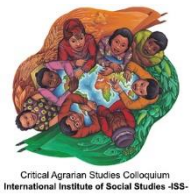

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Saying All the Right Things? Evaluating Gendered Discourse in Climate Smart Agriculture

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Andrea M. Collins

Abstract

Amidst debates about the role of 'climate smart agriculture' (CSA), the intersection of concerns about climate change and agriculture offer an opportunity to consider the extent to which gender is considered in global policymaking. The latest module in the FAO, World Bank and IFAD *Gender and Agriculture Sourcebook* – 'Gender and Climate Smart Agriculture' – offers an opportunity to reassess how gender factors into these global recommendations. This article argues that the Module makes strides towards 'gender-transformative' policy-making, but the vision of CSA in the Module sidesteps the market-led and productivity-oriented practices often associated with CSA. As a result, though the Module pushes a more feminist agenda in many respects, it does not fully consider the gendered implications of corporate-led and trade-driven CSA.

Introduction

Opinions are split on the promise of 'climate-smart agriculture' (CSA). Advocates boast the potential to scale up climate change mitigation and adaptation practices for the benefit of both the poor and the planet (FAO 2015). Critics remain skeptical of top-down strategies to reform agriculture to respond to climate change, and the ways in which 'climate-smart agriculture' might be used by agribusiness firms to deploy new agricultural technologies and expand agricultural production (Cedeño 2014). Moreover, the lack of clarity around the term has led to a failure to really consider what it means to be 'climate-smart', whether or not it entails a coherent set of agricultural practices, and whether or not it is actually directing us towards a 'safe operating space' for agriculture (Neufeldt et al 2013).

As discourses surrounding CSA combine concerns about food security, agriculture, and climate change, there continues to be an absence of consideration about the realities of how these environmental issues interact with socio-political structures, including hierarchies of gender. This is hardly unexpected: environmental policymakers have been slow to consider the gendered implications of environmental issues and climate change. Where gender is incorporated in either global or state environmental or climate change policies, it is often conceived of in limited ways, such as just 'adding women' (Arora-Jonsson 2014). Attention to gender and agriculture is likewise underdeveloped in global policy discourses on agriculture. There is a great body of academic research tying gender roles and relations to agricultural practices and land use (Razavi 2009), yet there remains a tendency to ignore or compartmentalize gender imbalances in policies addressing governance, market participation, education, extension services, and access to land and resources (Collins 2014, Collins 2016). Thus, as we debate the merits and

meaning of CSA, we must also pay careful attention to what is said and not said about gender in this context.

Fortunately, there has been a welcome addition to these conversations about CSA in a new contribution to the World Bank, FAO and IFAD *Gender and Agriculture Sourcebook*. The *Gender in Agriculture Sourcebook* was first released in 2008, a compilation of recommendations for policymaking around food and agriculture, and the consideration of gender therein. The document is impressive in scope, covering issues ranging from rural finance and land policy to issues specific to forestry, cropping, fisheries, and livestock management. In 2015, a new module titled 'Gender and Climate-Smart Agriculture' was added. Like other modules in the *Gender and Agriculture Sourcebook*, this module introduces a practical set of tools for policy-makers and implementers to integrate gender into the planning and design of agricultural policy. In addition, this module emphasizes not only the importance of gender to agricultural planning, but also the gender differentiated effects of climate change. This new module comes during a critical time as scholars, researchers, policymakers, governments, development agencies, and corporate actors attempt to both define and implement CSA.

As I explore below, this new module on gender and climate smart agriculture reflects critical shifts in how some global policymakers understand the role of gender in both agricultural and climate change policies. In particular, it marks a notable departure from more strictly technocratic understandings of inclusion and gender equality towards one that is more attuned to feminist scholarship on overlapping structures of gender inequality, including household and community power imbalances, economic inequality, and the absence of gender diversity in governance and decision-making. Moreover, the Module advances context-specific strategies focused on gender transformation rather than just inclusion. The language in the Module marks a significant shift at the global scale of policymaking, not the least on global policies related to gender and climate change. Where few states have advanced gender-sensitive climate change policy at all, and public opinion is unclear on the connections between gender and climate change, this is a remarkable step forward (Vanderklippe 2016, IUCN Global Gender Office 2016).

However, as this article demonstrates, though the Module says all (or at least many) of the right things from the perspective of feminist scholarship, a more troubling picture arises in the Module's discussion of CSA itself. It is on the matter of what CSA is and who does CSA that should concern observers. Though the Module offers key recommendations regarding the risks and rewards of introducing new technologies and practices and the need for gender-transformative policies, the Module's understanding of what CSA entails conflicts with CSA practices more generally. Though some projects have conflated CSA with agroecological practices as a means to adapt to and mitigate climate change, others have labelled new agricultural technologies, including seed hybrids, sustainable intensification, and increased productivity as key CSA strategies (GACSA 2014, CCAFS 2016). Though the Module appears to adhere to a CSA model that is closer to agroecological practices, the Module's limited attention to corporate involvement and the role of international markets in CSA more broadly leaves several critical factors unexamined, including land, labour and commodities markets. By more narrowly defining the scope of CSA, the recommendations of the Module do not fully address the gendered dimensions of agricultural shifts. Thus, questions remain about how

these strategies can be pursued and what other global forums need to consider the role of gender in agricultural policies.

Below, this article reviews the importance of considering gender and gender inequality in climate change and agricultural policies as well as the recommendations made by gender-focused experts on conservation agriculture and CSA. In light of the existing research, this article evaluates the new *Gender and Climate-Smart Agriculture* module (World Bank, FAO and IFAD 2015). Despite important strides towards more gender-transformative governance and policy-making, particularly on matters relating to gender and climate, there remain important questions about how this vision of CSA aligns with how CSA is practiced by various actors. Of particular concern, there is little attention to corporate actors or the introduction of new technologies or seed varieties, which are likely to transform agriculture for smallholder farmers, many of whom are women. Thus, though the Module says many of the right things, there are still important gaps in what is being said that should concern feminist and pro-poor advocates. While the Module highlights important steps to promote gender equality in agricultural practices, the practices of climate smart agriculture appear to be driven by actors and practices about which the Module says very little.

Feminist Scholars and Global Environmental Policymaking

Connecting the insights of feminist scholars to environmental decision-making is rarely done within the context of national and international policy, despite the value in establishing more comprehensive and sustainable environmental policy. Arora-Jonsson (2014: 295) notes that although environmental policymakers have adopted gender as a necessary part of policy development, there has been 'frustration among academic researchers as well as practitioners and policymakers that it appears to have had a marginal effect on environmental practice on the ground.' Efforts related to gender equality have largely revolved around three issue areas: 'mainstreaming' gender into environment programs; the delineation of property rights as a means of economic empowerment; and efforts to promote more gender-inclusive environmental governance (Arora-Jonsson 2014: 300). Yet each of these efforts has led to frustration. The celebration with which gender mainstreaming was met in the 1990s has given way to scepticism about the technocratic approach in which it is typically delivered (Parpart 2009). Efforts to promote property rights typically rely on the notion that defined property rights for women will promote productivity, access to credit, or the creation of more 'efficient' land markets (Razavi 2007). And efforts to create more representative governance of common resources, such as land, by adding more women to governance bodies have encountered systemic obstacles that prevent full participation of women (Yngstrom 2002, Pedersen and Haule 2013). Though all of these are still common practices used by policymakers, feminist scholars have noted where these practices might undermine women's land rights or contradict women's interests.

From the perspective of feminist scholars and activists, the ways in which policymakers have focused on gender has left much to be desired. 'While feminist research focused to a great deal on process and informal mechanisms that affected

gendered inequalities *vis a vis* formal rights and markets, policy focus in relation to gender emphasized the formalization of individual rights and women's entry into markets' (Arora-Jonsson 2014: 298). And while this is a symptom of global policymaking writ large, the relatively narrow scope taken regarding gender and environmental issues, particularly climate change, has been limited (Arora-Jonsson 2011). In particular, there has been a tendency to idealize women's roles in environmental management rather than recognize the diversity of women's interests and the intersectionality of social identities (Leach 2007). The challenges of addressing gender hierarchies cut across several dimensions of analysis pertinent to reforming agricultural practices.

Feminist Economics and Household Analysis

Feminist economists highlight what has not often been visible in conventional economic analyses and development policies, including household dynamics and the value of unpaid labour. As Elson (1991b) argues, the assumption of household unity and benevolence in economic analyses obscures the realities of gendered power relations. 'The models of the household constructed by neo-classical economists do assume unity, implying, for instance, … that extra income accruing to one household member will 'trickle down' to others.' (Elson 1991b: 11). The failure of policymakers to consider intra-household dynamics risks obscuring the contributions of women and children to agricultural practices. The unpaid labour of women and children to support agricultural practices have long been overlooked by development policies and analysts, including tasks such as weeding, harvesting, water collection, and the like.

Similarly, the failure to consider the differences between men- and women-headed households obscures other gender-differentiated obstacles. 'Women who farm on their own account and produce cash crops for export face other difficulties: lack of access to other inputs they need, such as fertilisers, credit and extension services; extra demands on their time for domestic tasks such as water collection and health care (Elson 1991a: 175). Razavi has further noted that the diversity within the category of 'female-headed' households might make interpreting the evidence impossible as it aggregates a number of social categories that have distinct meanings and differences, such as widowhood, divorce, or migration (Razavi 2009). There is thus a need to consider gender in broader ways than has been previously done since the introduction of gender-sensitive policy, including attention to broader economic and political contexts. Agarwal (2014) likewise notes the productivity gaps that result from gender gaps in access to resources that perpetuate gender inequality. Agarwal that addressing these inequalities must be done through policies that encourage intra-household redistribution and by state-supported policies that target women farmers.

Agricultural Markets as Gendered Institutions

In addition to unpacking gender relations at the micro-level, there is also a need to consider how meso- and macro-level institutions reproduce and enforce gender hierarchies (Elson 1994). Razavi (2009: 205) highlights that the tendency to understand gender in a narrow or simple way rather than as 'social relations … shaped by broader economic and political processes' is bound to produce misleading results. This is often difficult for policymakers to imagine as it abstracts beyond the personal interactions that are often considered the purview of gendered analyses. Yet the 'the operation of markets, firms, and public-sector

agencies is gendered via the social norms and networks which are functional to the smooth operation of those institutions,' (Elson 1994: 39). This requires considering how social hierarchies and customs structure institutional practices to the benefit of some and the exclusion of others. Gendered expectations about behaviour reinforce hierarchies in both formal institutions and markets, and circumscribe who is able to participate. The role that these social norms play in organizing meso-level institutions dictates that 'economics cannot be understood simply in terms of contracts and cash nexuses,' (Elson, 1994: 39).

These social hierarchies also inform agricultural practices, particularly around the gendered participation in land, labour, and commodities markets. Tied to gendered divisions of labour around the production of particular crops, men and women are also often ascribed to particular market functions around the sales of crops. It is more common for men to control cash crops, and thus also participate in the trade of such crops, while women typically have control of subsistence crops or crops more commonly used for domestic consumption. As a perennial interest area for agricultural policy, property rights and land management are frequently highlighted as both necessary for economic growth and women's empowerment (Collins 2016). Yet customary land ownership practices structuring land ownership often limit women's formal control of land, even in spite of women's legal rights to own and sell land (Kameri-Mbote 2006). The failure to consider these gender dynamics is frequently a major shortcoming of agricultural research and policy development.

The popular idea of 'Smart Economics' espoused by international institutions that aims to unleash women's productivity often fails to consider these social dynamics and hierarchies that structure gender inequalities (Chant 2012). Instrumental efforts to improve productivity that simply 'add women' and do not consider local practices, customs and preferences tend to have limited effects. Moreover, coupled with the general lack of attention to households, such initiatives also tend to neglect the amount of care and reproductive work required to support the economy (Razavi 2009). Elsewhere, Pederson and Haule (2013) note that efforts to encourage women's ownership of land were counterproductive where attitudes about the appropriateness of women owning land were particularly conservative. The social norms that structured land market participation led to hostility over the implementation of a gender-inclusive initiative. Indeed, any effort to reform women's participation in markets requires much closer attention to the social norms at work that structure gendered institutions.

Biodiversity and Seeds

These concerns over the gendered nature of markets can be extended to the contemporary trade in biotechnology and shifts in agricultural practices, including the sale and exchange of seeds. Although the development of new agricultural biotechnology – including genetically modified seeds – have been promoted as a 'pro-poor' technological development, the actual effects of these technologies are at best uneven for poor rural populations (Glover 2010). From the perspective of feminist scholars and activists, the introduction of new agricultural biotechnologies pose several challenges. In addition to concerns over threats to biodiversity through agricultural monocultures or the introduction of new crops, feminist scholars like Vandana Shiva have long noted the threats to indigenous knowledge and ecological

resources posed by the introduction of new corporate biotechnologies (Shiva 2016).

Moreover, it is typically larger scale farmers who benefit from the introduction of new agricultural biotechnology, leaving questions about the ability of smallholders to benefits (Wield, Chataway and Bolo 2010). Given that women farmers are predominately smallholder farmers, and typically have less access to agricultural inputs, credit, and other resources, the benefits of new agricultural biotechnologies are less likely to accrue to women without considerable attention to their potential gendered effects. Researchers note concerns patented seeds technologies may drive biodiversity loss and the loss of ecological resilience, which in turn can have gendered effects. Detraz (2015) has illustrated the necessity of gendering biodiversity policies by recognizing, without essentializing, the gender roles that structure relationships with environmental resources, and incorporating diverse knowledges into policy- and decision-making. However, the tendency to overlook household labour and knowledge tends to obscure the wealth of knowledge about plant species that exists (Shiva 2016).

Gender-Transformative Approaches to Climate Smart Agriculture

Given these existing critiques, the introduction of new agricultural practices and technologies, whether to enhance productivity or respond to climate change, or both, needs to be analyzed with reference to local preferences and social practices. The accumulation of knowledge about gender relations and the adoption of new agricultural technologies have lead to important recommendations about how policymakers should think about and implement such new technologies. Doss (2001) for instance notes how limited thinking about women's roles in agricultural technology have been inadequate: 'Much of the early work on women in agriculture assumed that women would benefit if project designs would simply take into account women's roles and responsibilities… it is now clear that 'taking women account' is not sufficient,' (Doss 2001: 2075). Rather than just assuming that women's productivity would be enhanced by new technologies, Doss notes the need to consider gender-differentiated labour roles and how women's labour burdens might be increased with new technologies or higher productivity. Where women are responsible for weeding or processing, these burdens might be further increased by the application of new fertilizers or seed varieties (Doss 2011), yet even these burdens will vary according to local contexts. Thus, it is imperative to understand the complexity and diversity of households and gender roles, rather than to presume that women can just be included without attention to broader power relations.

Beuchelt and Badstue (2013) take this analysis further, noting that new modes of climate smart food production may have unanticipated gender-differentiated effects that undermine development goals more broadly. In particular, they reiterate Doss' (2001) observation that we need to consider whose labour is saved when presumed 'labour-saving technology' is introduced. Yet they also note that the saving of labour is in some cases the deprivation of labour, especially where labour is a source of income. They note examples of new technologies in Bangladesh and Vietnam that replaced the paid labour provided by low-income women. In other cases, the introduction of herbicides has eliminated 'weeds' that were actually used by women as a subsistence crop, depriving women of an accessible and affordable food source (Beuchelt and Badstue 2013).

Farnworth et al (2016) also note that the failure to consider gender and gender relations in the practices of conservation agriculture often lead to low adoption rates. For instance, because many rural women in east and southern Africa typically lack access to extension services and agricultural inputs, these women are less likely to be able to adopt practices such as low tillage, which often require the use of herbicides (Farnworth et al 2016).

As a result, Beuchelt and Badstue (2013) recommend 'gender-transformative' approaches for the implementation of both nutrition- and climate-smart agricultural practices. Concurring with past critiques of superficial approaches to gender in agricultural policy, they recommend the use of gender responsive and gender transformative approaches. In their definition, gender responsiveness entails meeting the needs of women and men, while gender transformative approaches 'seek to examine, question, and change gender norms, roles and power imbalances,' (Beuchelt and Badstue 2013: 717). This approach entails a more comprehensive view of agricultural practices and resource management, as well as roles and relations in a given community. They note that gender transformative approaches can create change where past or present approaches have limited effects. Strategies that involve consultations with all adults in the household rather than simply the household head expand learning opportunities and address gender issues therein. Couple-focused strategies lead to discussions around roles, control of resources, and decision-making. These approaches can also lead to women's increased participation, movement, and control of income (Beuchelt and Badstue 2013: 718).

The work of feminist scholarship on both environmental policymaking and agricultural policymaking, including on the issue of conservation agricultural practices specifically, thus point to the need to consider gender in a much broader way. In the not-too-distant past, global policymakers have focused on gender inequality in limited ways, 'adding women' without paying attention to the broader social relations which dictate gender roles in agriculture, environmental governance, and public life more broadly. As we turn our attention to the recommendations of the *Gender and Climate-Smart Agriculture* module we will see how the authors have adopted many of them, though the potential impact of the recommendations remains to be seen. At the same time, however, the Module neglects a more systematic analysis of corporate agriculture, the global agricultural trade practices, and the so-called 'smart economics' of engaging women in labour markets.

Inclusive, Responsive, Transformative?

In light of the concerns highlighted by feminist researchers, the *Gender and Climate-Smart Agriculture* module has a tall task. Threading together concerns about gender inequality, climate change and agricultural practices, the Module is laid out into five Thematic Notes and three 'Innovative Activity Profiles', which detail some of the practical challenges of pursing gender and CSA. With author credits given for over two dozen contributors from within the World Bank, FAO, and IFAD as well as outside consultants, the Module clearly draws from a diverse base of research and knowledge, though most are affiliated with major international institutions or agencies. The defined target audience is listed as follows:

'development agencies (multilateral and bilateral); civil society and nongovernmental organizations; research, advisory services, and academic organizations; the private sector; and professional associations and networks related to CSA and gender issues,' (World Bank, FAO and IFAD, 2015: 1). The Module also notes that governments can use the recommendations in the development of CSA policies and strategies.

From the first page, the Module establishes the connection between gender and climate change, a connection that has been often overlooked. The Module rather adeptly threads together three separate concerns – gender equality, food security, and climate change – and the need to consider all three to create sustainable practices:

> Climate change has an impact on food and nutrition security and agriculture, and the agriculture sector is one of the largest emitters of greenhouse gases. It is crucial to recognize that climate change affects men and women differently. The initial assumption is that social differences, particularly gender inequality, must be taken into account to strengthen the effectiveness and sustainability of CSA interventions (World Bank et al 2015: 1).

By connecting these three dimensions, the Module makes clear that addressing these three issues together is imperative. Though the Module also echoes existing instrumentalist rationales for addressing gender inequality to enhance productivity – echoing the very language that Chant (2012) has criticized – it quickly transitions into promoting a more complex view of gender and social relations, premised upon ongoing academic research.

Of particular note, the Module builds from the academic research of Meinzen-Dick et al (2011) and Beuchelt and Badstue (2013), and elaborates on the differences between 'gender-responsive' and 'gender-transformative' approaches, distinguishing between responding to gender-differentiated needs to a more comprehensive understanding of gendered power relations recognizing sociocultural constraints and the distribution of benefits. In doing so, the Module highlights new levels of analysis and the implications for CSA practices:

> These studies suggest that more female as well as male farmers adopt climate-smart technologies and practices in agriculture when women's awareness, knowledge, and access to information about such practices increases—with the ultimate effect of strengthening the *resilience of households, communities, and food systems exposed to climate-related shocks and climate change*. Even more fundamentally, these studies suggest that a host of other factors can influence female producers' adoption of climate-smart approaches, including *legal or sociocultural constraints* on women's accumulation and control of assets and resources, *constraints on women's mobility*, as well as the likely *effects of climate-smart practices on women's time and labor commitments or share of the benefits*. (World Bank, FAO and IFAD 2015: 5, *emphasis added*).

Given the emphasis on gender-transformative approaches in order to promote sustainable and resilient practices, much of what follows in the Module focuses on the need to promote context-specific research and policy development. Based on the concept of gender-transformative approaches, the Module highlights the potential trade-offs of new technologies; the need to recognize diverse practices and knowledges; the need to promote inclusive decision-making; the importance of methodological pluralism in assessment, monitoring and evaluation; and the need to consider long time horizons. In doing so, this approach goes beyond economic definitions of empowerment – which other global policy recommendations have done (Collins 2016) – towards a recognition of power relations and how power relations affect men and women differently. This vision of CSA that recognizes women's role in resilience and adaptation is a departure from the 'smart economics' literature that views gender inclusiveness as a means to the end goal of increased productivity. But at the same time, the vision of CSA being advanced is not one that recognizes what is actually practiced as CSA. This vision of power relations is strictly local and does not consider the gendered nature of markets and international trade.

Technology and Trade-offs

Impressively, the Module builds from feminist research on agricultural technologies and the potential trade-offs – both economic and social – that the introduction of new technologies might bring. Citing the work of Beuchelt and Badstue, the authors note: 'it is vital to distinguish between technologies that reduce women's paid versus unpaid labor and assign priority to technologies that reduce unpaid labor,' (World Bank, FAO, and IFAD 2015: 17). The authors note how reducing drudgery for different kinds of workers should be a priority and how the introduction of new technologies might also be used to alter household practices and improve health. For instance, the Module cites the introduction of 'flexi-biogas stoves' in Kenya, which uses manure as a household fuel. By bringing cooking inside the home with new stoves, women enjoy more time with the family when cooking and men are more likely to share the work of cooking. In addition, families benefited as a whole from reduced smoke exposure, the environment benefitted from reduced methane emissions and reduced need for fuelwood, and the by-product of the stoves could be applied as an organic fertilizer to improve crop production (World Bank, FAO and IFAD 2015: 18). Similarly, more efficient mudstoves in introduced in Darfur reduced the need for fuelwood as well as reduced the need for women to retrieve fuelwood, which also put them at risk for gender-based violence.

The authors of the Module link these observations to some of the agroecological practices associated with conservation agriculture, particularly minimum tillage, which reduces the labour, needed to tend to crops. But again, the authors recognize the need to assess minimum tillage and conservation agriculture more broadly, within specific social contexts: 'Who benefits from conservation agriculture, and in what way, is contingent on the gender relations within the specific social context, gender roles in decision making over technology adoption, form of farming currently practiced (plow- or hoe-based), access to and control over productive assets, and women's roles in the production system,' (World Bank, FAO and IFAD 2015: 19). For instance, the authors cite the practice of leaving crop

residues to create mulch. In some cases, this may make weeding more labour intensive or even deprive women of livestock feed. If crop residues had previously been used to feed small animals, this may increase the workload of women to find and perhaps purchase new feed alternatives.

Thus, the Module highlights the importance of situating new technologies within local contexts and practices. The acknowledgment of potential gender-based trade-offs with the introduction of new technology is essential. Recognizing that changes in technology or agricultural practices might undermine the position of some – though not necessarily all – women is critical. At the same time, the Module balances this observation with the caveat that policy-makers not reify existing gendered divisions of labour either. There is a tremendous difficulty in designing policy that neither assumes that gender roles are fixed nor violates local contexts and values. Such shifts must be undertaken in close collaboration with the communities included. The design of approaches that incorporates local knowledges while not further entrenching gender roles is a significant challenge. As the following sections demonstrate, the Module provides some tentative solutions to this dilemma through attention to governance, research, and critical reflection on gender roles.

Inclusive Decision-making and Governance

The potential to overlook the various dimensions of agricultural labour – both domestic and otherwise – further speaks to the need to consider diverse knowledges and facilitate more equitable participation and decision-making. As noted by Arora-Josson (2014), women's movements have pushed for inclusive decision-making about environmental resources, which helps capture not only information about gender-differentiated needs and roles, but can include a broader base of knowledge and attention to issues such as gender-based violence. This is particularly important within the context of broader trends in the decentralization of natural resource governance. Encouraged by institutions like the World Bank, state governments are increasingly decentralizing governance of natural resources and land management to local governments and councils (Byamugisha 2013, Deininger and Binswanger 1999). Feminist scholars have highlighted how decentralization and devolution of authority presents challenges to overcoming patriarchal norms and practices without careful attention (Whitehead and Tsikata 2003, Tripp 2004).

Fortunately, the need for both equitable participation and decision-making in the context of decentralization are acknowledged throughout the Module. This is articulated most strongly where decision-making and participation are connected to the management not just of agricultural practices, but the broader consideration of climate smart landscapes, highlighted in Thematic Note 2. Here, the Module connects broad ecological considerations – linking agriculture with hydrological systems and animal habitats – to social, political and economic systems. It is argued that creating climate smart landscapes requires engaging decision makers across the landscape – those involved in agriculture, forest management, fisheries, and the like. Yet, as research has shown, there are both formal and informal socio-political obstacles to gender equitable participation in such forums (Tripp 2004,

Kameri-Mbote 2006). The authors of the Module highlight this reality as a multilevel governance challenge:

> A critical gender issue here is that very few women are in management or leadership positions in agricultural value chains and food systems, so they are not participating in high-level discussions. Even at the local and community levels, targeted strategies are needed to allow women to attend and actively engage in key meetings, training and processes (World Bank, FAO and IFAD 2015: 25).

Here, a holistic approach to landscapes and social systems highlights both the complexity of creating truly climate smart agriculture while also recognizing the complex social and political structures that exist. Such recognition is critical for establishing long-term sustainability. Indeed this is highlighted elsewhere in the Module. The authors of Thematic Note 5 illustrate that 'although the *technical components* of CSA often receive the most attention, the *institutional* and *policy aspects* of CSA are absolutely vital for programs to achieve sustainable and equitable results.' (World Bank, FAO and IFAD 2015: 52). The authors also highlight the challenges presented by the ongoing decentralization of resource management. On this issue, the authors of the Module highlight that local governments and councils in landscape management are also often sites of inequality: '…women are often underrepresented, and their viewpoints are not included. Knowing what aspects of the landscape women are responsible for, including non-income generating aspects, is therefore critical,' (World Bank, FAO and IFAD, 2015: 26).

Recognizing these trends in decentralization and the potential obstacles to gender equality, the authors of the Module highlight several 'intervention areas' to promote gender-responsive policy-making. These include land reform, finding financing, the development of a 'gender-disaggregated evidence base,' and 'overcoming institutional barriers to landscape management' (World Bank, FAO and IFAD 2015: 29, Table 18.3). While laudable, the intervention areas all require their own more specific reforms. For instance, improving women's land rights under a variety of land regimes – statutory, customary, and pluralist – has proven to be exceedingly difficult (Alden Wily 2011, Izumi 2007, Agarwal 1994). Indeed, improvements to CSA thus require broader awareness and dedication to addressing the challenges of land and resource governance more broadly, which require legal and policy reforms.

Yet the Module also offers smaller scale strategies to promote more inclusive governance. For instance, the authors recommend the use of participatory approaches for both research and planning: 'By ensuring that women are fully involved, research and planning tools such as participatory mapping and future scenarios can help to clarify the reality on the ground,' (World Bank, FAO and IFAD 2015: 25). The promotion of inclusive, affordable, and smaller scale reforms is essential to push for gender-equitable participation where larger-scale or longer-term reforms such as land reform are being undertaken. Thus, the authors are correct to include local, informal and customary institutions as important focal points for the effective adoption of gender-responsive CSA. While markets and states are necessary points of reference, considering the importance of local informal rules and institutions is also required to enact multilevel reform.

Indicators and Methodological Pluralism

Given the various scales at which resources are governed and CSA might be implemented, measuring progress on implementation is an important focus for the Module. All of Thematic Note 3 is focused on 'Monitoring and Evaluating Gender Through the CSA Project Cycle', and this section highlights the need for a range of instruments to 'provide a more complete picture of a project's issues, progress, outcomes, and impacts' (World Bank, FAO and IFAD 2015: 31). This Note highlights to important of capturing data from various sources: 'The use of a diverse set of tools is particularly relevant for gender in CSA, as it is critical to have a complete quantitative and qualitative picture of gender progress and achievements while a project is implemented and after it has been complete,' (World Bank, FAO and IFAD 2015: 31).

In order to create a complete picture of the progress made on gender equality, the Module highlights the need to measure progress along several lines, including the access to and control over resources and inputs, access to information, measures of time use, and participation in decision-making. Thus, while the Module highlights the need to collect gender-disaggregated data in order to fill the gaps around gender-sensitive and gender-responsive policy-making, it likewise highlights the limits of only collecting certain categories of data and the need to pair quantitative findings with qualitative measures. The Module highlights that several analytical considerations need to be made for developing monitoring and evaluation indicators, for instance recognizing that that evaluators must do more than just compare male and female farmers or male- and female-headed households. Evaluators also need to consider social norms that affect how livelihood strategies can be adopted and maintained over time (World Bank, FAO and IFAD 2015: Box 18.11).

Beyond the dimensions of monitoring, the Module embraces the need for methodological pluralism in the design of CSA projects and policy. Thematic Note 4 endorses the use of community-driven development (CDD) to design CSA policy, emphasizing the design of a project – rather than just the content – by focusing on the empowerment of communities and households, participatory governance, and the strengthening of community institutions. The embracing of such an approach not only enhances the development of policy, but ties directly to the values of inclusive participation highlighted above.

Thematic Note 4 also highlights the importance of using household methodologies (HHMs) to understand the different roles and privileges therein. Indeed, moving away from the assumption that households are cohesive and conflict-free, a critique often levelled by feminist economists, HHMs help to discover the inequalities that exist within households. 'The Unitary Household Model … does not support consideration of cultural restrictions that make it difficult for women to negotiate their needs or take into account the gender issues that relate specific needs and interventions,' (World Bank, FAO and IFAD 2015: 43). Again, incorporating such perspectives aligns well with feminist scholarship, such as the arguments made by feminist economists explored above. The Module further highlights that resistance is likely to occur in households and communities, and recommends engaging with community leaders and men, a strategy likewise endorsed by development agencies and international non-governmental organizations. The Note provides several examples, including the use of 'Men's

Campfire Conferences' in Zambia that build on activities that men already enjoy, and engagement with traditional leaders to create ownership on gender sensitization programs (World Bank, FAO and IFAD 2015: 48) The Thematic Note thus recognizes that addressing inequalities within one space does not necessarily entail change in the other, and that a focus on the micro-level is unlikely to succeed without understanding community dynamics and social practices.

While not explicitly stated, there are clear synergies between the landscape approaches and the models of CDD and HHM developed in Thematic Note 4. In general, the approaches recommended here speak to the commitment of the authors to develop strategies for design and implementation that respond to the challenges highlighted by feminist scholars. Considered within the broader scope of the Module, the more technical recommendations for monitoring and evaluation are balanced with the recognition of social relations. Yet questions ultimately linger about how evaluation can be carried out while ensuring that there is broad support for evaluative approaches that encompass more than indicators on the number of men and women adopting CSA practices, increases in crop yield, sales to value chains, and the like (World Bank, FAO and IFAD 2015).

Time Horizons and Political Commitment

Finally, the various dimensions of the Module suggest that the authors are well aware of the need to maintain a long-term view of both gender-transformative policies and the management of CSA. Whether in terms of governance or monitoring and evaluation, the authors highlight that effective CSA policies will require a long-term commitment. The described 'landscape approach' described requires long-term rather than short-term approaches, and 'usually entails continuous political and finance commitments, which might use public funds, either from national sources or development cooperation,' (World Bank, FAO and IFAD 2015: 26). Likewise, measurement of success of other initiatives requires a long time horizon. The HHM and CDD strategies described above highlight the importance of empowering households and communities. It advises assisting households in identifying goals and vulnerabilities of each member of the household, considering broader community practices, and eventually arriving at practices that can be mainstreamed in practices like CSA. Yet this comes only after several years of community driven research, including 'mapping of activities, stakeholders, and gender inequalities and participatory action research' through gender action learning (FAO et al 47).

All of this is considered by the authors to be time-consuming work, requiring dedicated staff and community members, supported by states and development agencies. It is on this issue that the Module does leave something to be desired. Questions of funding and political commitment for such long time horizons naturally follow, and are of course, context-specific as well. But questions of financing, the role of corporate actors, and the operation of agricultural markets go largely unmentioned in the Module. As discussed below, despite 'saying all the right things' the Module does not address some of the major emerging actors in CSA practices on a global scale, nor does it address the potential gendered impacts these actors and markets might have. Thus, while the Module highlights the roles of

governments and development agencies, in reality, the practices of climate smart agriculture appear to be driven by actors about which the Module says very little.

Limits to the *Gender and Climate-Smart Agriculture* Module

Despite the long list of positive attributes, there remains a troubling gap in how the authors of the Module discuss CSA itself. Despite being the purported focus of the Module, the authors appear to pay little attention to how the term CSA has actually been applied, and how actors operate under this increasingly popular moniker. Key questions remain, for instance, who *does* CSA and who pays for its implementation and monitoring? As noted above, the authors of the Module regard its target audience as multilateral and bilateral development agencies, NGOs, governments and, perhaps, private sector actors. The focus on the kind of transformation envisioned by the Module does seem suited to those actors most focused on the public good, public management of resources, equity in governance practice and in law.

However, despite naming the private sector as a target audience, there appears to be a rather limited understanding of the role of private sector actors within the practices of CSA. The Module suggests 'Because much of the climate-related information and many services linked to CSA can be considered a public good and common pool resource, the *private sector may not have an immediate interest in providing them*,' (World Bank, FAO and IFAD 2015: 61, emphasis added). This interpretation stands in tension with the actual practices of CSA in the current moment. Focusing on new technologies, new seed varieties, and agricultural practices, many visions of climate smart agriculture often imagine industrial or large-scale agriculture being made more climate-friendly.

It is beyond the scope of this article to discuss in depth the myriad ways in which CSA has been used by other actors has been applied, but by way of contrast, it is helpful to examine some of high-profile initiatives have defined CSA. Rather than being led by development agencies, CSA under FAO is highlighted as one of 11 'Corporate Areas for Resource Mobilization' (FAO 2016). And instead of the agroecological approach noted within the Module, partnerships such as the Global Alliance for Climate-Smart Agriculture (GACSA), which count the FAO as a member, espouse climate adaptation and mitigation strategies for agricultural practices, 'increasing the resilience and productivity of agricultural production systems' (FAO 2010). Other partnerships, such as the CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS) partnership with the World Bank, focuses explicitly on higher agricultural productivity as a key goal of CSA, with sustainable intensification of agricultural production a key element (CCAFS 2016). Moreover, corporations such as McDonald's have claimed to be bringing their own agricultural practices in line with the principles of climate-smart agriculture. These commitments entail sourcing certified 'sustainable beef' and a commitment to source '100% of palm oil from sources verified as supporting sustainable production' (McDonald's 2014).

The limited definition of CSA used by the Module results in these practices being overlooked for their own gendered qualities. While the micro- and meso-level focus of the Module is of critical importance, there is a missed opportunity to understand how these practices are have gendered effects. By making scant reference to CSA practices used in large-scale agriculture run by corporate actors,

the Module overlooks financial incentives of scaling up 'sustainable' or 'climate smart' practices, or even the gendered effects of expanding agricultural markets. As noted above, feminist economists and development scholars highlight the ways in which gender hierarchies operate at meso- and macro-levels through social norms and habits. Though the Module very carefully highlights how gender inequalities operate at both the household level and within local land and labour markets, there is no attention paid to CSA practices that rely on markets and expand the role of corporations in agricultural production.

For instance, though the Module's introduction acknowledges how market access may actually increase climate-related risks via more exposure to market price volatility, there is very limited attention to the ways that land, labour, and commodity markets are themselves gendered institutions (Razavi 2009). Indeed, these are precisely the kinds of concerns that should be raised around the promotion of CSA practices and the greater involvement of corporate actors. What seems to be missing is broader attention to the global economic factors associated with CSA practices and the gendered repercussions of such factors. Though the Module importantly highlights agroecological practices that can be supported at the local level, the Module overlooks the bigger picture of CSA practices that rely on large-scale agricultural production and the introduction of new agricultural biotechnologies, especially patented seeds.

Perhaps most surprisingly, it is in the Module's limited reference to how markets might be used to support CSA that we see evidence of where more feminist analysis would be useful. In one of the few references to markets in the Module, the authors posit that market institutions might be most suitable for the distribution of new seeds (World Bank, FAO and IFAD 2015). As noted above, this is a key issue highlighted by pro-poor advocates and feminist scholars concerned about the patenting of life, the affordability of seeds and inputs, and the potentially devastating effects on biodiversity loss and food security (Glover 2010; Wield, Chataway and Bolo 2010, Shiva 2016). While development agencies and NGOs doubtless play a key role in the rollout of new policies and practices, the authors of the Module appear to underestimate the role of private actors in CSA and the potential gender-differentiated effects therein. The tendency of agricultural markets to exclude women is well established, so it is surprising to see the Module express optimism alongside recognition that agricultural practices have long sidelined women.

Thus the question remains whether or not the recommendations are relevant to CSA practices more broadly and whether or not they consider the implications of corporate participation in agricultural biotechnology markets, and the potential disadvantages for women and smallholder farmers. When we look more broadly at the language and practice of what has been described as CSA, there is tremendous diversity in actors, strategies and practices. The omission of corporate actors in the Module is a rather serious limitation. Although the Module presents a coherent and cohesive view of the effects of technological shifts that CSA might entail from an agroecological perspective, and the gender- and class-differentiated risks and trade-offs therein, this vision of CSA and its gendered implications is still surprisingly narrow.

Conclusion

In general, the FAO, World Bank, and IFAD have advanced a suitably complex view of the gender dimensions of agricultural practices, and the risks involved with the introduction of new agricultural technologies and practices designed to mitigate and respond to climate change. The *Gender and Climate-Smart Agriculture* Module captures the range of political, social and economic imbalances between women and men in agricultural practices, and quite ably anticipates the kinds of imbalances that might arise through new technologies and practices. In fact, the Sourcebook generally offers thoughtful examples of how gender imbalances manifest in agricultural practice and how to avoid such problems. Moreover, the Module avoids common gaps in policies for improved environmental and agricultural practices, seeking to not just 'add women', but consider the broader scope of gender relations and the actual effects of gender relations for rural populations, smallholders, and small-scale producers. The Module promotes the use of several methodologies and indicators to establish goals and track progress with input from farmers and families, as well as promotes a broader view of agricultural practice. The expansion of the analytical scope from individual farms to broader landscapes and communities, and recognizing the need for complex, multilevel governance, all while maintaining attention to gendered power relations is also a remarkable feature of this Module. In these respects, readers of the Sourcebook have an important resource that considers the social dimensions of agriculture in a comprehensive way. With the exception of a tendency to still rely on instrumentalist economic arguments to promote gender equality and a few technocratic recommendations, the document is firmly grounded in an understanding of the gender dimensions of agricultural practices and community norms.

Yet as noted above, the Module leaves broader questions unanswered. Indeed, given the ways in which CSA has been embraced not only by corporate actors, but by institutions like the FAO itself, the Module is remarkably silent on the effects these projects might have on local populations and what limitations they may have in terms of implementing gender-aware, let alone gender-transformative, policies in a responsible way. Thus, the major shortcoming within the Module is hardly in terms of content, but in its characterization of CSA as state-driven or state-led, supported by development agencies and civil society. Rather, the realities of CSA lie in corporate practices, more closely aligned with calls for sustainable intensification than agroecology or gender-transformation.

This Module ultimately illustrates the slipperiness of a term like 'climate smart agriculture'. While the Module predominantly uses this term to describe small-scale practices of conservation agriculture and broader landscape governance, other institutions use CSA to describe new modes of sustainable intensification and the scaling up of 'smart' practices. Thus while the Module certainly says all of the right things from the perspective of feminist scholarship on environmental and agricultural policies, lingering questions remain about to whom these things are being said. The Module has identified a target audience of governments, policymakers and development agencies, which certainly may be receptive. But at the same time a parallel narrative exists, espousing climate smart practices on a much larger scale, carried out and funded by different actors. The material realities around costs and time horizons for gender transformative change are likely to be

lost in the shuffle as private actors scale up 'climate smart' agricultural practices in the near term.

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