

The role of women in early REDD+ implementation: lessons for future engagement

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SUMMARY

Researchers and practitioners have amply discussed the potential of REDD+ to help or harm forest-based communities, but less attention has been paid to its gender dimensions. Safeguard policies are aimed at ensuring that REDD+ does not harm women, but interventions that do not seek to address imbalances at the outset may be doomed to perpetuate them. Based on research by the Center for International Forestry Research in 77 villages in 20 REDD+ sites across six countries, this article finds that women – even where they use forests as much or more – have been less involved in REDD+ initiative design decisions and processes than men, a situation with potentially significant implications for implementation and future outcomes. This article uses the research findings to argue that “participation”, while a central demand of indigenous and other local communities more generally, is only a partial solution to addressing women’s strategic needs in ways that could strengthen their position in REDD+. Rather, gender-responsive analyses are needed to understand real and perceived gender differences and anticipate risks.

Keywords: forests, climate change, gender, indigenous peoples, safeguards

Le rôle des femmes au début de la mise en œuvre de la REDD+: enseignements dégagés en vue d’une future participation

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Les chercheurs et les professionnels ont longuement débattu du fait que la REDD+ peut éventuellement aider ou porter préjudice aux communautés forestières, mais la dimension du genre a été moins étudiée. Des garanties politiques visent à prévenir que la REDD+ ne soit néfaste aux femmes, mais des interventions qui ne cherchent pas à régler les déséquilibres dès le départ peuvent être vouées à les perpétuer. S’appuyant sur les travaux du Centre de recherche forestière internationale dans 77 villages situés sur 20 sites REDD+ dans six pays, cet article conclut que – même si elles utilisent les forêts tout autant ou plus – les femmes ont été moins impliquées que les hommes dans les processus et les décisions concernant la conception de l’initiative REDD+, situation pouvant avoir de fortes répercussions sur sa mise en œuvre et les futurs résultats. Cet article s’appuie sur les conclusions de la recherche pour avancer que, tout en étant une demande essentielle des communautés autochtones et plus généralement locales, la «participation» n’est qu’une solution partielle pour répondre aux besoins stratégiques des femmes en renforçant leur situation dans la REDD+. En revanche, ce dont nous avons besoin, ce sont des analyses tenant compte du genre pour comprendre les différences entre les sexes, réelles et perçues, et anticiper les risques.

El papel de la mujer en la aplicación temprana de REDD+: lecciones para acciones futuras

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Los investigadores y profesionales han debatido ampliamente el potencial de REDD+ para ayudar o perjudicar a las comunidades forestales, pero se ha prestado menos atención a sus aspectos relacionados con el género. Las políticas de salvaguardia tienen por objeto asegurar que REDD+ no perjudica a las mujeres, pero las intervenciones que no tratan de abordar los desequilibrios desde un principio pueden estar

condenadas a perpetuarlos. Este artículo revela, con base en investigaciones realizadas por el Centro para la Investigación Forestal Internacional (CIFOR) en 77 aldeas de 20 sitios REDD+ en 6 países, que las mujeres –incluso en los casos que utilizan los bosques tanto o más– han estado menos involucradas que los hombres en las decisiones y procesos relacionados con el diseño de iniciativas REDD+, lo que supone una situación con implicaciones potencialmente importantes para la implementación y los resultados futuros. Este artículo utiliza los resultados de la investigación para sostener que aunque la “participación” es un requerimiento fundamental de las comunidades indígenas y locales en general, tan sólo ofrece una solución parcial a la hora de abordar las necesidades estratégicas de las mujeres en formas que pudieran fortalecer su posición en REDD+. Más bien, se necesitan análisis bajo una perspectiva de género con los que comprender las diferencias reales y percibidas en cuanto a género y anticipar los riesgos.

INTRODUCTION

Concern over the contribution of forest clearing and degradation to climate change has led to the promotion of strategies for Reducing Emissions from Deforestation and Forest Degradation (REDD+). REDD+ is intended to be a performance-based mechanism whereby forest stakeholders at multiple scales (from national to household levels) could be rewarded for protecting or enhancing the carbon sequestration capacity of forests. Since the initial proposal by the coalition of rainforest countries, led by Papua New Guinea and Costa Rica, at the UNFCCC 11th Conference of Parties (COP) in 2005 in Montreal, REDD+ has been placed firmly on the global climate change agenda.

REDD+ has been controversial, however. Objections have been raised by business interests intent on converting forests to other land uses. In addition, indigenous people and other local communities have demanded that REDD+ policies, programs and projects fully guarantee respect for their land and forest rights as well as ensuring their participation in related decision-making arenas. Such challenges have been discussed elsewhere (Gomes *et al.* 2010, Griffiths 2008, Larson *et al.* 2013, Sikor *et al.* 2010), but the specific problems for women as members of these communities have so far received much less attention. Given the tendency to see “communities” as undifferentiated, even REDD+ policy makers and proponents (organizations or entities designing and implementing subnational REDD+ programs and projects) that are sensitive to the needs of forest-based peoples may fail to understand or address the specific needs of women related to forest and REDD+ policies. As a result, women must struggle on two fronts: even if “communities” are taken into account and have opportunities to benefit from REDD+, women may still be left out.

Literature on gender in rural decision-making and forest management strongly suggests that REDD+ implementation at the local level can pose risks to women for a number of reasons, as elaborated upon further in the next section. For example, women tend to participate less in village level government and decision-making institutions, and particularly in those that address forest-related decisions, hence their interests, relative to men’s, are less likely to be represented and recognized. In addition, women and men use and manage forests differently, and women’s use is likely to be less visible.

How can these risks be addressed? A number of recent reports have begun to pay greater attention to gender in REDD+. Several authors have argued that REDD+ will only

lead to sustainable outcomes if interventions adopt a gendered approach (UN-REDD 2011, 2013, Gurung and Setyowati 2012). Social and environmental safeguards frameworks are including more substantial language about women’s rights, livelihoods and participation in REDD+ (REDD+ SES 2012, see <http://redd-standards.org/>). What seems like the obvious solution is to promote greater participation for women in REDD+ processes. But is this enough?

The data presented here are based on the Center for International Forestry Research Global Comparative Study on REDD+ (GCS-REDD), from focus group interviews in 77 villages participating in 20 subnational REDD+ initiatives in six countries: Brazil, Cameroon, Indonesia, Peru, Tanzania and Vietnam (Sunderlin *et al.* 2010). These data were collected early in the planning stages of REDD+ initiatives and before activities were fully underway (2011–12). The data demonstrate that women-only focus groups were less informed about the REDD+ initiatives than mixed-gender (mostly male) focus groups in the same villages. This article explores several hypotheses to explain differences. It finds that overall, the women’s groups were less knowledgeable even when most other key variables (such as women’s use of forests or participation in village decision-making) suggest that women should participate more fully. There were differences between countries, and though we recognize that “women” are heterogeneous, the data used for this analysis are based on group interviews, and it is therefore not possible to consider differentiation among women in this article.

Evidence suggesting that women have been less involved than men in REDD+ initiative design decisions and processes has significant implications for implementation and future outcomes (Gurung and Setyowati 2012, Nhantumbo and Chiwona-Karlton 2012, UN-REDD 2011). Participation in REDD+, from national to local levels and from conception to implementation, has been a central demand of indigenous and other local communities more generally. Nevertheless, this article uses the research findings to argue that “participation” is only a partial solution to addressing women’s strategic needs in ways that could strengthen their position in REDD+ (see also Khadka *et al.* 2014).

Forests, REDD+ and Women

Concerns about the risks of REDD+ for poor forest people have been brought to international attention primarily by social movements, particularly international indigenous

organizations, and NGOs working with these groups. The effect of REDD+ policies, programs and projects could be either positive or negative for local people, or could pass them by altogether (Larson 2011). Benefits could arise from policies that secure tenure rights, secure borders from unwanted outsiders or provide new sources of income or other advantages for poor local communities. Harm could come from the usurpation of land rights by outsiders or elites, or from new limits on forest livelihoods without consent or compensation (Beymer-Farris and Bassett 2012, Corbera *et al.* 2011, Larson 2011, Sikor *et al.* 2010, Sunderlin *et al.* 2009). Communities that already conserve forests may be left out if benefits only accrue to those who stop deforesting or degrading forests.

Forest-based social movements have focused their attention not only at the community level but also at the level of national decision-making on REDD+ policies and processes. The main emphasis has been on the demand for safeguards, including free prior and informed consent, secure land and forest tenure rights, and the right to fully participate in decisions about REDD+ design (Anchorage Declaration 2009, Tauli-Corpuz *et al.* 2009).

Concerns about women's participation and role in REDD+ stem from substantial field evidence that women tend to have less voice than men in forest communities and participate less in decision making, particularly with regard to forests and forest resources (e.g. Agarwal 2001, Benjamin 2010, Gupte 2004, Jackson and Chattopadhyay 2001, Rocheleau *et al.* 1996, Saigal 2000, Sunam and McCarthy 2010). The findings regarding participation, however, are not always straightforward (Agarwal 2001, 2009, 2010a).

For example, Agarwal (2001) describes a variety of types of participation ranging from the least effective, which she calls nominal participation (physical presence), to the most effective, which she refers to as interactive and empowering participation (taking initiative and exercising influence). She argues that many studies focus on the numerical strength of women rather than their "ability to participate better in the very process of decision-making" (Agarwal 2010a: 8). Physical presence on boards, committees or at meetings, for example, is far from guaranteeing voice and influence (see Agarwal 2001). Even with specific efforts at inclusion, women often lack the experience, confidence and skills to engage in the public sphere (Mai *et al.* 2011).

At the same time, studies from India also show that a greater presence of women on decision-making bodies tends to lead to better forest conservation and regeneration outcomes (Agarwal 2009), and having a critical mass of women, rather than a single woman or a small number, can make a significant difference (Agarwal 2009, 2010a,b). In a study comparing data from Kenya, Uganda, Bolivia and Mexico, however, forest user groups with more women than men perform less well than more equally mixed or male dominated groups in adopting forest enhancing behaviour, although gender barriers in access to technology, time constraints and

possible limitation of women's sanctioning authority play a role in this (Mwangi *et al.* 2011).

"Participation" can also be a burden, particularly for women who are almost always the ones in charge of the household in addition to other responsibilities, and women (and men) may believe that "women's place is not in the forest" (Bolanos and Schmink 2005). But even if women do not personally harvest forest resources, they may be concerned about the supply of those resources, access to land in forests, water supplies, climate variation, forest conservation or the cultural value of forests (see for example, Mairena and Cunningham 2011). It should not therefore be assumed that women's failure to participate, or even desire to participate, is necessarily related to less use of or interest in forests, forest resources or forest ecosystems. Understanding women's participation requires in-depth knowledge of specific local social norms and gender dynamics by those promoting forestry management and conservation policies and measures, such as REDD+.

Women also use forests differently than men, and this is often poorly understood or simply not acknowledged (den Besten 2011). There is broad-based evidence that men tend to be more cash oriented and women more tied to subsistence uses; and that men use more high value and processed resources like timber, and women, more non-timber or unprocessed forest products (Awono *et al.* 2002, Awono *et al.* 2010, Fu *et al.* 2009, Shackleton *et al.* 2011). Men may be more likely to participate in formal markets and women in informal (Madi *et al.* 2010, Shackleton *et al.* 2011). Nevertheless there are important differences between world regions (Sunderland *et al.* 2014), and above all gender findings tend to be context specific. Nevertheless, there is no particular reason to assume that men in communities would effectively represent women's interests; they may not even understand how women's specific criteria or priorities regarding forest goods and services may vary from their own (Cruz-Garcia, personal communication).

Women's rights to land and forests are often not as secure as men's. Whether land is individual or collective, women may not be permitted to control their own plots, to be included on land titles or to inherit land. The specific arrangements of women's relationship to men (e.g. husbands, partners, fathers, brothers) and their social position (e.g. single, married, widowed) form a complex matrix of factors that often affect women's rights and, hence, their dependence on men for their livelihoods. For example, in Kenya, Harrington and Chopra (2010) found that formal, informal and hybrid tenure systems are equally inadequate for guaranteeing land access for women. Even where the law guarantees women's rights, in practice women are sometimes forced to obtain access to land and natural resources through husbands and sons (Lastarria-Cornhiel 2011).¹ Past interventions in forests and natural resources management or conservation have often failed to recognize gender differences, resulting in greater

¹ That said, there are some matrilineal societies where women control inheritances, including land (see for example Kato 1982).

hardships for women (Colfer 2005), such as some tree planting schemes that have unintentionally benefited men more (den Besten 2011, Schroeder 1999).

If these gender differences are not recognized and taken into account in REDD+, policies and actions that are assumed to be gender neutral could have detrimental effects on women and on women's contribution to household income and well-being. The design of appropriate policies and interventions, and avoiding unwanted outcomes, requires research on "people in nested and overlapping constituencies that reflect the multiple roles, identities and interests of men and women across class, location, occupation and other points of difference and affinity" (Rocheleau and Edmunds 1997: 1368). Yet integrating gender into forestry research is constrained by the broad perception that forestry is a male-dominated profession, a lack of clarity among researchers of the concept of gender, and a lack of technical skills, interest and/or awareness of gender (Mai *et al.* 2011).

While women are still peripheral to REDD+ debates, a number of organizations have recently called for greater attention to women and gender (Gurung and Quesada 2009, UN-REDD 2011, Peach Brown 2011); relatively, at least at the level of discourse, the situation is improving. For example, the World Bank's Forest Investment Program (FIP), which provides funding to support REDD+ in developing countries (such as REDD-readiness and pilot activities), refer to women in a footnote in the 2009 FIP Design Document, stating "For the purpose of the FIP 'indigenous peoples and local communities' includes tribal communities and implies equal emphasis on the rights of men and women" (Climate Investment Funds 2009: 4); the more recent FIP document on the grant mechanism for indigenous people and local communities refers to an overarching principle that includes gender equality and twice mentions ensuring the participation of women (Climate Investment Fund 2011). Maginnis *et al.* (2011: 2) report that the climate change "negotiation documents went from zero [previously] to eleven mentions of gender in Cancun".

Finally, as noted earlier, the second version of the REDD+ SES safeguards has included gender issues much more prominently than its previous version and more than other safeguard standards (Mackenzie 2012, REDD+ SES 2012). This attention suggests a small yet growing consensus on the importance of addressing women's particular interests and concerns in REDD+. The rest of this article uses an exploration of early field research findings from sub-national REDD+ sites in six countries to contribute to the debate on how that should be done.

Methods

CIFOR's GCS-REDD is a multi-year research project (2009–2016) that aims to provide policy and technical guidance to REDD+ stakeholders. The research reported here is based

on the GCS component focused on sub-national REDD+ initiatives. In this component, performance in intervention (REDD+) and control (non-REDD+) villages will be compared both before and after the introduction of REDD+ interventions through a counterfactual approach called BACI (before-after/control-intervention)² with the goal of extracting lessons for future REDD+ policies and practices (Jagger *et al.* 2010).

The results are not meant to be representative of all REDD+ sites, as the choice of both countries and study sites was not random (see criteria below). Nevertheless, the sites represent key REDD+ countries and capture a wide variety of REDD+ initiatives found globally. The data come from field research in 77 villages at 20 REDD+ sites across six countries (Figure 1). Countries were selected on the basis of the following criteria: large tropical forest countries where REDD+ is being pioneered and that have many subnational REDD+ initiatives (Brazil, Indonesia, Peru³); diversity of stages on the forest transition curve (e.g. high deforestation in Indonesia and forestry recovery in Vietnam); convenience of a CIFOR office in the country (Brazil, Cameroon, Indonesia, Peru, Vietnam); and strong donor interest (Brazil, Indonesia, Tanzania). Within countries, REDD+ initiatives were chosen based on proponents' interest in an outside evaluation and their prior identification of specific villages for REDD+ interventions.

Villages were selected through the application of a consistent logic across countries. A pool of candidate intervention and control villages were identified at each site, and a statistical matching technique was used to select a matched set of intervention and control villages (Sunderlin *et al.* 2014). In this paper, we report some of the early (before) outcomes in the intervention villages only.

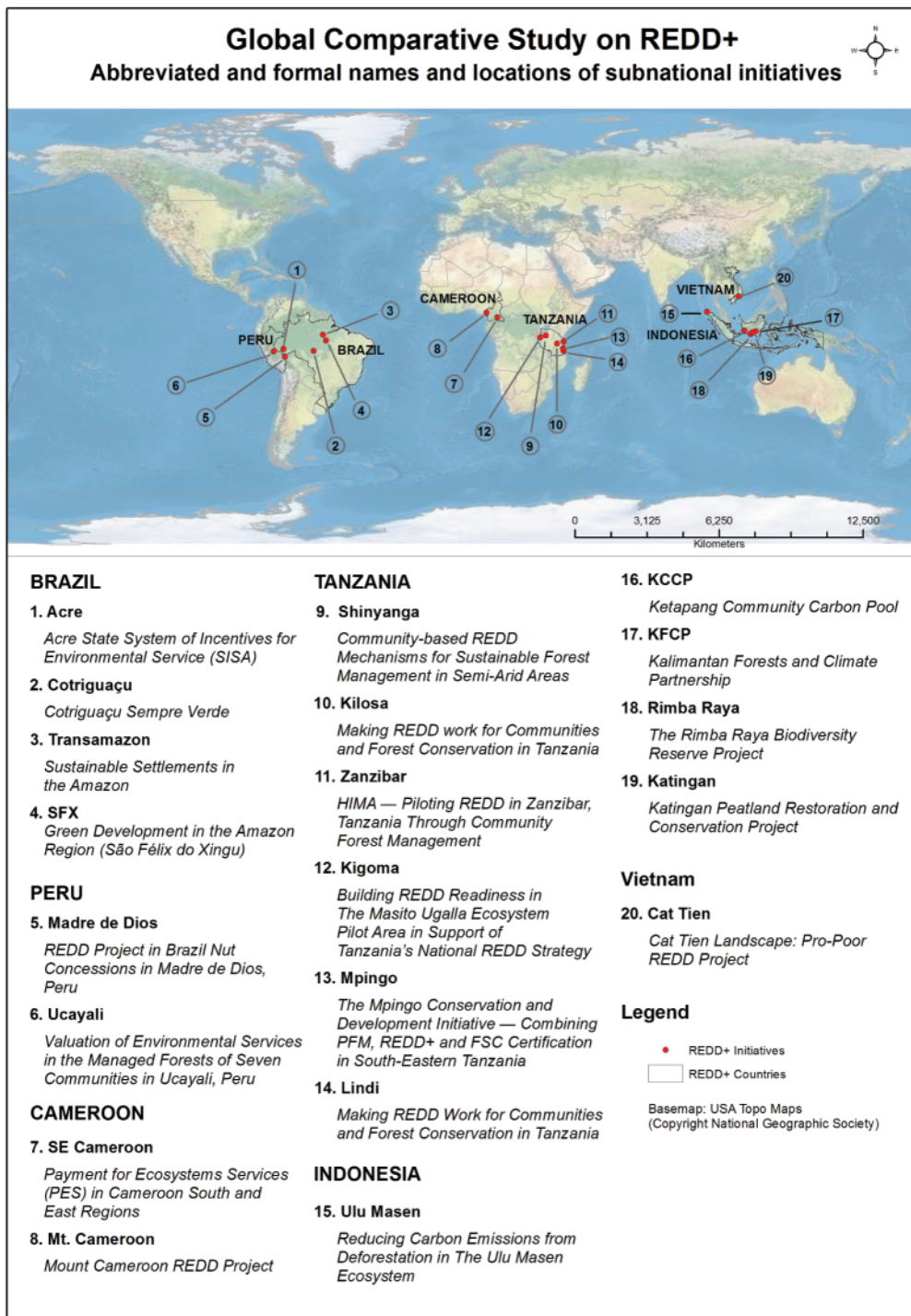
In each village, surveys were used to gather secondary data from key informants and to guide focus group interviews. We asked village leaders to invite focus group participants with an aim of 15 participants and a mix of both men and women. On average, 17 villagers participated in the village focus groups with greater male participation (66%) overall (Table 1). A women's survey was implemented by holding a separate focus group interview with women only. Again, we asked village leaders to invite these focus group participants, targeting female leaders. Both groups were asked the same questions about the main decision-making body in the village, and about their knowledge of and participation in REDD+. The women's survey focused on perceptions of participation in community decision making, as well as on how men and women use the forest. Finally, this article also draws from data on a survey with proponents to assess plans to address gender issues. Table A1 in the Appendix summarizes the questions used from each survey.

On knowledge of REDD+, both village and women's groups were asked whether they had heard about 1) REDD+ in general and 2) the local REDD+ initiative. If the group answered affirmatively to at least one of these questions, they

² For more detailed information about the BACI approach employed in the study, please see Jagger *et al.* (2010).

³ Peru was selected as a replacement for Bolivia after the government there withdrew from REDD+ activities.

FIGURE 1 Map of GCS-REDD+ project sites



Source: Map elaborated by Uji Astrono Pribadi

were asked to provide a short explanation. Based on the answers, the researchers evaluated (using standard criteria) whether the group demonstrated a basic understanding. If the group correctly stated at least one of the attributes of REDD+ or the local initiative, respondents were asked whether they had been involved in deciding whether the initiative should be implemented in their village and also whether and how they had been involved in the design and/or implementation. The

surveys were done prior to the full implementation of the local REDD+ initiatives, so we did not expect many respondents to have heard of REDD+. Nevertheless, during that same early phase, a comparison between the village and women's surveys in the same village would illustrate the differences between the two groups (Table 1).

During the focus group interviews, participants were asked to list all the main decision making bodies in the village

TABLE 1 Overview of subnational initiatives and data included in the analysis

Country	Initiative Name	Abbreviation	State/Province	Year project started	Year data collected	# of villages	Mean # of participants in focus group interviews	
							Women's	Village (% men)
BRAZIL	Acre State System of Incentives for Environmental Services	Acre	Acre	2009	2010	4	16	21 (58%)
	Northwest Mato Grosso Pilot REDD+ Project	Cotriguaçu	Mato Grosso	2011	2011	4	8	15 (56%)
	Sustainable settlements in the Amazon: the challenge of family production in a low carbon economy	Transamazon	Pará	2013	2010	4	13	19 (69%)
	The sustainable Landscape Pilot Program in São Félix do Xingu	SFX	Pará	2009	2010	4	11	17 (72%)
PERU	The REDD Project in Brazil Nut Concessions	Madre de Dios	Madre de Dios	2009	2011	4	8	19 (66%)
	Valuation of Environmental Services in the Managed Forests of Seven Indigenous Communities	Ucayali	Ucayali	2010	2012	4	13	14 (56%)
CAMEROON	Community Payments for Ecosystem Services	SE Cameroon	South and East Region	2009	2010	2	13	19 (68%)
	Mount Cameroon REDD+ initiative	Mount Cameroon	South West region	2008	2010	4	13	15 (88%)
TANZANIA	Community Based REDD Mechanisms for Sustainable Forest Management in Semi-Arid Areas	Shinyanga	Shinyanga	2010	2010	4	9	11 (62%)
	Making REDD work for Communities and Forest Conservation in Tanzania	Kilosa	Morogoro	2010	2010	3	9	10 (83%)
	Piloting REDD in Zanzibar through Community Forest Management	Zanzibar	Unguja/Zanzibar	2010	2010	4	11	14 (43%)
	Building REDD Readiness in the Masito Ugalla Ecosystem Pilot Area in Support of Tanzania's National REDD Strategy	Kigoma	Kigoma	2010	2010	4	12	11 (76%)
	Combining REDD, PFM and FSC certification in South-Eastern Tanzania	Mpingo	Lindi	2009	2010	4	12	12 (58%)
	Making REDD work for Communities and Forest Conservation in Tanzania	Lindi	Lindi	2009	2010	4	11	14 (66%)
INDONESIA	Ulu Masen REDD+ initiative	Ulu Masen	Aceh	2010	2010	4	26	35 (53%)
	Ketapang Community Carbon Pools	KCCP	Kalimantan Barat	2009	2010	4	23	26 (83%)
	Kalimantan Forests and Climate Partnership (KFCP)	KFCP	Kalimantan Tengah	2009	2010	4	16	13 (98%)
	Rimba Raya Biodiversity Reserve Project	Rimba Raya	Kalimantan Tengah	2008	2010	4	16	14 (98%)
	The Katingan Peatland Restoration and Conservation Project	Katingan	Kalimantan Tengah	2009	2010	4	19	18 (100%)
VIETNAM	The Cat Loc Landscape – Cat Tien National Park Pro-Poor REDD+ Project	Cat Tien	Lam Dong	2010	2010	4	10	16 (40%)
TOTAL						77	13	17 (66%)

and identify the most important. The village focus groups were asked how the leaders were selected and who was invited to attend meetings. The women's focus groups reported the total number of members of the body and how many were women. We use this data to assemble some basic, descriptive information about the decision making body as well as to assess whether the two groups identify the same body as the most important in their village. Membership in decision making bodies is a common measure of participation but, as discussed previously, does not necessarily reflect women's ability to influence decisions. The participants of the women's focus groups were asked to vote on a series of statements regarding their perception of participation and influence in village and household decisions, including forest rule-making (see Table A1). Each statement was read out loud to the group, and the number of people that agreed or disagreed noted.⁴ To correct for the differences in group size, the *share* of participants in each group that agreed/disagreed to each statement was calculated. Based on these shares, the weighted average at site, region and country level was calculated; each village is given equal weight.

With regard to (perceptions of) forest use by men and women, the women's group was asked to agree on a single answer. We did not ask the village group about forest use, meaning that we use data where women report men's use of the forest, hence we are not able to triangulate the information to see if the answers by men would differ.

RESULTS

The presentation of the results follows the logic of our analysis. The first section compares knowledge of REDD+ between the mixed village and women's focus groups. As explained above, the results demonstrate that on average, the women's groups were less knowledgeable than the village groups. The following sections explore a series of factors related primarily to women's participation to help understand those results and their significance for REDD+. We hypothesized that relative to men, there are four conditions that should contribute to more equal participation of women in REDD+: 1) that women have a strong voice in village decision-making; 2) that women have a strong role in forest rule-making; 3) that women use forest resources as much or more than men; or 4) that initiatives take an explicit gendered approach to REDD+.

Knowledge of REDD+

Across all villages, the awareness of REDD+ among the women's focus groups was lower than among the village focus groups (Table 2). While 38% of the women's focus groups had heard of REDD+, a much larger proportion of women focus groups (58%) had heard about the local REDD+ initiative. This result indicates that quite a few of the proponents were able to make their initiatives known at their

respective sites, even in the early stages. In all, 41% of the women's focus groups were considered to have a basic understanding of REDD+ and/or the local REDD+ initiative. When the same questions were posed to the village focus groups, we found consistently higher numbers: 60% of the village groups stated that they had heard about REDD+ prior to our interview, 71% had heard about the local REDD initiative, while 67% demonstrated a basic understanding. In Brazil, the women's focus groups demonstrated a basic understanding of REDD+ in all the villages where the village focus groups demonstrated understanding, whereas in Peru, Cameroon, Tanzania and Indonesia, the number of villages where the women's groups demonstrated a basic understanding was lower than the number of villages where the village focus groups demonstrated this understanding. In Vietnam, none of the women's or village focus groups had heard of REDD+ in general or the local initiative, which emphasizes the importance of comparing across groups within the same villages, given the early phase of initiative implementation in some of the sites.

Among the 30 villages where the women's groups demonstrated a basic understanding of REDD+, women had been involved in deciding whether the REDD+ initiative should be implemented in less than half (Table 3). In 12 out of the 13 villages where women had been involved, women were either part of a smaller group of villagers who were consulted for consent or because there had been a village meeting to discuss the proponent's request for consent. In one of the SE Cameroon villages, there had been a separate meeting with the village women to ask for their consent. In 9 of the 30 villages (30%) where the group demonstrated basic understanding, women had been involved in the design and/or implementation of the REDD initiative. This participation consisted of attending meetings where proponents had explained how the initiative would be implemented or solicited the input of villagers or as part of a training/educational event related to the initiative.

Of the 49 village focus groups that demonstrated a basic understanding of REDD+, a higher share (55%) had been involved in deciding whether or not to implement the initiative, and 35% of the village focus groups reported that villagers had been involved in its design and implementation. As with the women's groups, respondents in the village focus groups mentioned their participation in meetings to get input or explain the implementation of the initiative. Nevertheless, the village focus groups occasionally reported much deeper involvement, including activities such as clarifying tenure arrangements, community-based monitoring of carbon and better enforcement of forest rules.

Women's voice in village decision-making

The main decision making bodies identified by the focus groups varied; they included elected village governments/associations in Tanzania and Brazil, and in a few sites in

⁴ The participants could also choose not to respond or state that they did not know.

TABLE 2 Knowledge of REDD+ in women's and village focus groups (in number of villages)

Site	Women's groups knowledge of REDD+			Village groups' knowledge of REDD+			Total villages
	REDD in general	Local REDD initiative	Basic understanding	REDD in general	Local REDD initiative	Basic understanding	
Acre	0	4	4	0	4	4	4
Cotriguaçu ^a	.	.	.	.	.	.	.
Transamazon	2	4	3	2	4	3	4
SFX	0	0	0	0	0	0	4
Total Brazil	2 (17%)	8 (67%)	7 (58%)	2 (16%)	8 (67%)	7 (58%)	12
Madre de Dios	3	3	3	4	4	4	4
Ucayali	2	1	1	3	2	2	4
Total Peru	5 (63%)	4 (50%)	4 (50%)	7 (88%)	6 (75%)	6 (75%)	8
SE Cameroon	2	2	2	2	2	2	2
Mt Cameroon	1	3	1	3	4	4	4
Total Cameroon	3 (50%)	5 (83%)	3 (50%)	5 (83%)	6 (100%)	6 (100%)	6
Shinyanga	3	3	1	4	4	2	4
Kilosa	3	1	1	3	3	3	3
Zanzibar	1	1	1	3	3	3	4
Kigoma	4	4	4	4	4	4	4
Mpingo	1	0	0	3	0	2	4
Lindi	4	4	3	4	4	3	4
Total Tanzania	16 (70%)	13 (57%)	10 (43%)	21 (91%)	18 (78%)	17 (74%)	23
Ulu Masen	0	0	0	0	0	0	4
KCCP	0	4	2	0	4	4	4
KFCP	1	3	1	4	4	3	4
Rimba Raya	1	4	3	4	4	4	4
Katingan	0	1	0	1	2	2	4
Total Indonesia	2 (10%)	12 (60%)	6 (30%)	9 (45%)	14 (70%)	13 (65%)	20
Cat Tien (Vietnam)	0	0	0	0	0	0	4
Total average	28 (38%)	42 (58%)	30 (41%)	44 (60%)	52 (71%)	49 (67%)	73

Source: GCS-REDD field research, CIFOR, 2010–2012.

^aFocus groups in this site were not asked about REDD+.

Indonesia and Peru; the assembly of all (adult) villagers in one site in Peru; traditional councils in Cameroon; and the party committee in Vietnam. Women and the mixed village focus groups identified the same body as the most important in 74% of the villages (Table 4). Peru had the highest share of

villages where the women's and village focus groups disagreed about which body was the most important (7 of 8 villages), followed by Indonesia (9 of 20 villages).⁵

In the vast majority of the villages in our sample, (63 out of 76 with functioning decision making bodies), the leaders of

⁵ The reason for the discrepancy in Madre de Dios, Peru is that the participants in the mixed group were mainly concession owners from the Brazil nut associations, while the women's meetings included a much broader range of people from the community (i.e. agriculturalists, housewives, small business owners). In both sites in Peru, the women's group response better reflects the village as a whole and/or women's interests. In Indonesia, based on researcher observation, there are at least 3 main village institutions that could be viewed as 'important': the village government, traditional institutions, and the village assembly (BPD/Badan Perwakilan Desa). The village head almost always participated in the village focus group so it is not surprising that the village government (led by the village head) was commonly selected as the most important institution. Women's focus groups sometimes included the wife of the village head, but it was easier for them to select one of the other institutions.

TABLE 3 *Involvement in REDD+. Asked to groups with a basic understanding of REDD+ (in number of villages)*

Site	Women's involvement in REDD+			Village involvement in REDD+		
	Whether or not to implement in village	Design and/or implementation	Total with understanding	Whether or not to implement in village	Design and/or implementation	Total with understanding
Acre	3	2	4	4	0	4
Cotriguaçu	.	.	.	.	.	.
Transamazon	1	2	3	3	0	3
SFX	-	-	0	-	-	0
Total Brazil	4 (57%)	4 (57%)	7	7 (100%)	0 (0%)	7
Madre de Dios	0	0	3	0	0	4
Ucayali	0	0	1	2	1	2
Total Peru	0 (0%)	0 (0%)	4	2 (33%)	1 (17%)	6
SE Cameroon	2	2	2	2	2	2
Mt Cameroon	1	0	1	2	1	4
Total Cameroon	3 (100%)	2 (67%)	3	4 (67%)	3 (50%)	6
Shinyanga	0	0	1	2	1	2
Kilosa	1	0	1	2	0	3
Zanzibar	0	0	1	1	1	3
Kigoma	2	1	4	2	2	4
Mpingo	-	-	0	0	0	2
Lindi	1	0	3	0	0	3
Total Tanzania	4 (40%)	1 (10%)	10	7 (41%)	4 (24%)	17
Ulu Masen	-	-	0	-	-	0
KCCP	1	0	2	4	4	4
KFCP	1	0	1	1	0	3
Rimba Raya	0	2	3	2	4	4
Katingan	-	-	0	0	1	2
Total Indonesia	2 (33%)	2 (33%)	6	7 (54%)	9 (69%)	13
Cat Tien (Vietnam)	-	-	0	-	-	0
Total average	13 (43%)	9 (30%)	30	27 (55%)	17 (35%)	49

Source: GCS-REDD field research, CIFOR, 2010–2012.

the main decision making body were chosen by the village, either by election or consensus in a village meeting (Table 5). In the decision making body identified as the most important by the women's group, the average share of women was 24%, while 17 of the 76 did not have any women. As with the leaders of the main decision making body, female members were also chosen by the village in the majority of the villages in our sample (45 of 59). The share of women in these bodies varied considerably across countries from 48% in Peru (but see footnote 5), 30% in Tanzania to only 4% in Indonesia.

Across the 20 sites, we found that 64% of the women's focus group participants agreed that women were sufficiently represented in important village decision-making bodies, 65% agreed that women were usually able to influence village

decisions, and 79% agreed that women participated actively in meetings (Table 6). Again, there was substantial variety across the countries and sites, and even villages within sites. In two of the sites in Indonesia, RRC and Katingan, the overall share of women in the main decision making body was low, and in most of the villages there were no women represented at all. Yet, in both sites, all women in the focus groups in all villages agreed to all three statements regarding their participation in community decision making; they perceived that women in the village were sufficiently represented, were usually able to influence village decisions when they wanted to, and participated actively in village meetings. In Brazil and Tanzania, the situation was the opposite. In Acre, Brazil, although all villages had at least one woman in the main

TABLE 4 *Main decision making body in the village*

Site	Women and mixed group agree (# of villages)	Nature of the main decision making body when there is agreement	Main decision making body as identified by the women's group if it differs from the village group
Acre	4 of 4	Village associations (the entire village is invited for the meetings)	
Cotriguaçu	4 of 4	Village associations in three villages (the entire village is invited for meetings); women's sewing and craft group in one village (all women are invited for meetings)	
Transamazon	4 of 4	Village associations in three (the entire village can participate of the meetings, but only the association members can vote); organic producers association in one (only the members of the association are invited)	
SFX	3 of 3 ^a	Village association (the entire village is invited for meetings)	
<i>Total Brazil</i>	<i>15 of 15</i>		
Madre de Dios	1 of 4	Association of Brazil Nut Gatherers (only the members of the body are invited to attend meetings)	Governor of the community identified in three villages
Ucayali	0 of 4	Village assembly in three villages (all villagers over 15 years old); traditional council in one (only members are invited but decisions are subject to village assembly vote)	Artisan committee is identified in two villages, health committee in one and mother's club in the last
<i>Total Peru</i>	<i>1 of 8</i>		
SE Cameroon	2 of 2	Village traditional council (the entire village is invited for meetings)	
Mount Cameroon	4 of 4	Village traditional council (only the members of the body are invited to attend meetings)	Village council
<i>Total Cameroon</i>	<i>6 of 6</i>		
Shinyanga	3 of 4	Village government (only members of the body are invited, except in one village where the head teacher and doctor are also invited to attend)	Security committee
Kilosa	2 of 3	Village government (the entire village is invited to attend meetings in one of the villages while only religious leaders are invited in the other)	Security committee
Zanzibar	4 of 4	Village committee (only members of the body are invited to attend meetings, except in one village where the elders are also invited)	
Kigoma	4 of 4	Village government (only members of the body are invited; in two of the villages other authorities are also invited, like elders, head teachers, religious leaders etc.)	
Mpingo	4 of 4	Village government (only members of the body are invited; in one village leaders of other committees in the village are also invited)	
Lindi	4 of 4	Village government (the entire village is invited to attend the meetings in two of the villages while members of the body and only a few other authorities are invited to attend the meetings in the remaining two villages)	
<i>Total Tanzania</i>	<i>21 of 23</i>		
Ulu Masen	0 of 4	No agreement within villages.	Head of village and village units is identified by the women's groups in all four villages

TABLE 4 (Continued)

Site	Women and mixed group agree (# of villages)	Nature of the main decision making body when there is agreement	Main decision making body as identified by the women's group if it differs from the village group
KCCP	2 of 4	Village council and traditional body called "Adat" Council (the entire village is invited to attend the meetings of the Adat Council, while only members of the body are invited for the village council)	Traditional body identified in two, village body in one and village unit officers in the last
KFCP	1 of 4	Head of village (the entire village is invited to attend meetings)	Head of hamlet, village leaders and head of village
Rimba Raya	4 of 4	Village government (the entire village is invited to attend meetings)	
Katingan	4 of 4	Village government (in one village the entire village is invited to attend meetings, while the rest invite members of the body only)	
<i>Total Indonesia</i>	<i>11 of 20</i>		
Cat Tien (Vietnam)	4 of 4	Village party committee (only members of the body are invited to attend meetings)	
<i>Total across project sites</i>	<i>57 of 77</i>		

Source: GCS-REDD field research, CIFOR, 2010–2012.

*One observation missing. The main decision making body is not identified in one of the villages, as the village association has been inactive since 2004.

decision making body, a majority of the women disagreed to at least one of the statements that they were sufficiently represented, able to influence and participate actively in meetings in all four villages. In Tanzania, the share of women in the main decision body was the highest, and there was at least one woman represented in every village. In most villages, women perceived themselves to be sufficiently represented, but in 13 of 23 villages, the majority still disagreed that women were able to influence decisions, and in less than half of the villages the majority of the participants in each group agreed to all three statements jointly.

Across the 76 villages with a functioning main decision making body, the degree to which women perceived themselves, as a group, to be sufficiently represented in the body was positively correlated (0.24) with the share of women in the body. Nevertheless, the share of women that agreed that they were able to influence village decisions when they wanted to was not correlated (0.11) with the share of women in the body. The results demonstrate a disconnect between presence of women on village committees and the perception of participation and influence in the village. Notably, however, how women are selected into the body may have an influence on the perceptions of women's participation. In the majority of the villages where there was at least one woman in the body, women were elected by the women in the village or the whole village or by consensus in the village meeting, while in 20% they were appointed by higher authorities, such as the village leaders, the tribe or others. When comparing

responses to the participation statements we found that the share of women who agreed that women are sufficiently represented and participate actively in meetings are lower in villages where women are appointed rather than elected, but the differences are not statistically significant. Finally, t-test results show that the share of women perceiving active participation and influence over decisions is not statistically different between villages where women did and did not demonstrate a basic understanding of REDD+.

Women's participation in forest decisions

Overall, women were more involved in forest-related decisions at the household level than at the village level: in all but four sites, more participants in the women's groups agreed that women participated actively in decisions about forest use in the household compared to the village level (Table 7). The weighted average indicates that less than half (47%) of the participants agreed that women actively participated in making village rules for forest resource use while 73% agreed that women played an active role in household decisions about land and forest use. Interestingly, fewer (64%) agreed that women were able to participate in decisions about how to spend the households' cash income.

There are variations across and within countries, making it hard to generalize regarding women's influence on forest decisions. Study villages in Cameroon had the highest weighted percentage of respondents who agreed that women

TABLE 5 Information on the main decision making body in the villages

Site (total number of villages)	Body identified by women's groups			Body identified by village groups			
	Share of women, in % (# of villages with women in body)	How are female members chosen? (in # of villages with female members)			How are leaders chosen? (in # of all villages in the site with functioning main decision making body)		
		By the village	By authorities	By women	By the village	By authorities	Other
Acre (4)	23 (4)	4	0	0	4	0	0
Cotriguaçu (4)	7 (4)	3	1	0	3	1	0
Transamazon (4)	10 (3)	3	0	0	4	0	0
SFX ^a (4)	17 ^b (3)	2	1	0	3	0	0
Total Brazil (16)	13 (14)	12	2	0	14	1	0
Madre de Dios (4)	27 (4)	4	0	0	4	0	0
Ucayali (4)	70 (4)	3	0	1	3	1	0
Total Peru (8)	48 (8)	7	0	1	7	1	0
SE Cameroon (2)	22 (2)	2	0	0	0	1	1
Mount Cameroon (4)	11 (3)	2	0	1	1	2	1
Total Cameroon (6)	15 (5)	4	0	1	1	3	2
Shinyanga (4)	32 (4)	3	1	0	4	0	0
Kilosa (3)	27 (3)	1	2	0	3	0	0
Zanzibar (4)	24 (4)	0	4	0	0	4	0
Kigoma (4)	31 (4)	4	0	0	4	0	0
Mpingo (4)	32 (4)	4	0	0	4	0	0
Lindi (4)	33 (4)	4	0	0	4	0	0
Total Tanzania (23)	30 (23)	16	7	0	19	4	0
Ulu Masen (4)	2 (1)	1	0	0	4	0	0
KCCP (4)	13 (2)	0	2	0	4	0	0
KFCP (4)	0 (0)	-	-	-	3	1	0
Rimba Raya (4)	3 (1)	1	0	0	4	0	0
Katingan (4)	5 (2)	2	0	0	3	1	0
Total Indonesia (20)	4 (6)	4	2	0	18	2	0
Cat Tien (4) (Vietnam)	26 (4)	2	1 ^c	0	4	0	0
TOTAL (77)	24 (60)	45	12	2	63	11	2

Source: GCS-REDD field research, CIFOR, 2010–2012.

^aOne observation missing due to non-existing decision making body. ^bThis number is based on observations from one village only. In the remaining two villages with a functioning decision making body, the respondents did not know the total number of members in the body, and in one they did not know the number of women. ^cOne observation missing.

actively participated in making village rules for forest resource use (82%)⁶. In contrast, only 6% of women respondents in the Vietnam study villages thought so. Analogous values in Peru, Brazil, Indonesia, and Tanzania ranged from 38% to 50%. Yet within Tanzania, for example, the range

of values across REDD+ initiative sites is large, from 25% to 95%.

Women's perception of their participation in forest decisions was lower than their perceived participation in community decision making in general. The share of women's focus

⁶ Women control the management of non-timber forest products. Moreover they are involved in decision bodies, such as forest management institutions, both in SE Cameroon and Mount Cameroon sites.

TABLE 6 Perception of women's participation in village decision making (in shares^a)

Site	Sufficiently represented		Usually able to influence		Participate actively in meetings	
	Agree	Disagree	Agree	Disagree	Agree	Disagree
Acre	0.25	0.63	0.50	0.50	0.31	0.69
Cotriguaçu	0.75	0.25	1.00	0.00	1.00	0.25
Transamazon	0.25	0.75	0.63	0.24	0.76	0.00
SFX	0.00	1.00	0.50	0.50	0.60	0.15
Total Brazil	0.31	0.66	0.65	0.31	0.67	0.27
Madre de Dios	0.75	0.25	0.56	0.44	0.66	0.34
Ucayali	1.00	0.00	1.00	0.00	1.00	0.00
Total Peru	0.88	0.12	0.78	0.22	0.83	0.17
SE Cameroon	0.50	0.50	1.00	0.00	1.00	0.00
Mount Cameroon	0.75	0.25	0.75	0.25	0.75	0.25
Total Cameroon	0.67	0.33	0.83	0.17	0.83	0.17
Shinyanga	0.55	0.19	0.43	0.25	0.85	0.00
Kilosa	0.97	0.00	0.78	0.10	0.96	0.00
Zanzibar	0.68	0.06	0.73	0.25	1.00	0.00
Kigoma	0.93	0.00	0.48	0.37	0.98	0.00
Mpingo	0.88	0.06	0.55	0.45	0.98	0.00
Lindi	0.78	0.19	0.38	0.50	0.84	0.03
Total Tanzania	0.79	0.08	0.55	0.33	0.93	0.01
Ulu Masen	0.75	0.25	0.50	0.25	1.00	0.00
KCCP	0.00	1.00	0.50	0.50	0.25	0.50
KFCP	0.24	0.76	0.23	0.74	0.25	0.69
Rimba Raya	1.00	0.00	1.00	0.00	1.00	0.00
Katingan	1.00	0.00	1.00	0.00	1.00	0.00
Total Indonesia	0.60	0.40	0.65	0.30	0.70	0.24
Cat Tien (Vietnam)	0.73	0.28	0.75	0.25	1.00	0.00
TOTAL	0.64	0.32	0.65	0.29	0.79	0.15

Source: GCS-REDD field research, CIFOR 2010–2012.

^aThe remaining responses are “The respondent does not know” and “The respondent choose not to respond”. The mean number of participants voting in each site is included in Table 1.

group participants that agreed to actively participating in making rules for forest resource use in the village was lower in all but three of the sites when compared to the share of women that agreed they were usually able to influence village decisions (Kigoma and Mpingo in Tanzania, and Ulu Masen in Indonesia), and lower in all sites when compared to whether they participated actively in meetings, except in Acre, Brazil. There was no correlation (0.01) between the share of women on the main decision-making body and forest rule making, but there was a positive correlation (0.36) between participation in forest rule making and women's participation in forest monitoring.

Finally, the results indicate that in villages where women were more involved in forest resource use decisions and

monitoring, they were also more likely to demonstrate a basic understanding of REDD+ similar to the mixed village group. Overall, the share of women that agree women are actively participating in making village rules for forest resource use is significantly higher (30%) in the villages where the women's and mixed village focus groups demonstrate the same basic understanding of REDD+. The share of women that agreed women actively participated in forest monitoring is 14% higher, but this is not statistically significant. In a third of the 17 villages where the women's group demonstrates a lack of understanding of REDD+ relative to the village group, a majority there also state that women are participating in making rules regarding forest resource use and/or monitoring.

TABLE 7 Women's participation in resource use decisions at village and household level (in shares^a)

Site	Village forest resource use rule making		Forest resource monitoring		Household's cash income		Household's land and forest use	
	Agree	Disagree	Agree	Disagree	Agree	Disagree	Agree	Disagree
Acre	0.44	0.54	0.64	0.36	0.88	0.12	0.50	0.50
Cotriguaçu	0.50	0.50	0.50	0.50	1.00	0.00	0.50	0.50
Transamazon	0.55	0.25	0.96	0.04	0.65	0.25	0.58	0.25
SFX	0.13	0.63	0.38	0.38	0.75	0.25	0.25	0.75
Total Brazil	0.40	0.48	0.62	0.32	0.85	0.15	0.46	0.50
Madre de Dios	0.00	1.00	0.88	0.12	1.00	0.00	0.89	0.11
Ucayali	0.75	0.25	0.50	0.50	0.50	0.50	0.75	0.25
Total Peru	0.38	0.62	0.69	0.31	0.75	0.25	0.82	0.18
SE Cameroon	0.96	0.04	0.96	0.03	0.96	0.04	0.96	0.04
Mount Cameroon	0.75	0.25	0.50	0.50	1.00	0.00	1.00	0.00
Total Cameroon	0.82	0.18	0.65	0.35	0.99	0.01	0.99	0.01
Shinyanga	0.40	0.47	0.54	0.33	0.59	0.28	0.33	0.58
Kilosa	0.38	0.25	0.58	0.33	0.45	0.31	0.86	0.00
Zanzibar	0.25	0.50	0.25	0.47	0.46	0.32	0.63	0.24
Kigoma	0.95	0.02	0.96	0.00	0.93	0.02	0.68	0.20
Mpingo	0.67	0.26	0.32	0.65	0.94	0.00	1.00	0.00
Lindi	0.25	0.66	0.00	0.89	0.74	0.19	0.89	0.02
Total Tanzania	0.49	0.36	0.44	0.45	0.69	0.18	0.73	0.18
Ulu Masen	1.00	0.00	0.25	0.75	0.75	0.25	0.75	0.25
KCCP	0.00	0.25	0.00	0.25	0.75	0.25	1.00	0.00
KFCP	0.24	0.71	0.03	0.97	0.98	0.00	0.74	0.26
Rimba Raya	0.50	0.25	0.50	0.25	1.00	0.00	1.00	0.00
Katingan	0.75	0.00	1.00	0.00	0.75	0.25	0.75	0.25
Total Indonesia	0.50	0.24	0.36	0.45	0.85	0.15	0.85	0.15
Cat Tien (Vietnam)	0.06	0.31	0.06	0.56	0.50	0.50	0.71	0.29
TOTAL	0.47	0.37	0.48	0.40	0.64	0.31	0.73	0.23

Source: GCS REDD field research, CIFOR, 2010–2012.

^aThe remaining responses are “The respondent does not know” and “The respondent choose not to respond”. The mean number of participants voting in each site is included in Table 1.

Women's use of the forest

The results showed that men went to the forest more often than women in 56% of all the villages in our sample (Table 8), there was no difference between women and men in 33% of villages, while in the remaining 11%, women went into the forest more often. Again, there were distinct differences between countries. Women and men went equally often into the forest in Indonesia in 60% of the villages and in all the villages in the Vietnam site. Men went into the forest more

often on average in Brazil, Peru and Tanzania, while all of the villages where women went into the forest more often were in Cameroon or Tanzania.

There were also differences regarding how far⁷ women and men went from the forest edge into the forest. On average across the sites, men walked almost twice as far as women, but there were variations. For example, in the Cotriguaçu site in Brazil, SE Cameroon, and Kigoma in Tanzania, women walked further into the forest, while in some other sites the difference between men and women was small.

⁷ The question asked was about walking time rather than distance, so this should be seen as a proxy. In any case, the relevant data is the relative time/ distance between men and women and not the absolute numbers.

TABLE 8 Who goes more often to the forest, and how far do they go inside the forest?

Site (total # of villages)	Who are more often in the forest? # of villages			Mean walking distance inside the forest, in min	
	Women	Men	No difference	Women	Men
Acre (4)	0	3	1	55.00	411.25
Cotriguaçu (4)	0	3	1	67.50	56.25
Transamazon (4)	0	4	0	17.50	45.00
SFX (4)	0	3	1	63.75	105.00
Total Brazil (16)	0 (0%)	13 (81%)	3 (19%)	50.94	157.67
Madre de Dios (4)	0	4	0	360.00	480.00
Ucayali (4)	0	3	1	120.00	120.00
Total Peru (8)	0 (0%)	7 (88%)	1 (12%)	240.00	300.00
SE Cameroon (2)	0	0	2	102.50	72.50
Mount Cameroon (3 ^a)	2	0	1	150.00	220.00
Total Cameroon (5)	2 (40%)	0 (0%)	3 (60%)	131.00	161.00
Shinyanga (4)	3	1	0	16.25	27.50
Kilosa (3)	1	1	1	50.00	70.00
Zanzibar (4)	0	3	1	12.50	11.25
Kigoma (4)	2	2	0	22.50	12.50
Mpingo (4)	0	4	0	25.00	48.75
Lindi (4)	0	3	1	20.25	45.00
Total Tanzania (23)	6 (26%)	14 (61%)	3 (13%)	23.30	35.35
Ulu Masen (4)	0	0	4	40.00	66.67
KCCP (4)	0	2	2	78.75	440.00
KFCP (4)	0	2	2	170.63	245.63
Rimba Raya (4)	0	1	3	82.50	82.50
Katingan (4)	0	3	1	60.00	75.00
Total Indonesia (20)	0 (0%)	8 (40%)	12 (60%)	88.82	188.03
Cat Tien (Vietnam) (3 ^b)	0	0	3	65.00	125.00
Total (75)	8 (11%)	42 (56%)	25 (33%)	78.49	141.49

Source: GCS-REDD field research, CIFOR, 2010–2012.

^aOne observation missing. ^bOne village where the respondents do not know who goes more often.

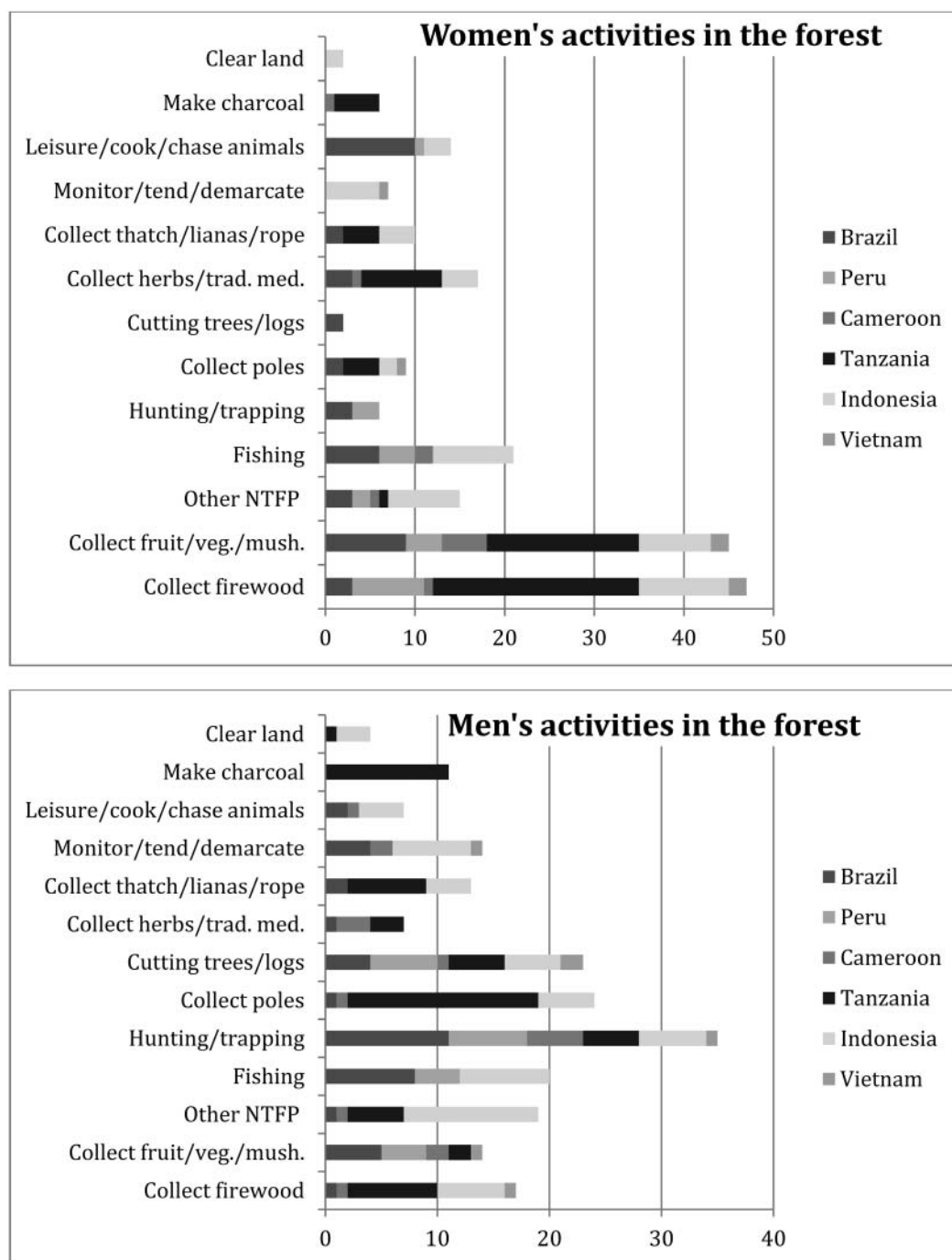
Women carried out a wide range of activities (Figure 2). There were clear differences in forest use: women's main activities included collecting firewood, fruits and vegetables, while hunting and collecting poles were the top two activities of men. There were also differences across countries. In Vietnam, the data suggest that both men and women carried out a relatively small variety of activities in the forest compared to all the other countries.

We found that in the small portion of villages where women were the ones who most often went to the forest, a higher share of women respondents agreed that they participated in forest monitoring. But otherwise we did not find a clear relationship between women's use of the forest and their participation in forest decisions. The data suggest that women were not necessarily included in forest decision making even

when they were the ones that went into the forest as much or more often than men, with the exception of Cameroon. In Cameroon, a high proportion of women agreed that women actively participate in making rules for forest resource use (82%). Also, a weighted average of 99% agreed that women participated in decisions about land and forest use at the household level.

No relation was found between women's use of the forest and their knowledge of REDD+. In 13 of the 19 villages where the village focus group demonstrated a basic understanding of REDD+ while the women's focus group did not, women went into the forest at least once a week. In the remaining villages they went only a few times a year, but so did the men in the same villages. Hence women's relative lack of a basic understanding of REDD+ cannot be explained by their lack of use of the forest.

FIGURE 2 Forest activities by women and men



Source: GCS-REDD field research, CIFOR, 2010–2012

REDD+ initiative commitments to women

Data from the proponent appraisal interviews were examined to see whether or not proponents were planning to take women's specific needs into account in the design and implementation of REDD+ initiatives, and if they were proposing concrete actions to do so. At the time of these early

interviews, none of the proponents⁸ listed women as a stakeholder group, though five proponents stated fair benefits to women as an equity goal (SE Cameroon, Ucayali in Peru, Cat Tien in Vietnam and Zanzibar and Mpingo in Tanzania).

Yet, at only one of those sites did we find a similar basic understanding of the local REDD+ initiative between women and village groups and equal participation in implementation

⁸ The proponents in Tanzania had not finalized this exercise yet at the time of the research.

and involvement in REDD+. In the two SE Cameroon villages in, both the women's and mixed village focus groups demonstrated a basic understanding about REDD+, and women were involved in deciding whether the initiative should be implemented in their villages along with in its design and/or actual implementation. At the time of the research, the SE Cameroon initiative had already taken a gendered approach, helping individual women who had been involved in NTFP collection to organize and obtain rights to a community forest in the village under a village umbrella association that the initiative also helped form. Stakeholder activities such as Payment for Environmental Services (PES) and organizing group sale of produce were coordinated through the association, which was being led by a woman at the time of writing this article.

In the two Tanzanian and one Peruvian initiative with explicit gender equity goals, however, mixed village groups showed greater basic understanding relative to the women-only groups. (As mentioned earlier, in the Cat Tien site in Vietnam, neither the women's nor the mixed village groups showed knowledge of REDD+, since based on the timing of the initiative, workshops had not yet been conducted in the villages.)

DISCUSSION

Overall, the data comparing the results of women-only and male-dominated mixed focus groups suggest that women were less familiar with REDD+ or local REDD+ initiatives than men. This result corresponds with the findings of other recent, more qualitative research on REDD+ (e.g. Gurung and Setyowati 2012) and raises concerns regarding the future of REDD+.

Of those groups that demonstrated a basic understanding of REDD+, the proportion of mixed groups that participated in the decision to implement or were involved in the design or implementation of the local REDD+ initiative was also higher than in the women's groups, although the gap narrows somewhat. Furthermore, where women were involved in design and implementation, their participation was more passive, or consultative, whereas men's participation was occasionally more active. There are at least two reasons that could explain the absence of women from design and implementation activities: (i) women are not seen as capable of contributing, or (ii) women choose not to participate because these are considered burdensome responsibilities that they are happy to delegate to men⁹.

Of the four aspects of decision making that were explored further, only participation in forest rule-making and monitoring was correlated with greater knowledge of REDD+. Each

factor is considered briefly in turn, before turning to the implications for REDD+.

In terms of women's participation and perceived influence in village decision making, results show that having women on the main decision making bodies was not correlated with the perception of influence over village decisions. This is not particularly surprising given previous research. In most cases there is only one woman on these bodies, and, as discussed above, past research suggests that such arrangements often fail to result in effective representation (Agarwal 2010b). Overall, however, almost two thirds of women believed that they influenced village decision-making, whether or not they were represented on formal decision-making bodies. Interestingly, women at the two sites in Cameroon showed higher influence in both the communal and household arena when compared to sites in the other countries. Perceptions of influence, of course, cannot be assumed to represent influence in practice, as women in a certain culture or community may simply be more demanding or have higher expectations.¹⁰ In that regard, the perception of influence was not correlated with greater knowledge of REDD+ initiatives. That is, participation in village decision making did not guarantee participation in REDD+.

For women's participation in forest rule making and monitoring, perception of influence relative to overall village decision making dropped, with just under half of women stating that they participated in forest rule making. At the household level, with the exception of Brazil, the majority of women believed that they influenced household decisions on land and forest use. Notably, in the villages where the women's and mixed village focus groups demonstrated the same basic understanding of REDD+, a higher portion of women participated in forest rule-making and, to a lesser degree, forest monitoring. Of the four factors studied, this is the only one that appears to be associated with knowledge of REDD+, though it does not hold across all of the villages.

In terms of women's use of forests and forest resources, we anticipated finding similar knowledge of REDD+ between the two types of focus groups where women use forests as much or more than men. The data demonstrate that women and men use forests differently (as expected based on the literature), and that there is great variation across the countries and sites regarding women's use of forests and the relative uses by women and men. In almost half the villages (44%), women reported going into the forest as much as or more than men. The research did not study the extent to which women's uses were more informal and/or less acknowledged than men's, but as discussed previously, there is sufficient literature on this to suggest that awareness of the full extent of women's forest use is often limited. More problematic, however, is that even when women used the forest as much or

⁹ There are many possibilities, for example they may not be as capable, they may not be seen as capable, and they may not have the confidence to contribute.

¹⁰ For example, this may be the case in Brazil, where women are least content with their representation on official bodies and have the lowest share agreeing that they actively participate in meetings, but in practice they have equal knowledge of REDD+ as the mixed village groups.

more than men, there was no correlation with women's participation in forest rule-making, nor were women in our study as informed about REDD+. Conversely, lack of influence, and less knowledge of REDD+, cannot be associated with less forest use.

With regard to proponents' explicit attention to gender equity in REDD+, while a similar number of women and village groups showed a basic understanding of REDD+ at several sites, with one exception these were not the places where proponents stated in early interviews that they were concerned with equity. This finding suggests that other initiatives may have taken this on without necessarily planning to, while those that planned to did not do so, at least early on in the initiative, with much success. Though it would be interesting to compare initiative strategies to include women or address gendered differences, data collection occurred too early in the initiatives' implementation to do so more fully.

The results raise a number of questions. Importantly, it is somewhat reassuring that women involved in forest rule-making appear to be better placed in relation to information on local REDD+ initiatives. Also, some REDD+ proponents had clearly managed to provide equal information for women and men in the early stages, even when this was not among their apparent goals. However, there is substantial evidence, from the study and from the literature, that this is far from enough to ensure a sustainable and equitable REDD+.

The results of the study confirm that understanding women's participation, representation and influence is not at all straightforward. The women interviewed often believed they are "sufficiently represented" in village decision making institutions, but this may be because they did not see existing governance bodies as particularly effective institutions through which to exercise influence. The majority also believed they were able to exercise influence when they wanted to, apparently through other means. This could be interpreted to mean that REDD+ proponents do not need to be concerned, but women's groups' relative lack of information on REDD+ compared to the village groups suggests otherwise.

The evidence that women using forests as much or more than men do not participate more in rule making and are not equally informed about REDD+ is particularly worrisome. At

village level, REDD+ policies, programs and projects most certainly involve changing the rules for forest use – otherwise there would be no change in behaviour to reduce emissions. Not all such rules necessarily would affect community uses – such as a project that simply secured the borders of a community forest from outside incursion. Nevertheless, among the cases studied, all of the initiatives contemplate some sort of norms and regulations regarding community forest use.

In addition, REDD+ may have unexpected consequences for women and for households. Even though most women believed they could influence decisions that they cared about, they may not understand the ways in which REDD+ could affect them until too late: for example after harm has been inflicted, or after contracts have been signed. Even in a hypothetical situation in which women make no use of and have no interest in forests, the impacts of a REDD+ intervention could have an important effect on families, such as in cases where men lose access to forests in return for cash payments; the research data shows that women have less decision making power over household cash income in comparison to household land and forest use. This requires that women be fully informed.

The data demonstrate important inequities but also that the results are highly context specific. Though the number of villages studied in each country is varied and clearly not representative at the national level, it may be useful to examine country level differences in this light. Table 9 presents the rankings of the six countries on gender inequalities using three different indices. Though there is substantial variation even among the different indices, Vietnam and Brazil are consistently in the top half (among our study countries), and Cameroon is consistently on the bottom. Contrary to the expectations that might be set by national rankings, and perhaps demonstrating even further the importance of the specific context, the villages in Cameroon had the highest percentages in some key variables like women's ability to influence decisions and participation in forest rule making. More consistent with the national indices, Brazil is the only country in our study where women and village focus groups were equally informed about REDD+.

Finally, it is important to note that the key variable that we have used in this study, knowledge of REDD+, to compare men and women is a very modest measure of difference. In

TABLE 9 2013 Gender-related rankings

UNDP (2014) Gender Inequality Index		WEF (2013) Global Gender Gap		IUCN (2013) Environment and Gender Index ^a	
Country	Rank (of 152)	Country	Rank (of 136)	Country	Rank (of 72)
Vietnam	58	Brazil	62	Brazil	24
Peru	77	Tanzania	66	Vietnam	28
Brazil	85	Vietnam	73	Indonesia	33
Indonesia	103	Peru	80	Tanzania	44
Tanzania	124	Indonesia	95	Cameroon	63
Cameroon	138	Cameroon	100		

^aPeru not ranked.

fact, it is a measure that virtually requires only physical presence at meetings – the *weakest* form of participation.

The complexities of gendered participation demonstrated here suggest, in fact, that more extensive participation in REDD+ processes is necessary but alone is insufficient. Rather, women's opportunity to participate in REDD+ will not necessarily bring a strong gendered understanding of forest resource access and control to the table, or result in influence over – and more equitable – outcomes.

CONCLUSIONS: THE ROLE OF WOMEN IN EARLY REDD+ IMPLEMENTATION

Results across our study sites show great variation in the extent to which women participate, influence and are represented in village and household decision-making processes. In the Cameroon villages, women appeared to influence village level decisions, participate in forest rule making and use the forest as much or more than men. In contrast, in the Brazil sites, women did not perceive that they influenced village decisions, did not participate in forest decisions and used the forest less relative to men; they were also the most dissatisfied with their level of participation in decision-making bodies. Women in the Vietnam villages influenced village decisions, used the forest as much as men but had no influence on forest decisions.

Despite variations within countries, and between sites and villages, there are some broad patterns that emerged in our analysis. In many sites, women reported that they influenced household land use choices and village decisions, used forests substantially and as much or more than men, and were sufficiently represented on village decision-making bodies. Yet these indicators of participation and representation were not linked to the perception that they could influence forest decisions, and they were not correlated with their knowledge of REDD+ when compared to male-dominated village focus groups in the same villages.

We cannot fully explain whether women's lower level of participation in REDD+ processes comes from their free choice *not* to be engaged, or because they are prevented from being engaged due to a set of cultural, social and economic conditions. In the sites where initiatives were beginning implementation, women's focus groups showed that their participation was mainly passive, related to receiving information and training, whereas village focus groups also mentioned more active and substantial participation, such as participatory mapping and clarifying tenure rights. The data we collected at the early stage of initiative implementation were quantitative in nature, meaning that the questions asked in the focus group interviews were mainly close ended. The methods did not include systematic follow-up questions, and further qualitative studies that fully account for local circumstances are needed to determine the reasons for these observations.

Nevertheless, other recent studies have also found that women are not being sufficiently included in REDD+

processes (Gurung and Setyowati 2012, Nhantumbo and Chiwona-Karlun 2012, WOCAN 2012). And as Khadka *et al.* (2014) argue based on similar research in Nepal, limiting attention to including women in meetings or even in payment mechanisms without addressing the underlying power issues behind inequity is insufficient.

At least two points should be taken into account in the search for an effective gendered approach to REDD+ policies, programs and projects. First, given the variation across villages, sites and countries, there are no simple solutions for improving women's participation, or a blueprint appropriate for all locations. Nevertheless, there are strategies for improving participation that have had some success, such as adaptive collaborative management and other deeply participatory strategies for engagement (Colfer 2005, Evans *et al.* 2014, McDougall *et al.* 2013). Women should be involved in all aspects of REDD+ design, decisions, capacity building and benefits (see also Gurung and Setyowati 2012).

Second, promoting women's participation alone is insufficient. This is true on the one hand because of social and cultural norms, discrimination and lack of experience, confidence and skills (Mai *et al.* 2011) and power relations (Khadka *et al.* 2014) that may limit women's voice in the public sphere, and on the other hand because of the limited analysis and understanding of gendered forest uses and community and household relations that may be affected by interventions. Although REDD+ SES has made important progress by focusing on women and gender in a number of principles and criteria, the overwhelming emphasis is on promoting women's participation rather than accompanying this with relevant gendered data and analysis.

Thus, REDD+ initiatives should integrate gender into design, monitoring and evaluation (Gurung and Setyowati 2012), to explore the ways in which men and women interact and differ with regard to key processes related to REDD+ implementation in their respective sites. This includes household and village decision-making, rights to and management of land and natural resources, and information dissemination. Gender-responsive analysis will be crucial to understanding real and perceived gender differences in interests and needs, and to anticipating threats or risks – to ensure that REDD+ implementation on the ground can lead to the effective engagement of rural men and women, encourage greater awareness and understanding of gender and forests, and lay the groundwork for community empowerment and informed participation in REDD+. Most importantly, interventions that do not seek to address gender inequities at the outset may be doomed to perpetuate them.

ACKNOWLEDGEMENTS

We thank the numerous people involved in the collection of these data in the field. We thank our partner proponent organizations, and the women and men of study villages, for graciously participating in our research efforts. GCS-REDD is supported by the Norwegian Agency for Development

Cooperation (Norad), Australian Aid, the Department for International Development (DFID) of the United Kingdom, the European Commission (EC), and the CGIAR Research Program on Forests, Trees and Agroforestry. We also thank two anonymous reviewers for their very helpful comments on a previous draft.

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APPENDIX

TABLE A1 *Data description. List of variables and sources*

Variable name	Question asked	Survey
The main decision making body in the village	What are the main village decision-making bodies? Identify the most important	Women Village
Female members of main decision making body	How many women are on this body? Number of women and number of all members	Women
Selection of leaders of the body	How are leaders of this decision-making body selected?	Village
Attend meetings of the body	Who are invited to attend meetings?	Village
Selection of female members of the body	If there are one or more women on this body, how were the women members chosen?	Women
Perception of participation (voting question: recorded number of people who agree/disagree/do not know/choose not to respond)		
Sufficiently represented	Women are sufficiently represented on important village decision-making bodies	Women
Usually able to influence	Women are usually able to influence village decisions when they want to	Women
Participate actively in meetings	Women participate actively in village meetings	Women
Village forest resource use	Women actively participate in making rules for forest resource use in the village	Women
Forest resource monitoring	Women actively participate in monitoring forest use (for example, as park guards, observers, reporting on infractions)	Women
Household's cash income	In most households in this village, women are able to participate in decisions about how to spend the household's cash income	Women
Household's land and forest resource use	In most households, women play an active role in decisions about land and forest use (e.g. what products to grow, collect, from where, how much, where to clear, etc.)	Women
Perception of forest use by men and women		
Frequency of use	On average over the year, how often do women/men go to the forest?	Women
Distance	On average, how far do women/men go from the forest edge inside the forest, in terms of walking time?	Women
Activities	What do women/men do when they are inside the forest?	Women
Knowledge of REDD+		
Knowledge of REDD+	Have you heard of REDD+ prior to this interview?	Women Village

Variable name	Question asked	Survey
Knowledge of local initiative	Have you heard of (name of the local REDD+ project) prior to this interview?	Women Village
Basic understanding of REDD+	Do the respondents show a basic understanding of what REDD or the local REDD+ project are, in the sense of stating knowledge of at least one of their attributes? (<i>Evaluation by the researcher</i>)	Women Village
Implementation decision	Have you or other women in the village been involved in deciding whether the project should or should not be implemented in your village? If yes, tell me in what ways	Women
Implementation decision	Have villagers been involved in deciding whether the project should or should not be implemented in your village? If yes, tell me in what ways	Village
Design and implementation	Have you or other women been involved in the design and/or implementation of the project? If yes, tell me in what ways	Women
Design and implementation	Have villagers been involved in the design and/or implementation of the project? If yes, tell me in what ways	Village
<i>Project strategies and goals</i>		
Stakeholders	Please list all of the major groups targeted by the project (e.g. small farmers, indigenous people, logging firms, concession holders, private companies, women's organization, particular ethnic groups, herders/pastoralists etc.) who currently use the forest	Proponent
Equity goals	Does your project have a specific plan for equitable distribution of project costs and benefits with project stakeholders? If yes, what are the equity goals?	Proponent