

# Introduction: contributions and gaps in gender and agroforestry

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## OUR APPROACH

This collection of papers began with our recognition of the vital need to improve our collective record on gender and agroforestry. We have seen mistakes committed in dealing with communities, particularly women in communities, repeatedly and usually due to simple ignorance of local contexts, cultural patterns and issues. Building on this concern, Catacutan coordinated discussions and presentations at a Gender Session at the 3rd World Congress on Agroforestry (WCA) in New Delhi, Feb 10-14, 2014. These seeds have evolved since then, as we have identified additional papers that contribute valuably to our growing understanding of gender and Agroforestry.

In introducing these papers, we make use of the Gender Box, a conceptual framework developed for analyzing gender roles in forest management (Colfer and Minarchek 2013).<sup>1</sup> The Gender Box originally had two purposes: 1) to summarise topics that researchers have found to be of relevance for gender and forests, and 2) to make these topics more accessible to forestry scientists and managers desiring to expand their attention to gender and/or women. Here, we consider this framework's applicability for gender and Agroforestry; we are inclined to consider it as readily applicable to Agroforestry as to forestry. Figure 1 shows the Gender Box; and Table 1 shows the Gender Box topics addressed in each article in our collection. Articles tend to address multiple topics, of course.

The Gender Box is based on an assumption of the interconnectedness of different aspects of people's lives, among scales, and over time; it recognises, however, that not all can be addressed simultaneously or in all programmes or projects. Catacutan and Naz, in their own study in Vietnam (this volume), also argue for a more holistic approach. They note that constraints to agroforestry adoption can not be single-handedly addressed by agroforestry interventions that have a linear focus on tree species and associated crops alone.

## A look at the issues

If we analyse the degree to which this sample of literature on gender and Agroforestry represents the relevant topics (as suggested in the Gender Box), we find a partially predictable bias: In our collection, the most popular issues were access to natural resources and day to day economic roles (9 articles each). Next in popularity were domestic roles and available

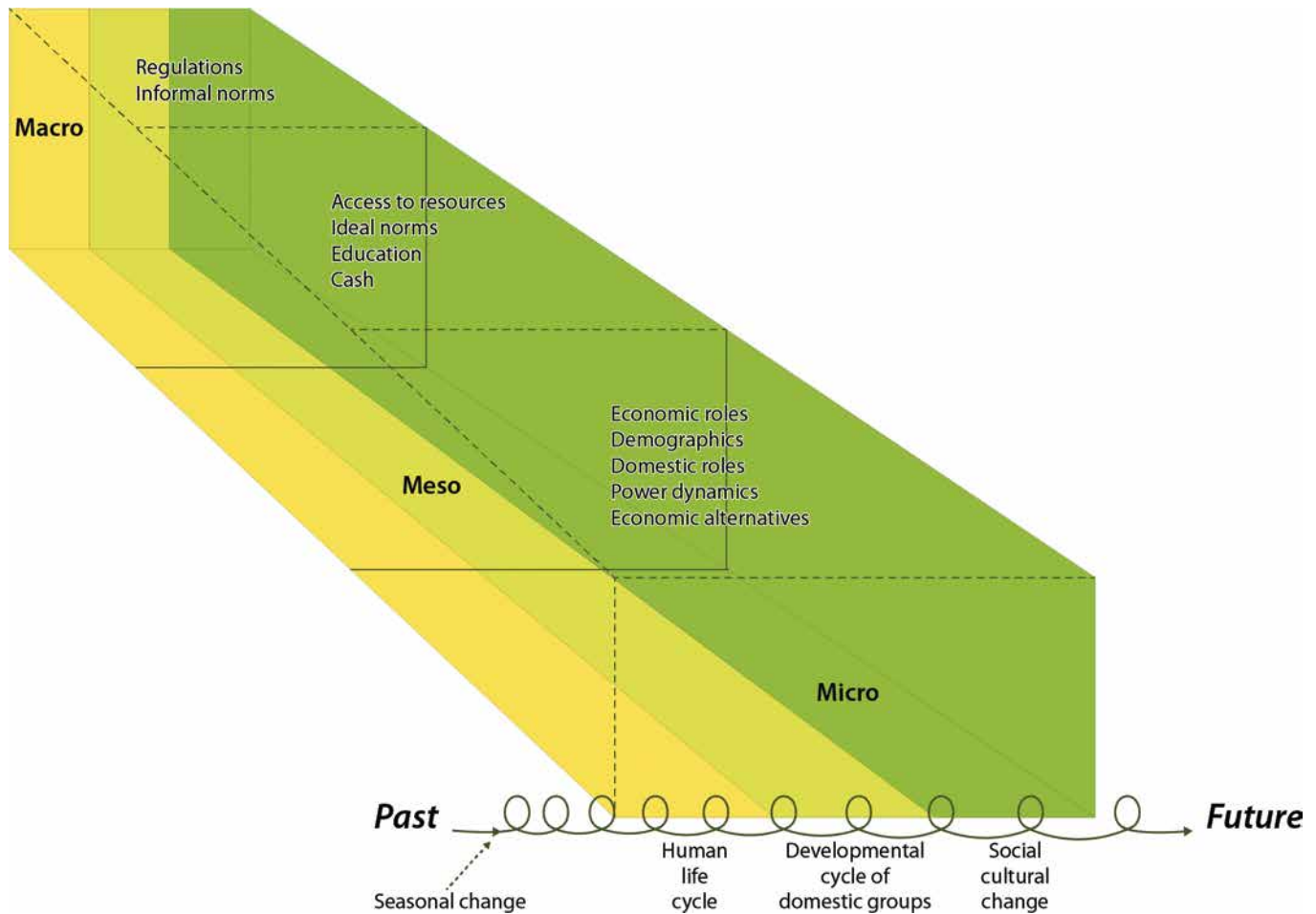
economic alternatives (8 articles each), with access to cash close behind (7 articles). These emphases mirror the trends in gender studies related to Agroforestry generally over the past few decades and provide useful new data, analyses, and policy guidance. The issue of intra-household power dynamics has increasingly been recognised as crucial if we really want to enhance gender equity: six articles emphasize its salience. An equal number address cultural/religious trends, an encouraging sign, as such influences have often been ignored. Norms of behavior, also often ignored, are addressed in half the articles (5), as is access to education and capacity-building, long seen as important by many.

The relatively neglected issues in this collection include formal laws/policies (each with 4 papers) and demographic issues (3). We still have a ways to go: These last two topics have been shown to affect gender and natural resources, generally. We look at these topics in more detail in our concluding section.

Two cross-cutting issues deserve highlighting: health and gendered knowledge. Women's usual responsibility for care of the sick, and their lesser access to health care in forested areas (Allotey *et al.* 2008) suggest that this warrants additional attention. The links between use of fuelwood for cooking, for instance and adverse health effects, particularly for women and children, are well established (e.g., Smith 2008). But these are not addressed in this collection. Blare and Useche (this issue) report local concerns about the health implications of wild animals, as interfering with local interest in biodiversity in Ecuador. In remote areas, where formal health systems barely exist, women (and men, variably) often take on informal roles in community health care (as birth attendants or other health providers, e.g., Torri's Indian example, 2012); Cunningham *et al.* (2008) provide an overview of the various alternatives to formal health care in forested areas, emphasizing the reliance on local traditional healers of various kinds as well as on medicinal plants (also often under women's care; see Bose, Kiptot, and Blare and Useche, this issue).

Knowledge also varies by gender, as is clearly shown in seven of the papers. In some cases, the extent of knowledge (by one or the other gender) is stressed. In many gender studies, the activities of women tend to be emphasized (primarily because of prior emphasis on men's activities). In this collection, we find useful information on women's knowledge: Mulyoutami *et al.* emphasize women's knowledge of seed selection and post harvest processing of rice and maize and

<sup>1</sup> For a longer, open access version, with more examples, see [http://www.cifor.org/publications/pdf\\_files/OccPapers/OP-82.pdf](http://www.cifor.org/publications/pdf_files/OccPapers/OP-82.pdf).

FIGURE 1 *The Gender Box\**

\*From: COLFER, C. J. P. and MINARCHEK, R. D. 2013. Introducing 'the gender box': A framework for analysing gender roles in forest management. *International Forestry Review* 15, 1–16.

of home garden management in Indonesia; Blare and Useche note both women's agricultural and land use knowledge, but also their knowledge of forest plants in Ecuador; Bose (India) and Kiptot (Africa) both emphasize women's knowledge about (and preference for) multi-purpose trees, relating to subsistence and food provisioning roles. They have also emphasized knowledge of fuelwood (e.g., Bose, on India); food/cooking/processing (Kiptot); fruit trees and biodiversity (Bose, Kiptot); or fodder (Bose).

Other authors point to shortcomings in women's knowledge and the need to enhance it: e.g., Gélinas *et al.* on sheep fattening in Mali; or Mbosso on women's lack of familiarity with processing machines and their prices in Cameroon; and Catacutan and Naz on lack of agroforestry knowledge by ethnic minority women in Vietnam due to interlinked factors such as a language barrier, low educational levels and poor attendance at training opportunities.

One of the strengths of this collection is the comparatively equal attention to the activities and knowledge of both genders. Clear understandings of the division of labour emerge in most of the articles. Tendencies for men to dominate in land preparation and particular parts of the agricultural cycle (varying enormously by area and crop) emerge;

one usual male prerogative is their preference for and dominance in timber management (Mulyoutami *et al.*, Kiptot). Very often, but not always, men excel at marketing, sometimes having complete control (e.g., Gélinas). The oft-noted pattern of men taking over as products become more profitable is evident in this collection (e.g., Mbosso, Kiptot, Catacutan & Naz). Men's preference for profitable monocrops also emerges (Blare and Useche, Mulyoutami *et al.*, Villamor *et al.*); and women's (sometime) interest in biodiversity conservation (in Blare and Useche, but not in Villamor or Mulyoutami *et al.*). These latter two papers show Indonesian women's unusual dominance in household financial management. Catacutan & Naz' findings on joint decision-making with respect to utilization of household incomes, despite men's dominance in decisions over many farming activities, suggest the need for a nuanced approach to understanding gender relations.

### Looking at questions of scale and temporality

Whereas many gender studies are conducted at the micro scale, our collection is unusual in the large proportion of analyses at the meso scale (8; Table 2). By meso-scale, we

TABLE 1 The Allocation of Articles to Gender Box Topics

Gender Box Topics	First Authors of Articles in Special Issue										Totals	%
	Gelinas	Bose	Catacutan	Ferket	Bourne	Mbosso	Villamor	Kiptot	Mulyoutami	Blare		
Formal laws/policies	1	1	1	1			1				4	40%
Cultural/religious trends	1	1	1	1	1		1	1	1		6	60%
Access to natural resources	1	1	1	1	1	1	1	1	1		9	90%
Norms of behaviour	1			1	1		1	1	1		5	50%
Access to education			1	1	1	1			1		5	50%
Access to cash	1	1	1	1	1	1	1	1	1	1	7	70%
Day to day economic roles	1	1	1	1	1	1	1	1	1	1	9	90%
Demographic issues				1	1		1		1		3	30%
Domestic roles	1	1	1	1	1	1	1	1	1	1	8	80%
Intra-household power dynamics	1	1	1	1	1		1	1	1		6	60%
Available economic alternatives	1	1	1	1	1	1	1	1	1	1	8	80%

refer to contexts larger than a village or two, but smaller than the national context. Kiptot's African overview, Ferket's pan-Cameroon assessment, and Catacutan and Naz' analysis of Agroforestry adoption in Vietnam (all scales) address the macro-scale. Such an emphasis makes this collection particularly relevant for others working at the recently popular landscape-scale. Three also address the micro-scale (Villamor *et al.*, Mulyoutami *et al.*, and Bose).

Another strength of this collection is its attention to temporality. Although all of the papers focus on the present, three explicitly examine change over time. The study in India by Bose compares the impacts of Agroforestry changes initiated ten years earlier with the ways they have played out in the intervening years. In Villamor's study, this is addressed by looking at two contexts in the present: a lowland area that has experienced a great deal of recent change (with the expansion of rubber and oil palm) compared with an upland area that more closely resembles the traditional patterns. Mbosso *et al.* examine the uptake of a machine that was introduced in 2007. The significance of history on current day practices has been frequently noted, and its effects on gender are no less important. Bourne *et al.* consider future directions in their study of people's interest in adopting agroforestry on the northern slopes of Mt. Elgon in Uganda. Catacutan & Naz also consider future priorities by men and women. We would argue that attention to imagined futures represents a potentially crucial, and under-studied research topic in this field (see e.g., Cronkleton 2005, Evans *et al.* 2006).

### Agroforestry and forestry

Considering the differences between forestry and agroforestry, and the possible implications for gender studies, several issues strike us. First, forestry research and interests are more likely to be associated with conservation and ecology; agroforestry, with tree-crop production and agriculture generally. Where a forestry institution might struggle to protect timber production, non timber forest products, and biodiversity, an agroforestry institution might focus on pests, spacing, interaction of trees and crops, and domestication of species that are economically valuable to small farmers.

Second, even where there are shared interests — as of course there are many — the language used tends to differ. Where foresters think about forest management units (FMUs), agroforesters are focused on individual farms or farming landscapes (including shifting cultivation areas within forests). Where foresters might consider swidden agriculturalists to be encroachers or poachers, agroforesters might be interested in providing them with extension to increase their productivity even *in situ*. Foresters write of secondary forests and forest regrowth, whereas agroforesters refer to forest fallows and fallow length. But members of both professions are often looking at the same landscape, the same people on those landscapes, the same overall context for making desirable changes.

The discussions in these papers focus on different 'agroforestry' practices and systems, but in some cases, this term refers to the same patterns that others have called swidden or shifting cultivation (e.g., studies by Bose, Kiptot, Mbosso,

TABLE 2 *The scales addressed in this collection*

Scale	First authors of articles in Special Issue on Gender and Agroforestry										Totals	%
	<i>Gelinas</i>	<i>Bose</i>	<i>Catacutan</i>	<i>Ferket</i>	<i>Bourne</i>	<i>Mbosso</i>	<i>Villamor</i>	<i>Kiptot</i>	<i>Mulyoutami</i>	<i>Blare</i>		
micro			1				1		1		3	30%
meso	1	1	1		1	1	1		1	1	8	80%
macro			1	1				1			3	30%

and some sites studied by Mulyoutami *et al.*, Villamor *et al.*, and Catacutan and Naz). Referring to such systems as agroforestry avoids the knee-jerk negative response that shifting cultivation (or even more dramatically, slash and burn) can elicit. However, it also fails to contribute to a needed redefinition of swidden agriculture that recognizes its value under certain circumstances (particularly in areas of low population density). Such intact swidden systems could beneficially provide models as we try to maintain forest cover while ensuring livelihoods to local people; they could also serve as sources of insight as scientists seek to intensify forest-based systems (e.g., Colfer, Gill and Agus 1988 or Colfer, Peluso and Chin 1998, in Indonesia; Vien, Rambo and Lam 2009, in Vietnam). Such efforts gain in importance as researchers strive to implement REDD+ (Reducing Emissions from Deforestation and forest Degradation) projects.<sup>2</sup> Swidden and agroforestry systems represent ways to maintain forest cover, to varying degrees, while providing useful products and services for people whose lives are intimately connected with forests.

But even more relevant for our purposes here is the typically significant role that women play in such systems, particularly in Africa and in Southeast Asia. In Africa, some have referred to such systems as ‘women’s agriculture’ (as far back as Boserup 1970, or more recently Meinzen-Dick *et al.* 2012 analyse the variety of types in that continent). Active, often dominant involvement of women is commonly reported in swidden agricultural systems in SE Asia and the Pacific (e.g., Colfer 2009; or more generally Colfer and Minarchek 2015). Even in South America where men tend to play more active roles as farmers, women are actively involved in many such systems (cf. e.g., Porro 2001; Porro and Stone 2005). Yet officially and in terms of extension, biased assumptions about farming as a men’s activity continue to interfere with women’s access to relevant information and inputs and with their access to fora in which to make their own interests and goals known. The scientific traditions in much agricultural and agroforestry research measure particular products (e.g., rice or timber) and neglect others (e.g., NTFPs, medicinal plants); these traditions represent some of our problems in capturing the various products that women (and men) gather from forests, which in turn

further diminishes our perceptions of women’s productive roles in many areas. Attention to some of the ‘missing data’ discussed below could improve our record in these arenas.

Regardless of these differing emphases, vocabularies, and orientations, both foresters and agroforesters need the cooperation and involvement of local people, which renders these analyses of use to both. The next two sections of this introduction provide first a summary of each article, moving from overviews through foci on gender roles and expectations, through crop prioritization differences, ending with examples of gendered technology. The final section of our Introduction looks at the gaps, the issues that are missing from our compilation, with some discussion of their relevance for future work.

#### SUMMARY OF TOPICS ADDRESSED IN EACH PAPER

Of these ten papers, four discuss sites in Asia, five are from Africa, and one is from Latin America. We have excellent authorship representation from developing countries (half of the first authors are from developing countries and many more of the secondary authors); but authorship is unbalanced in favor of women (a fact that we lament).

Kiptot’s paper provides a summary of relevant literature on gender and agroforestry throughout much of Africa. The core of her paper is an overview of tree species preferences by gender, gendered rights to and involvement in harvesting and processing of agroforestry products, spaces for gendered ownership, and the gendered marketing of agroforestry products. She concludes with a series of suggestions, beginning with the need to understand sociocultural norms and taboos. She then calls for a careful species prioritization (a task performed for southern Sulawesi by Mulyoutami *et al.*, this issue). Kiptot calls for maximizing products coming from both men’s and women’s spaces, fitting in with existing social norms, though she also calls for a transformative process to widen women’s scope. The appropriateness of technology is another important concern (including better means of processing *Ricinidron heudelotti*, as offered in Mbosso’s paper, this issue), as is the availability of micro-credit for women, using something other than land as collateral.

<sup>2</sup> Fox, Castella and Ziegler (2011), for instance, who compare rubber plantations with shifting cultivation in upland SE Asia, note that “[E]merging carbon finance schemes are being developed across the tropics to provide economic incentives for more rural communities to transition away from swidden agriculture to other land use types, including rubber (FCPF 2010; UNREDD 2010; UNREDD Indonesia 2010)” (pp. 22–23). Such efforts tend to be based on prejudices against shifting cultivation, as much as on any evidence that such systems are truly worse, carbon-wise, than the alternatives. See also Hett *et al.* (2012), for constructive efforts to monitor/assess shifting cultivation on a landscape.

Catacutan and Naz also begin with an overview of women and agroforestry, followed by a review of the Vietnamese situation in agriculture and forestry, highlighting the gap in agroforestry literature in the Vietnam context. The centerpiece of this paper is an assessment of the compatibility of agroforestry interventions with the lives of ethnic minority women in Northwest Vietnam. The authors' emphasis is primarily on the respective roles men and women play in different agroforestry and other crop production, and the benefits from and barriers to women's more equal involvement in such systems, especially as women appear to be more interested in agroforestry than men. Like Kiptot (above), they conclude with some specific recommendations for improvements in agroforestry interventions, aiming for a more equitable approach.

The paper by Bourne *et al.* likewise assesses the compatibility of Agroforestry interventions with local lifeways, but among the Sabinu peoples of Uganda along an altitudinal transect of Mt. Elgin (as done by Villamor *et al.* in Sumatra, this issue). Bourne *et al.* begin with a landscape orientation, emphasizing how gender affects land use and land use change. They examine assets and decision making related to tree crops and Agroforestry, finding significant differences between men's and women's perceptions and preferences, as well as their access to and ownership of assets. One of this paper's strengths is its full discussion of the policy implications of their findings; another is its recognition of the significance of the differentiation between women-headed households and wives in male-headed households — both of which are dealt with in this paper. It is unusually thorough as well in addressing the issues identified in the Gender Box.

Blare and Useche's study is another step in the right direction as they call for greater attention to environmental services extant in managed landscapes; their example: Cacao agroforests. Using econometric choice experiments, they examine men's and women's attachment to agroforests vis-à-vis monoculture cacao in Ecuador. Their conclusions differ from those of Mulyoutami *et al.* (this issue) in southern Sulawesi: Where Blare and Useche found women to be *more* attached than men to cacao agroforests, Mulyoutami *et al.* found that neither men nor women in southern Sulawesi expressed serious interest in the ecological implications of their agroforests. In another study, Villamor *et al.* (2013) used an experimental role playing game in central Sumatra, finding that women were more willing to negotiate with outside actors like oil palm and mining companies, suggesting more willingness to convert land, to the environment's detriment. Variety reigns!

The more recent paper by Villamor *et al.* (this issue) emphasises the changes in the division of labour that accompany land use change in central Sumatra (Jambi). Farmers in the uplands retain much of the Minangkabau traditional, matrilineal, rice and rubber-based system, whereas the lowland communities have been quickly converting to monoculture rubber and oil palm in recent decades (as shown both by surveys and satellite imagery). These authors compare the responses of men and women in a survey about their division of labour, inheritance, and preferences in the two settings. Although not stressed in this paper, some of the changes observed are likely to reflect the national policies under

previous President Soeharto that stressed male household headship in bilateral nuclear families as the norm, considering alternative systems 'primitive' or somehow abnormal (see e.g., Elmhirst 2011). Villamor *et al.* share this bias, for instance noting what they termed as 'increased equity' of traditionally matrilineal women in the lowlands now preferring to will lands to both sons and daughters; but failing to note whether men choose to leave their rubber gardens (traditionally inherited patrilineally) to their daughters as well as their sons — one wonders why matrilineal patterns need explanation, but not patrilineal ones. Colfer's own view (based on three years residence in a neighbouring area in the 1980s and continuing long distance involvement in Jambi through the 2000s) differs from that of Villamor *et al.* Colfer sees these matrilineal systems as providing a more equitable alternative to the national model, since women had secure access to family land fully recognized locally (see Blackwood 1995, Krier 1995, for ethnographic discussions of power within Minangkabau families). Which of our views is more reflective of local realities represents an interesting research question, particularly as local conditions evolve.

Gélinas *et al.* look first at the gender division of labour in Zan Coulibali, Mali, as they strive to implement improved agro-silvo-pastoral management, with special attention to women's labour and benefits. They argue, though, that understanding relations between men and women is insufficient. They take the common observation that significant within-community differences exist among women a step further. They identify three locally used profiles of women in these nine villages: women 'before the kitchen', newly married with young children; women 'with the kitchen' typically in their middle years, with older children; and those 'beyond the kitchen', still further along in their life cycle. These authors examine people's perceptions of the division of labour, particularly pertaining to sheep husbandry, among these different categories of people, as well as their perceived ability to extract labour from others (boys and girls, co-wives, husbands, others within the lineage).

Bose's ethnographic study compares conditions in three tribal villages in each of two provinces in two periods: 1999–2001, when an agroforestry project undertaken by an NGO (via a women's self-help group) began; and ten years later, 2009–2011, to assess its long term gender impacts. She observed the globally common pattern in which men take over a crop when it becomes more profitable. Although men expressed little interest in participating in non-economic decision-making (e.g., many crop and soil management decisions), they monopolised decisions about agroforestry profits. Responses to drought (increasingly common with climate change) varied also, with women retaining their obligation to provide daily subsistence and many men leaving to seek employment elsewhere, thereby increasing women's daily burdens. The findings show the value of these women's groups in dealing with uncertainties and people's general adaptability and resilience. Ultimately Bose concludes that the government's well intentioned agroforestry policy has worked to the detriment of tribal women in terms of equitable rights and sustainable development.

In southern Sulawesi, Indonesia, Mulyoutami *et al.* have looked at women's and men's crop prioritisation. They found a common pattern of women focusing much of their effort on food crops close to home. The compatibility of child care and other domestic tasks on the one hand, and agricultural production at home (for both subsistence and sale) on the other, reinforce this tendency. However, although men are seen as the prime actors in cash crop agroforestry (specifically cacao, clove, coffee, and pepper), both men and women see these as important crops; and both are involved in their cultivation (with men dominant). Both women and men also value the food crops of sago (mainly in SE Sulawesi), rice and maize, though both see these as more women's than men's crops, and women correspondingly value them more. These authors look at gendered roles and knowledge in species selection, agricultural practices and their potential domestication, as well as intra-household decision making dynamics. One more broadly applicable take-home message is the comparatively great emphasis women place on nutrition and food security.

The next two papers focus on tree products in Cameroon and complement each other. The emphasis in Ferket *et al.* is on the appropriateness of domesticating non timber forest products (NTFPs) and agroforestry tree products (AFTPs), with special emphasis on *Cola spp.* in Cameroon — a product that is marketed by men but often collected and processed by women and children. Beginning with a literature review, looking at previous attempts to domesticate these products, the authors emphasize the possibilities for both desirable and undesirable outcomes, particularly in the realms of equity and subsistence. Their paper concludes with a discussion of the relevance of these issues for gender. They stress the significance and utility of building on and strengthening collective action, e.g., in collecting and bulking products for market, negotiating prices, improving quality, but also in strengthening social capital, gaining new skills, and pooling of risks.

The paper by Mbosso *et al.* examines people's attitudes toward a new machine that extracts kernels from the *Riciodendron heudelotii* plant grown, processed and sold extensively in Cameroon by women (but also increasingly by men). Although these authors' attempts to understand men's and women's responses to the machine are admirable, one possibly worrying trend — previewed in the paper by Ferket *et al.* and others — is that men are becoming more involved in the processing and sale of this product. It would be sad if, as happens in so many contexts, men's increasing involvement should represent serious loss of opportunities for women to earn income (cf. work by Brown and Lapuyade 2001 or Tiani 2001 for additional Cameroonian examples). There are more positive conclusions, though: the women of southern Cameroon have a more diversified income stream than men; and the use of this machine, in its early stages now, may render some of women's (and men's) work less onerous — something called for in Catacutan's and Naz's paper on Vietnam (this issue).

## MISSING ELEMENTS, GAPS IN OUR KNOWLEDGE

Although the articles in this special issue represent a treasure trove of useful and relevant information, we want to discuss here some elements we'd like to see approached more systematically; these are: demography (3 papers), formal laws and policies (4), norms of behavior (5) and cultural and religious trends (6).

### Demographic issues

There are a number of elements involved in demography. Those addressed in these papers are related to migration; whereas issues of population density and growth are ignored. All three issues intersect with gender in different ways. Population density and growth (problems for, among other things, access to land, levels of conflict, maintenance of biodiversity) are directly related to women's reproductive roles, which in turn have direct bearing on women's (and men's) life chances.<sup>3</sup> A couple without access to birth control is likely to have to spend virtually all their resources on a growing number of children — feeding, childcare, clothing, education. A woman who has access to birth control can opt to start having children late — meaning she may be able to attend and/or finish school; she can space her children, both of which result in better health for herself and her entire family; she can have sufficient time in a day to develop additional sources of income or involve herself politically and/or in collective community action. A whole world of opportunities may suddenly become available to her. She may even be able to engage in agroforestry more effectively. And of course reduced population density/growth can have significantly positive effects on forest conditions.

Migration, much better represented here, is another element with serious gender implications. In many parts of the world, men are leaving women behind in rural areas to do the farming. This has some positive effects on women (who then may gain in decision-making options, e.g., Shipton 2007 in Kenya; Basnett, in press, Nepal), but it also typically increases their already demanding work load (e.g., Basnett 2011, Nepal; Colfer 1995, Indonesia; Moyo and Kawewe 2002, Zimbabwe). And it exacerbates the problems of access to extension information, discussed for instance, in Catacutan and Naz (this issue). In other areas, it is the women who are leaving (e.g., Elmhirst 2008, on internal Indonesian migration; Chan 2014, reports that 80% of Indonesian international migrants are now women). In Brazil, this pattern has meant more male involvement in agroforestry (Campbell *et al.* 2005). The implications vary geographically, but tend to have gender impacts everywhere.

### Formal laws and policies

Laws, policies, regulations — formal rules that people are expected to follow — operate at various scales, from the

<sup>3</sup> The discussion here refers to general conditions. There are significant differences from place to place in terms of the implications of controlling one's fertility, and these must be taken into account. Taking people's, particularly women's, preferences into account is absolutely vital.

international to the local. Internationally, many countries have signed agreements that strengthen women's rights and argue for equality between men and women (e.g., the Convention on the Elimination of all Forms of Discrimination against Women, or CEDAW; see <http://www.unfpa.org/gender/rights2.htm>, for a more thorough list). Nations develop comparable laws: The US, for instance, has the Equal Employment Opportunity Commission, though it has not been able to ratify the Equal Rights Amendment to the US constitution, first suggested in 1923. In Indonesia, although a quota of 1/3 women has been mandated for the legislatures, the country has been unable to pass a Gender Equality Law, proposed for passage in 2011 (USAID 2014). Such agreements, laws, rules, regulations can be helpful; a law requiring parity (50-50 representation) in Nicaragua encouraged women to participate in politics, though there are still significant questions about their level of influence (Anne Larson, personal communication, 28 October 2014); see Nussbaum *et al.* (2003) for a compilation of relevant governance studies focused on South Asia; or Badiaky-Badji 2011, on Senegal's gender-relevant legislation; Badiaky-Badji *et al.* in press, on gendered tenure regulations in Liberia and Cameroon).<sup>4</sup> The Family and Marriage Law in Vietnam provides impetus for women's security over conjugal property acquired during the marriage.

Rules and regulations can be more effective at lower levels, and their effects can vary by the dominant gender in a governing body. Mwangi, Meinzen-Dick and Sun (2011) and Sun, Mwangi and Meinzen-Dick (2011) found mixed forest user groups to be the most effective — compared to either male-dominated or female-dominated groups in Kenya, Uganda, Bolivia, and Mexico. Agarwal (2009), who has written extensively on this subject, found impressive advantages in India and Nepal to women's involvement in forest management. She provides a clear analysis of the adverse implications of excluding women from local level management in South Asia (Agarwal 2001); and she finds evidence (2010) to support the commonly estimated 'tipping point' in groups: Once women comprise a quarter to a third of the membership, their voices are more likely to be heard. Colfer *et al.* (2015a) look at relevant governance-related skills of men and women in southern Sulawesi, having found elsewhere that these influence their levels of involvement in landscape governance.

The applicability of these studies to agroforestry contexts is likely to be most apparent in efforts to organize people into action groups or co-ops — whether focused on income generation, marketing, increased productivity, training in new crops, or some other agroforestry-related activity. Issues like representation and voice in decision-making, monitoring, conflict management, enforcement of sanctions, and likelihood of trying new technologies can all be affected by gender in different ways in different places (see e.g., Arora-Jonsson 2013, on India and Sweden; or the collections by Colfer

2005b, Colfer *et al.* (In press), Guijt 2007, Pottinger and Mwangi 2011 — for relevant examples from forests).

### Norms of behaviour

Norms are the forces that reflect our values and encourage us to 'do gender', to behave in ways that are consistent with conceptions and ideals of manhood and womanhood in our own cultures. The fact that being enmeshed in at least one cultural system is a *pan-human* trait complicates our efforts to study this issue: We cannot pretend to be the thoroughly 'objective observers' some contend we can be in studying trees. We all view gender through our own cultural lenses, our behaviour and world views are affected by the culture in which we have come of age, try as we might to avoid bias. We have, however, reached a level of understanding of human systems — particularly the strength of these gender norms and their relevance for our behavior — that demands that we confront the need to study them head-on, as best we can.

The global variation in these norms is extreme. In Indonesia, there are some groups that minimize gendered difference and see men and women as complementary, equivalent entities; in the Middle East, the dominant cultural norms emphasize difference between men and women, with women needing (and, under ideal conditions, receiving) protection. A related and key element, touched on by a number of authors, is the cross-cutting nature of the various social categories into which any individual can be put. Different ethnic groups in the same areas express different gender norms (e.g., Djoudi and Brockhaus 2011, on Mali; Bose 2011, on tribal India; Colfer *et al.* 2015b, on Indonesia). Moyo and Kawewe (2002) make a strong case for rejecting the view that men are consistently the oppressors, urging us instead to look at the various kinds of oppression that intersect, exacerbate and moderate actual effects. Silberschmidt (2001) wrote over a decade ago about the difficulties of East African men as economic conditions precluded their living up to cultural norms. In 2011, she concluded that "[w]omen's well-being cannot improve without addressing men because gender is relational...[and]...women are not always the losers and men the winners in gender systems" (Silberschmidt 2011, p. 108).

### Cultural/religious trends

More powerful than formal laws, in most cases, are the cultural and religious leanings that characterize a particular area. The most common examples are differences in religion, with some specifying female seclusion, with obvious effects on women's ability to be involved in agroforestry development. Another example is the global move toward encouraging gender equity or protecting human rights. Even scholarly fads and trends can have an effect: Some believe, for instance, that the very differentiation between production and reproduction

<sup>4</sup> Several relevant chapters appear in Colfer, Basnett and Elias (in press), *Gender and Forestry: Climate Change, Tenure, Value Chains, and Emerging Issues*. London: Earthscan. This book's contents are also analyzed using the Gender Box.

and its gender implications are damaging artifacts of capitalism that serve to reinforce it.<sup>5</sup>

Some argue also that the notion of ‘hegemonic masculinity’ (discussed at length in Cleaver 2002, for instance) is universal, built on patriarchal advantage. Dolan (2002), while recognizing the differences in lived experience, says of masculinity in northern Uganda:

“The model [of what defines a man] is hegemonic in that it largely precludes alternatives and is buttressed by major forms of social and political power. It is normative in that men are taught they should aspire to and judge themselves by it, and state and society in turn judge and assess them against it — before either validating, or belittling and punishing them.” (p. 60)

Although we see huge variation, globally, in conceptions of how to ‘do gender’, of what constitutes a good man or woman, the power with which these conceptions are expressed, enforced and reinforced will have to be reckoned with, as we seek a more equitable world.

Such patterns can directly influence people’s willingness to engage in particular tasks, grow, market or consume particular products, use particular technology, make desired financial investments, and more. Cultural and religious dictates exert pressure socially, but also through their internalisation by each individual.

Our Gender Box analysis of the issues examined in this collection suggest strong similarities between forestry- and Agroforestry-related gender concerns globally. The range of issues addressed in the papers is also encouraging, in showing an increased recognition of the holistic nature of people’s lives and the importance of addressing issues beyond straightforward tree management. We have been encouraged.

The issues highlighted in this collection also provide strong evidence for attending to gender more seriously in agroforestry efforts. The papers report data and analyses based both on fieldwork and on literature that show the dangers that *can* characterize agroforestry efforts (despite the many positive features of such systems)<sup>6</sup>. They also provide valuable lessons for scaling up the benefits of agroforestry — a clamour that has evolved since the emergence of agroforestry science. The task remaining for us is to examine how these factors (those addressed in this collection as well as more thorough examination of demographic issues, cultural /religious trends, formal laws/policies and norms of behaviour) intersect with agroforestry to create systems that are more gender-equitable, productive and sustainable. Building on collective action — both women’s and men’s — appears to be one likely suspect for a viable strategy.

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<sup>5</sup> Some even argue that an emphasis on men vs. women as conceptually distinct categories is harmful (see Kandiyoti 1998, for a useful discussion of such views).

<sup>6</sup> A particularly thorough study of interest in this regard is by Li (2012). She concludes, after demonstrating extreme and growing differentiation in well being within Central Sulawesi communities over two decades, that “The lure of a boom crop [cacao], combined with its perennial format, created the conditions for the rapid emergence of agrarian classes among highland farmers who had no previous experience with this phenomenon, and no mechanisms to manage it” (p. 209; see also Li 2014).



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