climate change organizations (Ospina and Heeks 2010).

5.1 Contextual equity

Whether climate information is effectively disseminated amongst affected communities depends on who owns the technology and whether we make the right decisions about people's preferences for receiving information. GSMA (2010) estimates that there are 300 million fewer women than men who own mobile phones in developing countries. In their comparative studies in Bangladesh, Ghana, and Uganda, Chaudhury et al. (2012) find out that men use radio to obtain climate information, whereas women prefer getting information from their friends and village leaders. They explain that the gender differences link to their livelihood priorities.

Another concern is about how such warning information is transmitted. Using the big floods in Bangladesh in 1991, Rohr (2005, quoted in IDS 2008) underlines the gender biases of warning information. In her observations, warning information is transmitted by men to men in public spaces. Women, who stay at home most of the time, rely on their husbands to pass the information gained from the radio, to them.

Early warning systems also need to address the cultural constraints that delay the timely escape of the vulnerable. Swimming and tree climbing, for example, are useful skills for escaping flash floods, but women are not equipped with the same skills as their male counterparts. Women's clothes in Muslim countries could reduce their mobility in an emergency (IDS 2008).

5.2 Procedural equity

To encourage dialogue with community members and to improve governance, community radio encourages listeners to provide feedback through text messages or phone-ins (IISD 2011). The interactive, participatory approach is, however, restricted by the ownership of, and access to, radio and mobile phones.

Research by Gurumurthy (2004) shows that it is often men, rather than women, who control the access to radio. In Gurumurthy's words, 'if the household has one radio, it is most likely to be used by men. Women may not have the leisure to listen to the radio, nor may be allowed to join the men sitting outside the house listening to radio' (p. 5).

The 'shared' ownership of mobile phones between husbands and wives, reported in many developing countries, hides intra-household power inequalities. In their ethnographic study in Northern rural Uganda, Wesolowski et al. (2012) find out that many women report that their mobile phones actually belong to their husbands. These women complain that their husbands sometimes insist on making calls or sending text messages on their behalf, because they fear that they might keep secrets from them or pursue forbidden contact with other men. Similarly, Burrell (2010) argues that mobile phones help men impose their control on women and retain their authority.

5.3 Distributive equity

Gender stereotypes play a significant role in distributing disaster-related resources. In their participatory gender study in Indonesia, Haynes et al. (2010) discover that men and boys receive more evacuation resources than women and girls. This uneven distribution of resources is based

on the perception that girls are the victims, rather than the rescuer, of disaster because girls ‘only know screaming’ when disasters strike (p. 24). In contrast, men and boys are praised for effective evacuation of the elderly and livestock from the affected areas.

Promoting men and boys as ‘effective rescuers’ actually puts them at risk. During the Asian Tsunami in 2007, UN (2011) report that men often consider saving their families as heroic, so they often become the last persons to leave the disaster scenes.

6 Organizational analysis of climate funds

In the previous sections, we have taken a micro-perspective to examine how climate finance relates to mitigation, adaptation and disaster-management policies, and how those links occasionally challenge gender stereotypes, and often reinforce gender inequities, at the intra-household and community levels. In this section, we move our analysis to the organizational level. By examining the organizational structures of three global climate funds: Climate Investment Funds (CIFs), Adaptation Fund (AP), Global Environment Facility (GEF), we want to understand how much the climate funds have achieved in gender equity.

Similarly, we draw on the ‘contextual-procedural-distributive’ analytical framework to make the evaluation, but since the nature and the context of the discussion is different, we need to slightly modify the criteria of each level of equity. In examining contextual equity, we will discuss whether gender equality concerns are adequately considered and integrated in the programme design of the climate funds. We will also examine whether gender differentials are part of the financing criteria.

In procedural equity, we will focus on which social groups and stakeholders are included or excluded in the process of finance application. We will investigate whether the input and participation of women are recognized and valued in the programme design. We will also explore the proportion of male and female representatives on the funding committees as well as the role of gender consultants and experts in the meetings.

In distributive equity, we will discuss whether the funds collect sex-disaggregated data to evaluate the impact of climate change on men and women. We will also explore what strategies the climate funds have adopted to address gender inequities.

We draw on research by Oxfam (2011b) and Schalatek (2011), for instance, to conduct the organizational analysis. We share similar research objectives as well as the units of analysis in examining the effectiveness of the existing big climate funds in managing different capabilities of men and women in tackling changing climate and in accessing various sources of resources. We are, however, aware that, in conducting their studies, the authors do not use our ‘contextual-procedural-distributive’ analytical framework to look for evidence. We, therefore, are very careful in selecting the right kinds of materials from their research in order to meet the requirements of our own framework.

6.1 Backgrounds of CIFs, AP and GEF

CIFs were jointly established by the World Bank and regional multilateral development banks in 2009. They aim to provide leverage to private and public resources to assist developing countries to transit to low-carbon and climate-resilient future. They are composed of three sub-funds: Clean Technology Fund (CTF), Strategic Climate Fund (SCF) and Pilot Programme on Climate Resilience (PPCR). CIFs received US\$929.5 million funding in 2012. It is still not sure if it will be terminated when the Green Climate Fund (GCF) becomes fully operational in late 2014 (Schalatek 2012).

AP was established under the Kyoto Protocol in order to provide funds for adaptation programmes in developing countries. It became operational in 2009. Similar to GCF, it is independent of development finance institutions. It is managed by a Board which is equally represented from developing and developed countries. It is financed with 2 per cent of revenues generated from the trade of certified emission-reduction allocated for the Clean Development Mechanism.

GEF, founded in 1991, is an independent financial organization representing 182 member governments in partnership with international institutions, NGOs and the private sector. It assists developing countries by providing grants to them in support of the United Nations environmental agreements. There are two components under GEF: Least Developed Countries Fund (LDCF) and Special Climate Change Fund (SCCF). LDCF assists the least developed countries to implement National Adaptation Programmes of Action (NAPAs). The nature of SCCF is slightly different. It provides not only adaptation, but also technology transfer, to all developing country parties to the UNFCCC (Oxfam 2011b).

6.2 Contextual equity

Amongst the climate funds, CIFs' PPCR, and GEF's, LDCF have been strongly criticized for a lack of deep understanding of how gender inequalities and climate change are intertwined and of how issues, such as land tenure, property rights and division of labour, are related to climate finance (Arend and Lowman 2011). CIFs' CTF and SCF and AF may have made an explicit claim for gender analysis, but Schalatek (2011) points out that they have not adequately incorporated a gender mainstreaming approach to reach the goal of long-term gender-equitable development in low-carbon strategies (p. 12).

As far as getting women and men involved, CIFs and GEF only suggest that they will consult 'key stakeholders' and hear the 'voices of the poor during consultation' respectively (Oxfam 2011b). Oxfam (2011b) criticizes these climate funds for not targeting women specifically. Although AP has highlighted women as one of the key stakeholders in its finance design, Arend and Lowman (2011) criticize AP for depicting women mostly as victims of climate change, rather than agents of change who have valuable resources in adaptation strategies (p. 16).

6.3 Procedural equity

The board representation of women in climate fund has caused controversy. Based on statistics, there is a low representation of women in climate fund committees. The level of female participation is between 25 per cent and 40 per cent, in which AP has recorded the lowest level (Schalatek and Burns 2013). Although 50 to 60 per cent of the staff members in the climate funds are women, Arend and Lowman (2011) are critical that the staff members in AF have no formal gender expertise.

Petherick (2013) argues that the numbers of women in committees matter since creating a critical mass of qualified women is necessary for women to ‘influence key outcomes and be taken seriously in political circle(s)’ (p. 86). However, UNDP (2012) is concerned that merely including women on boards or in meetings is not sufficient to ensure that climate funds would respond to the needs of both women and men. Vogt (2010) shares a similar view, stressing that the effectiveness of women’s participation is more about whether they have the capacity to join in the debate and the courage to make alternatives. Whether the gender issues are robustly discussed in the committee meetings also depends on the influence of gender experts and civil society representatives. All these three climate funds are reported to have gender experts and NGOs as observers.

6.4 Distributive equity

All three climate funds have been criticized for not considering the gender-differentiated impact of climate change in their programme design and financing criteria. For example, Oxfam (2011b) suggests that only eight out of 47 evaluation indicators in LDCF have sex-disaggregated data, whereas CIFs have no explicit call for collecting sex-disaggregated data in its gender-sensitive monitoring and evaluation. AF seems to have a lack of clear mechanisms for including local strategies and vulnerability- and impact-assessments (Marston 2013).

Arend and Lowman (2011) complain about GEF’s weak gender-budgeting because it assumes that since projects benefit women and men equally, it does not need to collect sex-disaggregated data. In response to the criticisms, GEF has approved a gender-mainstreaming policy in both LDCF and SCCF in 2011 and has also introduced a new monitoring and evaluation tool for adaptation projects that evaluates gender-differentiated impact.

7 Implications for Green Climate Fund

What makes GCF different from other climate funds is that it makes gender an explicit guiding principle. It specially states ‘taking a gender-sensitive approach’ in the Governing Instrument (GCF 2011, para 3). Although no proper definition is given, gender is mentioned in three areas within the Governing Instrument which gives some hints of how the ‘gender-sensitive approach’ is operationalized. In the selection of board members, it states that: due consideration should be ‘given to gender balance’ (para 11). In the establishment of the secretariat, gender balance should be taken into in the process of staff selection (para 21). And, in the operational modalities, GCF should simplify the funding process and ‘encourage the involvement of relevant stakeholders, including vulnerable groups and (also) addressing gender aspects’ (para 31).

Schalatek and Burns (2013: 1) call it an ‘unprecedented step’ in integrating gender into climate finance. The Friends of the Earth (2010) has high expectation on GCF to achieve gender equality. GCF also gives some pressure on other finance funds to examine their own gender policies and practices. GCF has adopted one male and one female co-chair system. The Board of GCF has met five times by far. The Fund is expected to be fully operationalized by the end of 2014.

7.1 Financial imbalance of mitigation and adaptation policies

In the previous sections, we have used the tree-planting and smart agriculture policies to emphasize that mitigation and adaptation strategies are equally important to gender equity and people’s livelihoods. It has also demonstrated that women can make significant contributions to both mitigation and adaptation strategies. The financing reality of existing climate funds, however, disproportionately tilts towards mitigation. While adaptation activities receive only 4

per cent of total climate finance, approximately US\$14 billion, mitigation strategies get the rest. 80 per cent of the mitigation budget is allocated to large-scale energy and transportation programmes and projects.

The financing imbalance has serious implications for gender equity. Mitigation strategies are often gender-blind, which assume that ‘mitigation interventions addressing global environmental issues should theoretically benefit everyone on the planet, regardless of their sex’ (Arend and Lowman 2011: 12). They tend to be top-down and over-technical in nature. The limited consultation with local communities fails to ‘give women and men an opportunity to define and have power over their livelihoods’ (UNDP 2010: 2). The funding projects are always on large-scale energy and transportation programmes, which Vogt (2010) puts it, are traditionally male-dominated working sectors of the formal economy. In light of this, providing women the opportunity for meaningful involvement in the mitigation strategy design and decision-making process would help challenge male biases.

A larger increase of funding for adaptation seems crucial to achieving gender equity because adaptation policies, targeting rural women, in capacity building and agricultural extension services, would make a difference to gender equality in food security and distribution, both within households and in markets.

GCF has already shown their awareness of these concerns. It makes it explicit in the governing instrument that: ‘the Board will balance the allocation of resources between adaptation and mitigation activities under the Fund’ (GCF 2012, para 50). While these promises are encouraging, how to achieve the balance remains a mystery, especially since GCF is keen to get the private sector involved in order to catalyse additional finance (GCF guiding instrument, para 54). Yet, the private sector will not invest in adaptation policies if GCF does not offer sufficient financial incentives. GCF can use more public funds to promote adaptation, but how it strikes a financial balance between mitigation and adaptation, as it has committed, remains unclear.

There is also a concern about how adaptation financing is delivered. At present, most adaptation funds are distributed in the form of concessional loans, rather than grants. The debt payment will add extra financial burden on poor countries and vulnerable communities. Calland and Dubosse (2011) are worried that, in order to pay the debts, developing countries may have to reduce social expenditures which have greater negative impact on women, and thus increase gender inequities.

7.2 Low female representation at GCF Board

Women’s representation at the Board of GCF in the past three meetings is very low, only between 20 per cent to 25 per cent (Schalatek 2012). The figure is even lower than that of CIFs, AP, and GEF. The low female representation seems contradictory to the high-profile campaign of gender sensitivity of the GCF. As discussed in the previous section, the low numbers of women representatives should not cause alarm, especially since one of the Board Chairs of the GCF is female. Additionally, four observers and eight non-business UNFCCC civil society constituencies, including gender experts and indigenous representatives, are allowed to sit in the meetings. However, from our perspective, being a driving force to achieve gender equity through climate finance, the GCF Board is required to be self-critical and highly-transparent in the decision-making process. It needs to reflect constantly about whether different voices and interests of women in developing countries are adequately represented in the discussion.

8 Conclusions

This paper has developed a climate finance-gender equity analytical framework. Through the lens of contextual, procedural and distributive equity, we have demonstrated that mitigation, adaptation and disaster management, funded by climate finance, have potential to challenge gender inequity, if three key aspects are critically explored: (1) how different incentives and preferences, between men and women, are shaped by their livelihood experiences and priorities, and what factors enable, and restrict, their access to resources; (2) how formal and informal participatory arena offers a genuine space for women, and men, to make decisions that empower them; and (3) how women's practical and strategic needs are met and the contradictions resolved. Our analyses have also indicated how the processes of negotiation at the intra-household and community levels interact with the organizational level.

From our perspective, current climate finance fails to achieve gender equity. Blame should not be placed on climate finance itself because how resources are distributed and mobilized are mediated by existing social institutions and patterns. The failure of climate finance merely mirrors the unequal power relationships between men and women. To offer a solution, climate finance needs to touch on and address wider political and social issues. Our study has argued that, insecure land rights, for instance, undermine women's incentives in making long-term commitments to sustainable development. It also weakens their adaptive capacities in response to changing climate and disaster attack. We, however, believe that the Green Climate Fund could make a difference, only if it manages to accommodate the different identities and needs of women and men, and only if it is bold and ready to challenge the underlying causes that perpetuate gender inequities.

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