



**INTERNATIONAL FOOD
POLICY RESEARCH INSTITUTE**
sustainable solutions for ending hunger and poverty

Supported by the CGIAR

IFPRI Discussion Paper 01056

January 2011

The Gender Implications of Large-Scale Land Deals

Julia Behrman

Ruth Meinzen-Dick

Agnes Quisumbing

Environment and Production Technology Division

Poverty, Health, and Nutrition Division

INTERNATIONAL FOOD POLICY RESEARCH INSTITUTE

The International Food Policy Research Institute (IFPRI) was established in 1975. IFPRI is one of 15 agricultural research centers that receive principal funding from governments, private foundations, and international and regional organizations, most of which are members of the Consultative Group on International Agricultural Research (CGIAR).

PARTNERS AND CONTRIBUTORS

IFPRI gratefully acknowledges the generous unrestricted funding from Australia, Canada, China, Denmark, Finland, France, Germany, India, Ireland, Italy, Japan, the Netherlands, Norway, the Philippines, South Africa, Sweden, Switzerland, the United Kingdom, the United States, and the World Bank.

AUTHORS

Julia Behrman, International Food Policy Research Institute
Senior Research Assistant, Poverty, Health, and Nutrition Division
j.behrman@cgiar.org

Ruth Meinzen-Dick, International Food Policy Research Institute
Senior Research Fellow, Environment and Production Technology Division

Agnes Quisumbing, International Food Policy Research Institute
Senior Research Fellow, Poverty, Health, and Nutrition Division

Notices

¹ Effective January 2007, the Discussion Paper series within each division and the Director General's Office of IFPRI were merged into one IFPRI-wide Discussion Paper series. The new series begins with number 00689, reflecting the prior publication of 688 discussion papers within the dispersed series. The earlier series are available on IFPRI's website at <http://www.ifpri.org/publications/results/taxonomy%3A468>.

² IFPRI Discussion Papers contain preliminary material and research results. They have been peer reviewed, but have not been subject to a formal external review via IFPRI's Publications Review Committee. They are circulated in order to stimulate discussion and critical comment; any opinions expressed are those of the author(s) and do not necessarily reflect the policies or opinions of IFPRI.

Copyright 2011 International Food Policy Research Institute. All rights reserved. Sections of this material may be reproduced for personal and not-for-profit use without the express written permission of but with acknowledgment to IFPRI. To reproduce the material contained herein for profit or commercial use requires express written permission. To obtain permission, contact the Communications Division at ifpri-copyright@cgiar.org.

Contents

| | |
|---|----|
| Abstract | iv |
| Acknowledgments | v |
| 1. Introduction, Context, and Rationale | vi |
| 2. Phases of Land Deals and their Gender Implications | 4 |
| 3. Case Studies | 18 |
| 4. Promising Initiatives and Recommendations | 21 |
| 5. Knowledge Gaps | 24 |
| 6. Conclusions | 25 |
| Appendix: Recommendations for Gender-Equitable Large-Scale Land Deals | 26 |
| References | 28 |

ABSTRACT

This paper strives to introduce a discussion of the gender dimensions into the growing debate on large-scale land deals. It addresses the current information gap on the differential gender effects of large-scale land deals through (1) an overview of the phases of large-scale land deals and discussion of related effects on rural men and women based on new literature on large-scale land deals and past literature on the gender effects of commercialization and contract farming; (2) a presentation of further evidence using several recent case studies on the gender effects of large-scale deals; (3) an identification of knowledge gaps and areas where further research is needed; and (4) a recap of promising initiatives, followed by recommendations and conclusions.

Keywords: gender, large-scale land deals, land tenure reform

ACKNOWLEDGMENTS

This paper was supported by funding from the Swiss Agency for Development and Cooperation. The authors are grateful to Amber Peterman, Jere Behrman, Martha Osorio, Clara Park, Katono Ouma, Andrea Reis, and anonymous reviewers from the Swiss Development Corporation for providing comments and feedback on earlier drafts.

1. INTRODUCTION, CONTEXT, AND RATIONALE

Large-scale acquisitions of land by foreign and domestic investors in developing countries are currently a subject of a heated debate among development practitioners and researchers, national governments, the international investment community, and civil society organizations at national and international levels.¹ Land deals come with promises of great opportunity for local populations, including labor demands and investment in local infrastructure, technology, and capacity. However, they also have serious consequences, such as the export of valuable resources in contexts where local populations are food and energy insecure. The controversy generated by land deals is most famously illustrated in Madagascar, where public uproar over a decision to lease large quantities of land to a Korean company contributed to the collapse of the government. Related protests in the Democratic Republic of Congo, Indonesia, and the Philippines reinforce the controversial nature of the land deals.

In the aftermath of a number of high-profile incidents, civil society organizations and nongovernmental organizations (NGOs) have made large-scale land deals—commonly referred to as “land grabs” in the media—a focal point of campaigns and advocacy work. Land deals have also become a serious point of investigation for the policy research community; Theme One of the 2010 World Bank Annual Land Policy and Administration Conference was “large-scale agricultural investment,” and a number of high-profile organizations—including the Food and Agricultural Organization (FAO) of the United Nations, the World Bank, and the International Land Coalition—have initiated serious empirical studies on the topic. Meanwhile, governments in developing countries, recognizing the potential of land deals for investment and controversy, are quickly implementing policies to attract investors and to regulate future deals.

Because of the high level of interest in the topic, a literature has rapidly emerged to chart the dominant trends of large-scale land deals (Cotula et al. 2009; Smaller and Mann 2009; Ullenberg 2009; Braun and Meinzen-Dick 2009; Cotula 2010a). There is considerable diversity in the scale of reported land deals; a recent FAO (2009) report suggests that deals range from 10,000 to 500,000 hectares. There is also diversity in the country, institutional, and political context in which deals take place, with reported deals in Uganda, Brazil, Cambodia, Sudan, Pakistan, and Ukraine. However, land deals in Sub-Saharan Africa have generated the most international attention because of their increasing frequency and staggeringly large size. Wily (2010) estimates that 18 out of the 33 to 40 countries leasing lands for foreign direct investment are in Sub-Saharan Africa, and two-thirds of the global land under lease for biofuel and food production are in Sub-Saharan Africa.²

Throughout the literature on the scale and effect of this new wave of large-scale land deals there has been little discussion of the differential effect that land deals will have on rural men and women. A survey of many of the key reports and literature on large-scale land deals finds very few references to, and limited discussions of, gender effects (Cotula et al. 2009; Germany 2009; Schutter 2009), although a number of in-progress case studies and a few larger empirical projects do address gender dimensions of land deals (Daley 2010). The current lack of discussion of gender dimensions is particularly surprising given that large waves of foreign direct investment in land are not a new phenomenon. During the colonial era in many developing countries it was common for colonizers to expropriate customary land and set up large estates dedicated to the production of export crops. In many instances, foreign-owned estates continued to operate even after countries gained independence. Agricultural commercialization—often the purported rationale for land deals—has also occurred in a variety of modes of production, ranging from smallholder farms to plantations often owned by foreigners or national elites. The gender impacts of colonization and commercialization have been analyzed (Quisumbing 1998; Oyewumi 1997; Colson 1999), but this literature is not reflected in the current debates on land deals.

¹ We use the term acquisitions generally, although the mode of acquisition may range from purchase, to rental, or to contract farming arrangements.

² Biofuels are a range of fuels derived from agricultural and forest products or the biodegradable portion of industrial and municipal wastes.

Although foreign investment in land is not a new phenomenon, what is particularly new—and controversial—is the complex array of drivers of these land deals. Increasing urbanization, population growth, and the global food price crisis of 2008 drove investors—particularly from oil-rich Gulf states or wealthy Asian countries with little arable land—to seek out new locations for the production of staple crops for export to their home countries. At the same time, rapidly increasing oil prices and the corresponding interest in biofuels prompted governments from the United States and Europe to look for available land for biofuel production and exportation. The concurrent financial crisis prompted the international investment community to seek out new, “safer” investment opportunities, and rising prices of land in developing countries made speculation an attractive investment option. Critics argue that investment in land is no longer about seeking out a comparative advantage in global markets but rather about providing food and energy for wealthier countries using the land and water of the poor (United Nations 2010; GRAIN 2008). The magnitude of this current wave of land deals is also unprecedented: a World Bank (2010) study of 464 projects found land deals accounting for 46.6 million hectares reported in 203 projects in 81 countries, with information on areas unavailable in the rest.

A gender perspective is critical to truly understand the impact of large-scale land deals, because women and men have different social roles, rights, and opportunities and will be differentially affected by any major change in tenurial regimes, especially land transfers to extralocal investors. Prior to any land deals, poor rural women often do not have reliable access to land, secure land tenure, or customary land rights (Agarwal 1994; Lastarria-Cornhiel 1997; Kevane 2004). Women also lack access to essential complementary nonland inputs such as fertilizer, pesticides, improved seed varieties, and extension services (Peterman, Behrman, and Quisumbing 2010; World Bank and IFPRI 2010). Existing literature on the gender implications of the shift to large-scale commercial agriculture—a shift that usually accompanies large land deals—finds that these shifts often lead to changes in household dynamics and roles, income-generation activities, and property rights—often to the detriment of women (Quisumbing 1998). Given this information, it stands to reason that large-scale land deals may exacerbate poor conditions of female land access and ownership or further limit poor rural women’s opportunities for income generation.

The rationale for paying attention to gender issues in agriculture derives from a wide-ranging body of empirical evidence that demonstrates the many ways in which women are essential to improvements in household agricultural productivity, food security, and nutrition. Substantial evidence contradicts the common assumption that households are groups of individuals who have the same preferences and fully pool their resources. Research shows that households do not act in a unitary manner when allocating food and nonfood resources (Udry et al. 1995). A number of studies demonstrate the different ways men and women use resources and, correspondingly, the benefits of investing in women. For example, increasing women’s control over assets—such as land, physical assets, and financial assets—has been shown to improve child health and nutrition and increase allocations toward education (World Bank 2001; Quisumbing 2003). In Bangladesh, for example, a higher share of women’s assets is associated with better health outcomes for girls (Hallman 2000). Research from the International Food Policy Research Institute also finds that equalizing women’s status would lower child malnutrition by 13 percent (13.4 million children) in South Asia and by 3 percent (1.7 million children) in Sub-Saharan Africa (Smith et al. 2002).³ Empirical work suggests that increasing resources controlled by women promotes increased agricultural productivity (Saito, Mekonnen, and Spurling 1994; Udry et al. 1995; Quisumbing 1996) and contributes to poverty reduction (World Bank 2001). By implication, land deals that take resources away from women can reduce the welfare of women and their families, even if there are some income gains to men. Thus, including attention to gender not only is a matter of social equity but also is central to poverty reduction. Land-related investments that are promoted in the name of “rural development” will therefore miss their mark unless they address the needs of women as well as men.

³ The study defines women’s status as women’s power relative to men. Thus, women with low status typically have weaker control over household resources, tighter time constraints, less access to information and health services, poorer mental health, and lower self-esteem.

This paper addresses the current information gap on the differential gender effects of large-scale land deals through (1) an overview of phases of large-scale land deals and discussion of related effects on rural men and women based on new literature on large-scale land deals and past literature on the gender effects of commercialization and contract farming, (2) a presentation of further evidence using several recent case studies on the gender effects of large-scale deals, (3) a recap of promising initiatives and recommendations, and (4) an identification of knowledge gaps and areas where further research is needed.

2. PHASES OF LAND DEALS AND THEIR GENDER IMPLICATIONS

Land deals involve a wide range of actors at community, local government, national government, and international investment levels. To fully understand a land deal and the effect it has on a community, it is also important to understand the complexities of the situation prior to the deal and the wide range of outcomes that occur as a result of the deal. Given that land deals arise in a diverse array of contexts and take a multitude of forms, a number of prevalent trends will be discussed and explored so that varying gender implications can be ascertained. In this section we identify issues and present evidence structured around a rough chronology of processes related to land deals, starting with the preexisting situation and moving through consultation, negotiation, contract development, implementation, compensation, and subsequent changes in production structure and local economies. We finally consider the enforceability of agreements and outcomes.

Preexisting Situation

An in-depth understanding of the local context is a necessary starting point for understanding how a land deal will likely affect local women and men. This understanding should encompass the existing production system, including the land tenure system and the rights, roles, and responsibilities of those who use the land.

Of utmost importance is the issue of who in the community has land rights and how gender, age, marital status, ethnicity, or other distinguishing factors may influence these rights. This information needs to go beyond “ownership” to identify who holds different types of use and decisionmaking rights, which can often overlap on the same piece of land (Meinzen-Dick and Mwangi 2008). Related is the question of whether land rights are customary or statutory and how patterns of inheritance are determined. Studies from South Asia and Africa demonstrate that women are disadvantaged in both statutory and customary land tenure systems (Agarwal 1994; Lastarria-Cornhiel 1997; Kevane 2004; UN-Habitat 2006). Even when legislation aimed at strengthening women’s property rights is enacted, women often lack the legal know-how or enforcement mechanisms to ensure that these rights are maintained. Older women face additional challenges, as property grabbing from widows is a common occurrence in many contexts; in an attempt to retain rights to her husband’s land, a widow may marry the brother of the deceased—a risky practice in the context of HIV/AIDS in Sub-Saharan Africa (Drimie 2003; Strickland 2004; Gillespie and Kadiyala 2005).

A comprehensive understanding of land use patterns is also essential because women may lack land rights but play essential roles in a wide range of agricultural activities—including planting, weeding, or postharvest processing—on the plots of husbands or other family members (Doss 2009; Meinzen-Dick et al. 2010; Peterman et al. 2010). It is also relevant to ascertain whether there are gender differences in crop choice. For example, throughout Sub-Saharan Africa, lucrative cash crops are often perceived to be “male crops,” and crops for home consumption are perceived to be “female crops” (Kasante et al. 2001; World Bank and Malawi 2007), although Doss (2002) finds that such simplified delineations are not always accurate, as suggested by an examination of nationally representative household survey data from Ghana. Indeed, as marketable surpluses of foodcrops increase, this distinction is likely to erode. At this point, knowledge of local value chains can help better delineate income-generation patterns among men and women. It is important to know what quantity of the harvest is kept for home consumption and what quantity is sold so that the value of existing production—and its importance to local food security—is not underestimated. A related question involves who in the household markets agricultural products and who keeps the income from products sold.

Analysis of preexisting land uses needs to go beyond private “agricultural” land uses, to also consider uses of common lands for purposes such as collecting firewood, water, and medicinal plants; grazing; and other uses often not counted in official statistics. Such common lands often have the most insecure tenure, even being designated as “waste lands” by governments and therefore most likely to be given up for outside investment (Alden Wily 2010; Rossi and Lambrou 2008). The loss of the common

property has differential gender effects, with women more likely to be affected directly by loss of firewood, water, and medicinal plants, whereas men or women may be more affected by loss of grazing, depending on existing patterns of livestock control and responsibility. The implications of land deals for availability of water, both within and outside the project area, also need to be carefully considered; Smaller and Mann (2009) point out that many so-called land deals are actually a means of accessing water. Thus, we need to look at questions such as whether fencing off of areas for new large-scale farms will restrict people's access to water points or whether expanded irrigation in the project area will reduce or pollute water supplies downstream.

Potential gender disparities in human capital can further influence the likelihood that men and women are able to take advantage of new employment opportunities that arise from land deals. Gender differences in educational attainment may be prominent in rural contexts where families do not have adequate resources to send all of their children to school. Klausen (2002) compares gender inequality in education in a cross-country dataset and finds not only that gender inequality in education is persistent across many contexts but also that these inequalities directly affect economic growth by lowering levels of human capital: differences in gender gaps in education across regions account for between .4 and .9 percentage points in the difference between annual per capita growth rates in Sub-Saharan Africa, South Asia, East Asia, and the Middle East. In many cases where parents have limited resources to spend on schooling, boys are given preference; notably in some regions, such as certain parts of South East Asia, however, girls are given preference for schooling. In addition to differences in educational attainment, there may be gender differences in other forms of human capital, such as access to agricultural extension services. In an extensive review of primary survey data in Ghana, Ethiopia, and India, researchers from the World Bank and IFPRI (2010) found large gender inequalities in access to extension services. Of particular note are differences in mean access in Ghana, where an average of less than 2 percent of female heads of household and female spouses in male-headed households had contact with extension agents, whereas nearly 12 percent of men did.

Mankunike (2010) argues that another important—and often overlooked—contextual aspect of land deals is whether the land under consideration has important cultural, ancestral, or religious significance to the communities in question. Land is often essential to the cultural identity of its inhabitants, and investors need to recognize how land is used and understood by local people in capacities that go beyond the productive realm. Such a cultural understanding of land use may be defined by gender patterns. For example, women—who often are the practitioners of healing and traditional medicine—may be more affected by loss of marginal land where plants with important spiritual and medicinal qualities are typically grown (Rossi and Lambrou 2008).

Consultation and Negotiation

Acquisition of land is typically initiated through a process of consultation and negotiation that will ultimately lead to a contract formally enunciating the terms of the deal. The great diversity in how this process plays out and the extent to which the perspectives of local populations are taken into account has important implications for local men and women.

Legal Framework of the Acquisition Process

Although there are a few reported instances of outright illegal land grabs—most famously in Sudan (Bending and Taylor 2009)—in most instances land is legally acquired within the bounds of national law. However, this is not to say that land is always acquired equitably or that the acquisitions are seen as legitimate by all parties. Governments may not acknowledge customary rights of local users, a practice that is not illegal but that disregards the norms and needs of longstanding local users. Furthermore, Cotula (2010) documents the ways in which the concept of eminent domain for the public interest has come to be invoked as a rationale for commercial investment projects in Africa when historically the use of this concept has been reserved for the provision of schools and hospitals. The notion of “unused” land, which has often been used to justify land deals with outside investors, needs to be critically examined. A starting

point for any deal is to identify whether the land in question is customary land or privately held titled land, and who the users of that land have been.

The gender implications are likely to differ depending on whether statutory or customary land tenure predominates. Authors concur that the majority of land in Sub-Saharan Africa remains under customary tenure (Deininger 2003; Markelova and Meinzen-Dick 2009). In these cases the state may be seen (and may claim) to be the land “owner”, but this term is variously understood to be as custodian for a tribe or clan. Within that group, chiefs are often seen as the landholder—again, with varying connotations that the chief holds the land as custodian for the people. Within customary systems, men typically hold the land rights, and women access land through relations to men as wives, mothers, or daughters. Toulmin and Quan (2000) assert that women usually have stronger rights under statutory law; however, the implementation of these rights is often limited. In addition, the shift from customary to statutory property claims has often disadvantaged women. Lastarria-Cornhiel (1997) argues that the privatization of land in Africa leads to the concentration of land in the hands of those who can successfully assert ownership, such as community leaders and male household heads, often to the detriment of the access and use rights of poor rural women or ethnic minorities. For example, in regions of Malawi traditionally dominated by matrilineal–matrilocal land tenure regimes, the introduction of formal titles led to erosion in women’s land rights, as the male household head was consistently designated the official title holder (Peters 2010).

Gender-based landownership disparities exist throughout Sub-Saharan Africa. For example, UNICEF (2007) estimates that in Cameroon, women undertake more than 75 percent of agricultural work and own less than 10 percent of the land. UNICEF notes similar disparities in Kenya, Tanzania, and Nigeria, among other places. Because female farmers and household heads are less likely than their male counterparts to have formal land titles, they will likely be in a weaker position to bargain with governmental authorities or investors on potential land deals in their communities. On a related note, some authors report the use of intimidation in the acquisition process (Bending and Taylor 2009). Female heads of households who do not have access to their husbands’ social networks are especially at risk, especially where, as is often the case, “women lack confidence to voice their concerns about ownership, access and use of land” (Oxfam 2010, 4).

Identity of Investors

Many of the most prominent actors seeking to obtain the land are foreign investors, including sovereign wealth funds, agribusinesses, investment banks, commodity traders, and mining companies. However, private-sector investors increasingly act closely with or on behalf of their native governments, and there are many instances of governments fostering investment through the organization and negotiation of deals and policy arrangements and the provision of targeted support or favorable conditions (Germany 2009; FAO 2009; GRAIN 2008). For example, in Saudi Arabia the King Abdullah Initiative for Saudi Agricultural Investment Abroad provides credit to overseas Saudi investments in agriculture; the Saudi government recently provided 60 percent of the funding for an investment in Sudan led by the Hail Agriculture Development Corporation, a Saudi company (Smaller and Mann 2009). A large, though less prominent, share of investors in large land deals are domestic elites, who are either on their own or are representing foreign investors in the negotiation process or are acting as partners in joint ventures. The national identity of the foreign investor may affect the form the land deal takes in important ways. For example, investors who think of men as farmers and women as dependents may not take into account the role of women in agriculture or make efforts to involve them in negotiations or subsequent contracts and employment. In contrast, investors from Middle Eastern countries who look to invest in fellow Islamic countries are often guided by Islamic ideals of welfare and may be more amenable to providing ancillary services geared toward improvements in the public good. Such services—for example, health facilities—may be directly beneficial to women, although as mentioned above, there may be trade-offs if these investors do not think that women can or should be active in agricultural labor.

Identity of Actors with the Authority to Sell or Lease Land

On the other side of the negotiations, there is also great variation in the types of actors who may have (or claim to have) authority over the land and the right to engage in deals. Depending on the land tenure system and local power structures, the negotiators may include national governments, local elites, farmers' associations, or individual farmers. The capacity of each and the degree to which women's interests are likely to be represented are likely to vary.

- *National governments represented by agriculture ministries or state development associations negotiate directly with foreign investors if the land in question is formally state owned (Bending and Taylor 2009).* In this case, customary rights of any local users may be ignored by the state or acknowledged but forsaken in the name of “public interest.” In this scenario, rural men and women are both at a disadvantage, as they are rarely consulted and their perspectives are seldom considered prior to or during negotiation. Women farmers are further disadvantaged because they are less likely than their male counterparts to have formal land titles to use as a point of bargaining or negotiation (Germany 2009).
- *Local elites play an important role in the negotiation process, either on the side of the investor or on behalf of those attempting to sell or lease (Germany 2009).* Elites may be from urban areas or other wealthier parts of the country, or they may be local chiefs who have claims to authority over land. In the former case, the elites may be out of touch with the realities on the ground or unsympathetic to perspectives and needs of local men and women. In the latter case, chiefs may be interested in the consolidation of their own power and influence. In addition, chiefs, who are usually male, are likely to subscribe to local norms regarding gender and may not recognize the importance of ensuring that women will benefit from land deals. In the Julia and White (2010) study of palm oil deals in Indonesia, discussions were conducted exclusively with male chiefs, and as a result, the perspectives and needs of local women were left out of negotiations.
- *Local-level farmers' associations and communes can negotiate directly with foreign investors over titled or privately held land (FAO 2009).* Typically, such negotiations lend themselves to contract farming agreements. In this case, women farmers may also lose out if farmers' associations and communes are made up primarily or exclusively of males. The preferences of women may be overlooked or ignored because women do not own land or because of the pervasive misconception throughout Africa that “women don't farm” (World Bank and IFPRI 2010). For example, a recent study of large-scale biofuels projects in Mozambique finds that even though women are heavily involved in farming, they are rarely involved in consultation processes and almost never sign official reports and documents (Nhantumbo and Salomao 2010). Another case study from Mozambique suggests that women are largely left out of negotiation processes even though they are the ones working the land (Duvane 2010).
- *Local small- to medium-scale landowners negotiate sales of privately titled land directly with investors (Ullenberg 2009).* This situation is particularly common in Latin America. Once again, questions about whether men and women have equal land rights—and, by extension, bargaining power—and equal representation in negotiations are of utmost importance in this scenario, particularly given that men are more likely to hold larger plots of land. In these situations, consent clauses that require the wife's permission for husbands to sell land can give women some voice and bargaining power.

Availability of Information

The availability to local populations of information regarding the deal may depend considerably on the form the deal will take (a topic to be discussed in detail in the discussion of contracts) and whether investors negotiate directly with local farmers' associations or farmers or with government representatives. Critics maintain that many land deals are characterized by a serious lack of transparency

and information sharing with local populations (GRAIN 2008). In addition, Vermeulen and Cotula (2010) maintain that the smallholder–investor relationship may be marred by serious asymmetries in information related to market trends, calculation of product prices, royalties and dividends, risk levels, and debt. A recent International Institute for Environment and Development study of several biofuels projects in Mozambique finds that even when community consultations and information-sharing sessions take place, they are plagued by a number of problems, including lack of advance information, limited number of consultations (typically only one meeting), inadequate records from consultations, vague commitments in meetings, and lack of consideration of future community needs (Nhantumbo and Salomao 2010). As discussed above, there is an overarching issue of whether men and women will be equally represented at consultations and will have equal access to this information. The Mozambique study also indicates that in consultations, certain topics (such as job creation or resettlement) are positively emphasized, whereas others (such as potential environmental effects) are scarcely discussed. Such a misrepresentation of information has potential gender dimensions if perceived benefits of land deals will primarily benefit men (that is, job creation in the formal sector) and negative ramifications of the projects that stand to particularly affect women (that is, increased difficulty in access to water and fuel) are overlooked or downplayed.

Contracts and Compensation

Once the negotiation process is finished, the final terms of the deal will be drawn up into a contract of agreement between both parties. In exchange for use of the land, the investor will provide compensation to the party or parties who are selling or leasing the land. Compensation takes myriad forms, including monetary compensation for use of land; shares of profit or revenue from the land; and investments in local infrastructure, public goods, and labor forces.

Duration of Contract

In the vast majority of cases in developing countries, contracts with outside investors are for leases rather than outright sales, as many countries have stringent laws regarding foreign purchase of land. Nonetheless, there are instances where foreign investors actually do purchase land—typically through the creation of a new company in country—and also instances of foreign–national collaboration under the banner of a national company (Ullenberg 2009; GRAIN 2008). Typically, short-term leases range from 15 to 20 years, and longer-term leases—the vast majority of cases—range from 50 to 99 years (Smaller and Mann 2009). The nature of the contract (lease versus sale) and the duration of the contract clearly have large effects on rural women and men. Duvane (2010) asserts that one problem with land deals in Mozambique is that projects are long term but communities have immediate needs—particularly with respect to food security—and may not see benefits for significant amounts of time. In Madagascar, farmers report preferring shorter-term contracts of 15 to 20 years and feeling alienated by longer-term possibilities (Ullenberg 2009). Conversely, if there is a lump sum cash payment and people do not have the means to convert the payment into assets that will provide an equivalent livelihood or income stream, the compensation will be lost, as has often happened when land is appropriated to build dams (Cernea 1988). This situation is especially problematic for women if the compensation is paid only to men.

Types of Contracts

In a recent review of contracts and large-scale land deals, Cotula (2010) differentiates between three different dominant models of contracts: concession contracts, production-sharing agreements, and joint ventures:

- In concession contracts, the leasing partner (almost always the government) grants the investor the right to run operations on the given land and exploit resources for a specified time in exchange for fees, taxes, or royalties. In this case, monetary compensation from the investor to the government will bypass the people who had been using the land for farming or

habitation or both, and rural men and women will almost certainly lose the ability to use the land in question for their own productive purposes. If farmers—particularly women farmers—are used to receiving proceeds from their land in food, the transition to a cash economy may be further disequilibrating. Whether or not existing tenants are completely evicted from the land, are resettled, or are allowed to continue living there (either formally or via squatting) is context specific and will be discussed at greater length in the following section. One major concern with this type of contract is the serious lack of transparency in the process and the dearth of information that local populations have about the terms of the contract (GRAIN 2008). This lack of transparency may be particularly detrimental to poor rural women, who are already less informed of their rights and who have less mobility and correspondingly less access to outside information and alternative livelihoods.

- Production-sharing agreements build upon a long history of sharecropping agreements. In instances of large-scale land deals, the investor provides physical capital and technological investments, and the party selling or leasing the land (almost always the government) provides land. As compensation, the investor and government share resources produced by the deal. Typically, this type of deal is employed when the land in question will be used for the production of high-value products (for example, oil or fuels). Many of the same issues that local men and women face in the case of concession contracts are also prevalent in production-sharing agreements and include gender disparities that may arise from disproportionate lack of compensation for the land, loss of land for productive and habitation purposes, and lack of transparency or information about the deals. Moreover, unlike traditional sharecropping agreements, which are typically in kind and under which the tenant undertakes the harvesting, in production-sharing agreements harvesting and sale are typically done centrally, and there is scope for manipulation of the share that goes to the local population, depending on how products are priced. Clear information and transparency about the output and price can help to build trust among the local community, but as with other types of contracts, it is essential that benefits be shared with women, not just “heads of households.”
- Joint ventures usually entail a contract between the investor and local partners (host states, local elites, or local community associations or groups) with the goal of running a business venture together. Joint ventures most commonly take the form of contract farming arrangements and may be incorporated (with a formal body created in country and owned by both partners) or unincorporated (run on the contract). Compensation typically comes in the form of an agreed-upon rent going to the farmers (it may be a percentage of the crops produced or a monetary value). Although joint ventures are typically held to be the most equitable option because they are often made directly with community groups, it does not mean that they are necessarily gender equitable. Case studies on gender and land deals in Mozambique find that women are often left out of consultation and negotiation processes (Duvane 2010; Ntantumbo and Salomao 2010). Tandon’s (2010) work on large-scale investments on Maasai pastoral lands in Tanzania finds that poor farmers in general, and women in particular, are virtually excluded from political decisions regarding the land they use. As a result, women likely will have less influence over key issues—such as control of revenue from deals—and monetary compensation may bypass women and go directly to husbands or male household members.

Investments in Local Labor Forces—Plantation Systems

It is commonly acknowledged that land deals will affect existing land contracts and tenurial relations, but the potential effects of land deals on employment are less recognized. Often investors initiate large-scale agricultural production through the creation of a plantation system in which they provide inputs and land as agreed upon in the terms of the production-sharing agreement or concession contract and hire outside

laborers. Plantations are typically large areas of monoculture that rely on hired labor and extensive use of pesticides, inorganic fertilizer, and hybrid seed to make land more productive. The gendered effect of plantation agriculture on labor and employment will depend not only on the actual practices used to hire labor but also on the prevailing gender division of labor prior to the beginning of the land deal. Existing gender division of labor is conditioned by the farming system that predominates in a particular context, which may have substantial heterogeneity across and within regions (Quisumbing 1998). There are several common scenarios for supplying the labor needed to run these plantations:

- The vast majority of laborers at both unskilled and managerial levels are hired from the local population (Ullenberg 2009; Cotula 2010). In this case it is important to know if men and women will be hired equally to work as laborers, as in some contexts it is assumed—by investors or local communities or both—that formal-sector jobs are largely or exclusively for men. This is precisely what happened in Duvane’s (2010) case study of land deals in Mozambique. In this case, wage labor opportunities associated with land deals went to men. Correspondingly, women—who do not work in the formal sector in this context—did not benefit from these employment possibilities. In contexts where both men and women are hired to work as laborers, it is important to know whether there is a gender division in task allocation, hours worked, or wages earned. Case studies in India find that women in both contract farming and hired wage labor systems often encounter lower wages, worse working conditions, and difficulties negotiating (Singh 2003). In the production of high-value crops and biofuels, and in other types of commercial agriculture, there is a trend toward the “gendering” of tasks whereby women are perceived as more “nimble” and assigned tasks such as pruning, spraying, thinning, tying, and other tasks and are thereby excluded from activities that may be better paid, less strenuous, or less dangerous (Torres 1997; Barrientos et al. 1999; Rath 2003; ILO/FAO/IUF 2007; Dolan and Sorby 2003). However, other authors argue that this “gendering” of tasks is actually beneficial for women, who are increasingly hired in positions that would be otherwise occupied by men because of the perception that women are lower cost, more conscientious, and more dexterous (Dolan and Sorby 2003). This type of plantation labor is often low skilled, temporary, and seasonal, which is reported to be a mixed blessing for women. On the one hand, it allows women to balance productive and reproductive responsibilities (Anker 1998; Hakim 1996); on the other hand, it comes with frequent uncertainty about income generation. The provision of adequate childcare facilities is important for both women and young children, who may be co-opted into child labor if they go to the fields alongside their mothers (Singh 2003).
- Supervisors and other managerial positions are hired externally (either from investor countries or from wealthier countries in the region), whereas the local population is hired as lower-level wage laborers (Ullenberg 2009). From a capacity-building standpoint, it is important to know if there are opportunities for the advancement of local women and men, given time and experience. As in the scenario above, there are also questions about gender-differentiated hiring practices, earning potential, task allocation, and childcare provision.
- The vast majority of the labor force is brought in externally, thereby overlooking the potential of local populations as laborers (Germany 2009). In this scenario, it is essential to understand what other local employment opportunities are available for men and women.
- The investor relies heavily on mechanized production methods (Germany 2009). Although an almost exclusive reliance on mechanized methods can limit employment opportunities for local populations, Rossi and Lambrou (2008) argue that the mixed labor and mechanized system that is increasingly being put in place for sugarcane production in Africa can actually be advantageous to women. In this case the machine cuts the cane—the most physically difficult part of the process—and the workers collect and gather it manually. Because the most physically challenging part of the process is performed mechanically, rather than being

performed by men, other opportunities for work may actually be opened up to women (Johnson and Rossillo-Calle 2007).

Investments in Local Labor—Contract Farming

An alternative to a plantation system is a contract farming agreement, also known as an *outgrower scheme*, in which the farmer agrees to provide a given quantity and quality of a product within an agreed-upon timeframe and the investor agrees either to purchase the harvest at a set price or to provide a fixed percentage of the harvest to the farmer as rent. In the latter instance, the farmer will theoretically end up with the same amount of crops as prior to the contract, given that the investor typically also provides a range of production-enhancing inputs, such as improved seed, fertilizer, machinery, and extension services. In theory, contract farming arrangements are mutually beneficial to local populations, who possess existing underutilized assets such as land, labor, and water, and to investors, who have access to assets that are more difficult for local populations to access, such as financial capital, technical expertise, and linkages with markets.

Proponents of contract farming argue that it allows small-scale farmers to hold on to land and labor, whereas critics point out that the system is driven by seasonality and monocultivation and is excessively prone to natural shocks. Other critics argue that the notion of contract farming is predicated on a unitary model of the household controlled by a male household head, when in reality the household is made up of a diverse array of actors with different preferences and responsibilities. As a result of this assumption of the unified household, the contract is made only with a male household head, although many male and female family members, with diverse interests, will in fact be providing labor (Raynolds 2002; Schneider and Gugerty 2010). Evidence indicates that contract farming agreements that do not pay attention to these intrahousehold gender dimensions may aggravate household and community dynamics. Eaton and Sheppard (2001) provide the example of a large venture in China where contracts were made exclusively with senior male members of the household in spite of the fact that it was largely women who did the agriculture work. This situation led to large disputes within the community because women were not often properly compensated by male contract holders for their work. Dolan (2002) documents the introduction of a French bean contract farming scheme in Kenya. As the beans—traditionally a female product—became increasingly profitable, men began to lay claim to land allocated for, and income derived from, the production of beans, thereby challenging women’s traditional spheres of control and causing conflict within the community. Studies from von Bulow and Sorensen (1988) and Mbilinyi (1988) on the introduction of tea contracting also illustrate how subsequent pressures on women’s labor time aggravated relationships between wives and husbands and destabilized the potential for capital accumulation.⁴

This is not to say that contract farming is necessarily disadvantageous to women; case studies from cotton contract farming schemes in Zambia indicate that with deliberate targeting of female participants and promotion of gender-friendly crop enterprises, contract farming can be profitable for female farmers (Bangwe and van Koppen 2010). Another study of nontraditional contract farming in the Dominican Republic finds that contracting has actually increased demand for women’s farm labor while also providing women with an opportunity to contest the appropriation of their unpaid labor (Raynolds 2002). Sørensen and von Bülow (1993) find that in Kenyan households where women’s labor was indispensable for tea production in outgrower schemes, women’s bargaining power in payment for the tea was greater than in households relying on hired labor. In contrast, Sorensen and von Burlow find that before the commercialization of milk production in Kenya, milk production from local cattle had been under the domain and authority of women and was used for both sale and consumption. When production became commercialized via participation in outgrower schemes, men took over the cash “crop” domain, and all milk became for sale only. This change had a detrimental effect on households’ nutritional state—especially for the children—despite increased household income.

⁴ Women’s loss of control of labor and income has been documented in other contexts related to agricultural commercialization; see von Braun and Kennedy (1994).

Studies on contract farming in Guatemala indicate that the nutritional and health status of contract growers is not necessarily negatively affected by participation in export production. The picture is considerably more complex and varies over time. One study reported positive changes in family nutrition and healthcare, including increased consumption of meat and maize (Hamilton, Asturias, de Barrios, and Sullivan 2001). Earlier studies on the adoption of nontraditional export vegetables in the highlands of Guatemala have found that smallholder export agriculture increases farm household incomes substantially, has favorable distributional effects, and does not have detrimental effects on either subsistence production or nutrition (von Braun, Hotchkiss, and Immink 1989; Katz 1992). However, whether these results are sustained over the long run is questionable. A follow-up study of the same households in the earlier study by von Braun and colleagues (1989) showed that although on average, welfare levels have improved for all households irrespective of adoption status and duration, long-term adopters exhibited the smallest increase over the two decades, in spite of some early gains (Carletto, Kilik, and Kirk 2009). Conversely, early adopters who withdrew from nontraditional agricultural export production after reaping the benefits of the boom period of the 1980s are found to have fared better and shown greater improvements in durable asset position and housing conditions than any other category. Given the long duration of land deal contracts, attention to long-term effects is imperative.

Investments in Public Goods

Local populations also stand to benefit from investments in public goods by investors that would not otherwise occur. Investments typically take two forms:

- Targeted investments in nonagricultural infrastructure, such as construction of roads, rail links, or port facilities that will be mutually beneficial to investors looking to improve supply chains and to local populations needing improved transport links (FAO 2009). Whether or not women and men will be able to benefit from these improvements depends on the type of infrastructure, the extent to which the improvements facilitate men's and women's productive and reproductive tasks, and women's and men's social and financial mobility. Given that women are often limited in both of these domains; this type of investment may be more beneficial to males than females.
- Investments in schools, hospitals, clinics, or other local public goods that will not directly improve productive capabilities or export processes but will benefit local populations. Investments in schools would help build human capital more generally, and schools located closer to home might encourage girls to attend. Investment in human capital may also facilitate the movement of displaced workers into better-paying jobs that typically require higher levels of schooling. Medical care facilities are also valuable for women because they reduce maternal mortality and because women are often responsible for a wide range of household caregiving activities—not only childcare but also caring for sick members of the household. Thus, investments of this kind stand to be particularly beneficial to women.

Water-related infrastructure can be of either type: domestic water supply systems are not directly productive, whereas irrigation investments are designed primarily to improve productivity of the agricultural investment. Whether this creates a positive or negative spillover to others depends on whether the water for irrigation is taken away from other uses (including downstream agriculture and fishing) and whether it provides facilities for domestic use. Some irrigation systems close off places where people used to draw domestic water supplies, whereas others are designed as multiple-use systems providing for local drinking, bathing, or doing laundry. Women are generally most responsible for domestic water supplies (White, Bradley, and White 1972). Rosen and Vincent (1999) find that on average, women spend more time than men on water provision (700 hours a year in Ghana, 500 hours in Tanzania, and 200 hours in Zambia) and tend to collect higher volumes of water. Consequently, improvements in water provision, especially of piped clean water near the homestead, are especially beneficial for women, whereas

development projects that include, for example, fences that exclude women from accessing traditional water sources and make them walk farther, are a significant cost to women.

Implementation and Changes in Production Structure

Once the contract is finalized, the process of implementation begins. There is an expectation that this will begin promptly to make land productive as quickly as possible—usually within a 10-year horizon—so that investors maximize profit (GRAIN 2008). However, a World Bank (2010) study found that many investors acquire more land than they have the ability to develop, at least initially. Such speculative behavior is particularly damaging because preexisting land users are evicted from the land, without new production systems in place. When implementation does begin, one of the most significant changes is in the structure of production; large-scale commercial-oriented agricultural systems are implemented in the place of traditional subsistence farming. Such a shift can be detrimental to the livelihoods of rural farmers, who lose the direct use of their land and thus must sell their labor to work on their former land to gain income. This income does not guarantee the cash necessary to maintain a quality of life comparable to that prior to the sale of land. In addition, other trends accompany such changes and are discussed in the following sections.

Eviction and Resettlement

Following a land deal, local populations may be evicted from the land in question, resettled by the investor or by choice, or allowed to continue living on the land (either with formal acknowledgment from the investor or by informal oversight). The obvious exception is in contract farming situations, where local populations continue to inhabit and farm the land in question. Whether people are forced to resettle or just lose their farmland will have important gender implications. Whereas investors may view the household as a unit that will equally share the benefits and losses of resettlement, in reality different family members will be differentially affected by loss of privately and commonly held land, homes, employment, social capital, and additional assets that inevitably accompany resettlement (Cernea 1997; Mehta and Srinivasan 2000). Colson's (1999) study of people uprooted by the Kariba Dam in Zambia/Zimbabwe at the end of the colonial era finds a number of gender effects. Women lost land rights when males in resettled areas were awarded exclusive land rights and compensation for relocation by the colonial officials who oversaw resettlement. In addition, new extension services, capacity building, and labor opportunities (typically in the form of building roads) benefited men rather than women. Mehta and Srinivasan (2000) review resettlement following the building of a dam in the Narmada Valley in India and find a number of gender effects, including erosion of female influence in household and land matters due to exclusion from official consultations; loss of land rights due to reallocation of land to male heads; and loss of livelihood as skills, including those involved in basket weaving, pottery, and herbal remedies, were made redundant at resettlement sites. Loss of social connections to neighbors is another factor that affects women, particularly, in resettlement. Planning resettlement to reproduce neighborhoods and provide better housing and increased services—such as piped domestic water and space for gardens, handicrafts, or piecework activities—can help make resettlement less disruptive to women.

Introduction of New Technology

Commercialization—a shift from subsistence to greater market orientation—is almost always accompanied by the introduction of new technologies aimed at increasing aggregate factor productivity. In the case of land deals, these changes include mechanization and the introduction of inputs such as new crops and varieties, inorganic fertilizer, and pesticides (Ullenberg 2009). The effects of technological change and commercialization by gender may be different, even within the same socioeconomic class, because of initial differences in involvement in agricultural fieldwork and nonfieldwork, especially domestic work and childcare; the extent of control over, and the patterns of, distribution of household earnings and expenditures; and the extent of direct access to productive resources, especially land.

Furthermore, the effect of technology adoption cannot be discerned in the period after immediate adoption, since the diffusion of agricultural innovations is a long-term process. Some of these long-term adjustment effects may involve the movement of labor from agriculture to nonagriculture. Because the majority of the poor—and women—in Africa and Asia derive incomes from labor on their own and others' farms, the employment effects of new technologies are important factors determining changes in incomes and welfare. This idea is illustrated by the studies of the adoption of irrigated rice and high-yielding or modern varieties in Asia and Africa in the 1970s and 1980s, as well as the introduction of other crops in Africa.

Whether or not the introduction of these new technologies will have a positive effect on local women and men is a subject of debate. FAO (2009) warns that local populations will not benefit if technology transfer occurs in a system where advanced agriculture and smallholder agriculture continue to exist side by side with limited spillover from one domain to the other. Cotula (2010) points out that investors often put limitations on the use of technology and related knowledge, particularly when it comes to application outside of the project. It is also conceivable that labor-saving technologies might make production so much more efficient that the producer can expand production a lot and, for example, sell on the international market—without an increased demand for local labor. In a review paper on gender and technology adoption, Quisumbing (1998) asserts that for new technology to increase employment opportunities for women there must be a concurrent increase in demand for women's labor. In contexts where there is a growing supply of landless women's labor, women will benefit only if productivity increases are accompanied by increased labor demand or if productivity increases free up women's time for leisure, self-care, or other, more remunerative tasks. Furthermore, women's ability to benefit from technological change depends largely on their control over valuable resources. When women have at least some control over income derived from land, they stand to benefit from technological change that will increase productivity of household labor and land. However, for women who lack control of proceeds from land, labor becomes their primary resource. In this case, neutral or labor-using technological changes will increase demand for their labor, but labor-saving technological change will reduce employment opportunities (Unnevehr and Stanford 1985). However, because most land deals remove direct control of land from local populations (particularly women); many of the benefits of new technologies that would have accrued to women farmers are appropriated by the new enterprise established by the land deal. Increased employment in agriculture would therefore result only if technologies introduced as a consequence of the land deal are neutral or labor using; increased employment overall could result if increased incomes lead to increases in domestic demand, as well as increased hiring in the domestic economy, potentially in nonagriculture.

There are also a number of important environmental dimensions to the introduction of new technologies. For example, the discharge of pollutants that accompanies the use of inorganic fertilizers, pesticides, or other agrochemicals may damage the quality of local soil and water used for productive purposes. Furthermore, the quantity of water needed to sustain large-scale agricultural production for staple crops or biofuels will likely compete with water needed for food production, livestock, and domestic consumption (Rossi and Lambrou 2008). Women are typically charged with collection of water and fuel and with preparation of food. In a review of 19 developing countries in Africa and Asia, researchers found that biomass fuels managed by women—including wood, charcoal, and agricultural residues—made up a large percentage of the country's energy supply (Karlsson 2008). Thus, women stand to be particularly disadvantaged if they are forced to seek out new and more distant sources of water and fuel.

In addition, the use of new technologies, such as pesticides, may have serious potential health effects on the local community. Evidence from tomato-processing plants of Mexico indicates that protective equipment is not adequate, and illness due to the ingestion of pesticides and other agrochemicals is common (Barron and Rello 2000). Likewise, in Kenya's fresh vegetable industry, chemicals used for storage, mixing, and spraying have led to skin allergies, headaches, and fainting (Dolan and Sutherland 2002). These health effects may differentially affect men and women, as there is evidence that women workers in plantations often receive less training and instruction than male

counterparts, do repetitive work that can result in health difficulties, and face reproductive difficulties as a result of exposure to agrochemicals (Loewenson 2000). For example, Oxfam (2007) finds that in Malaysia, women plantation workers are often recruited as sprayers of chemical pesticides and herbicides and are not given proper training and safety equipment.

Crop Choice and Export

Another issue of relevance is what type of crops will be planted on the land in question, what quantity of the crops will be kept for home consumption, and what quantity of the crops will be exported.

Staple crops—such as rice, maize, and millet—are usually planted with the intent of export to investor countries that lack the land and water resources necessary for domestic production. In some contexts, all of the crops produced will be exported to the investor's country, a situation that can be detrimental to local food security, particularly if the labor of local populations is diverted from subsistence farming to wage labor. In some instances, a portion of the product may be sold in local markets or given to local laborers. In other cases—particularly, though not exclusively, in contract farming—local populations hired as laborers may retain a percentage of the crop yield as a rent or payment for labor. The availability of staple crops, along with crops rich in important nutrients and vitamins, is particularly important to women who act as the guardians of household food security.

Biofuels, including bioethanol and biodiesel, are increasingly produced in developing countries and sold on the global market as an alternative to fossil fuels. Initial enthusiasm about biofuel production has been offset by some skepticism about potential environmental and social effects of this production. Rossi and Lambrou (2008) argue that biofuel production might contribute to the socioeconomic marginalization of women because often so-called marginal lands—often the domain of women—are used for the production of biofuels. For example, the government of India strives to bring 400,000 hectares of classified marginal lands, which were de facto common property resources of the villages, under cultivation of nonedible oilseed crops (mostly *Jatropha*)⁵ for biodiesel production (Rajagopal 2007). Although marginal lands may have less productive potential, they are extremely important to women, who use them for a variety of purposes, including grazing animals and the collection of firewood, medicinal plants, and wild foods.

Exclusive biofuel production can be detrimental for local food security, because land and water will be diverted from food production to biofuel production while land available for livestock grazing may also be given over to biofuel production (UN-Energy 2007). There is also evidence that demand for biofuels can lead to insecurity in agricultural commodities and food prices, a fact that may particularly affect female-headed households and other vulnerable groups prone to food shocks (Rossi and Lambrou 2008). Whether or not men and women benefit from biofuel production depends very much upon whether they are hired as laborers and thus are able to increase their net income, providing insulation against potential fluctuations in food prices.

In addition, Rossi and Lambrou assert that the loss of biodiversity that often comes with large-scale biofuel production may affect men and women differently. The loss of wild edible plant species that grow on fallow fields and wildlands might be particularly difficult for women who are charged with collection, preparation, and consumption of these species and who have acquired a specialized knowledge of how such species are used for food, fuel, or medicinal purposes. Loss of biodiversity is not necessarily exclusive to biofuel production and may also arise in large plantations where monocultures are used for the production of staple crops.

⁵ *Jatropha* is a genus of approximately 170 plants from the family Euphorbiaceae. The seeds from these plants are used in the production of biodiesel.

Enforceability, Transparency, and Monitoring

Agreements for compensation are one thing; whether they are met is another. Therefore, it is crucial to examine the enforceability of land deals and whether there are mechanisms in place to ensure that investors follow through on promises to abide by national legislation, invest in infrastructure as promised, and work with local populations. Also relevant is whether there are adequate monitoring and evaluation systems in place so that investors, governments, and communities can understand the complex processes of the land deal and the effects on local men and women. This, in turn, requires adequate sharing of information about the provisions that do or should govern land deals, the details of specific deals, and the collection of information on whether these provisions are being followed.

Although enforcement and monitoring mechanisms were typically left out of earlier land deals, in light of the enormous amount of attention land deals have generated, some countries have started to create relevant legal mechanisms to facilitate enforcement and transparency. For example, in 2009 the Mozambique government introduced a national strategy geared at protecting the land and resource rights of local people, including wide-scale use of community consultation as a mechanism to ensure that the needs of local people are met. Nhantumbo and Salomao (2010) note that the success of this strategy has been mixed, and women are often left out of the negotiation process. In another example, Brazil has recently passed legislation requiring investors to declare the amount of foreign participation in ownership, in addition to setting up a special registry for those purchases that use foreign capital (GRAIN 2008). Whether or not local people will be made aware of these registries in the Brazil case remains to be seen. Even in contexts where appropriate legislation has been implemented, many projects were approved and implemented before relevant standards were created, and many countries continue to lack any of these standards. Enforcement mechanisms are of particular importance for rural women to ensure that in instances where gender targeting is a component of land deals, it is properly implemented, and the mechanisms for appealing to these enforcement mechanisms must be realistic for poor rural women. This, in turn, requires that women know about the provisions that may be in their favor and that the cash and time costs of appealing are not beyond their means. Likewise, monitoring policies—including the collection of gender-disaggregated monitoring data—are essential to document the differential effects of projects on male and female livelihoods and to track these effects over time.

One of the greatest barriers to enforcement is the great power asymmetries involved in many large-scale land deals. On the one side are wealthy investors, whether domestic elites or foreigners; on the other side are generally poor rural people, often without clear land rights. Host governments have the greatest responsibility to enforce the provisions in the land deals. But governments often lack the ability or the incentive to enforce rules in favor of local people. This situation is especially seen in countries where the governments are trying to encourage foreign investment.

In such contexts, other actors are especially important:

- *The media* can play a role as watchdog, helping to create transparency over deals and publicizing both positive cases and cases that fail to live up to commitments or have a negative impact on local communities or the environment. Although the media have given considerable attention to such land deals, there has been relatively little attention to their gendered impacts. Sensitizing the media to the key gender dimensions of such projects can help to ensure that these aspects are also covered in the news stories—of good or bad cases.
- *Farmers' organizations* can similarly raise local concerns and may offer some collective bargaining power. However, the capacity of these organizations varies greatly, and many do not include women in decisionmaking or consider the differential needs and impact on women.
- *NGOs* can play an intermediary role, educating both communities and outsiders about land deals, helping to build farmers' capacity, and advocating for the rights of communities. Many NGOs are sensitive to gender issues, but these organizations often have no legal standing or

enforcement power beyond “naming and shaming” those who do not live up to agreed-upon standards.

- *International agencies, donors, and development organizations* can exert pressure on governments to encourage them to enforce provisions to protect the interests of marginalized local groups, including women.

All of these actors can play an important role. The various civil society and international organizations, however, are not a substitute for effective government enforcement of deals to ensure that land deals at least do no harm, and preferably that they provide improved livelihoods of the women and men in the areas.

3. CASE STUDIES

Two case studies from different countries and contexts illustrate the myriad forms that large-scale land deals take and the differential ways in which women are affected. The first case study explores the gendered politics of monocrop oil-palm expansion in a Hibun Dayak community in Sanggau District, West Kalimantan, Indonesia (Julia and White 2010).⁶ The second case study is on the effect of sugarcane production projects on rural men and women producers and a women-run cooperative in the Maputo Province of Mozambique (Andrade et al. 2009). The case studies are developed systematically along the analytical framework developed in the proceeding section when adequate information is available.

West Kalimantan, Indonesia (Julia and White 2010)

Context: Indonesia is a lower-middle-income country in Southeast Asia with roughly 40 percent of the labor force continuing to work in the rural sector (CIA 2010a). With the rise in demand for biofuels, the Indonesian government established a massive agrofuels expansion program for oil palm plantations.

Preexisting situation: Sanggau District, along with much of rural Indonesia, is characterized by patriarchal norms and traditions. Prior to land deals, however, women did have traditional access to land, and there was no gender differentiation in land inheritances (instead, inheritance was determined by ability to care for aging parents, regardless of gender). Within the Sanggau District, gender-based education disparities were pervasive, a fact that is attributed to increasing costs for school fees and transport in the face of resource scarcity and large distances between villages and schools.

Identity of those with the authority to lease and legality of the acquisition process: Indonesia's constitution mandates that all land, water, and other natural resources that belong to common pools and public goods are under state control; as a result, the 70 percent of Indonesian land under customary control is formally the property of the state. The provincial government of West Kalimantan—the province in which the case study was conducted—has correspondingly raised its target for expansion of oil palm plantations from 1.5 million hectares to 4.5 million hectares.

Identity of investors: In Sanggau District, oil palm plantations have been rapidly expanding since the 1980s, with as many as 20 oil palm companies to date (4 of these companies are foreign, 15 are domestic privately owned, and 1 is state owned).

Availability of information: Companies coming into the district to set up palm oil plantations often reinforced—if not exacerbated—existing patriarchal norms and gender disparities by relying solely on male community leaders to help sign up smallholder farmers, disseminate information, and resolve conflicts. Women were also left out of initial community consultations precisely because they did not occupy visible community leadership roles.

Type of contract: Both corporate plantations and contract farming systems were introduced in the region.

Investment in local labor force: Women are often not able to take advantage of higher-skilled labor positions because of lack of education. As a result, the women are increasingly hired as daily casual laborers and lack the security that comes with a more permanent fixed contract. There is also a gender division of labor; harvesting, a physically intensive activity, is seen to be the domain of men, and spraying, land clearance, and fertilizer application are seen to be the domain of women. These “women's tasks” often entail coming into contact with dangerous chemicals; protective equipment is rarely used and must be purchased at the laborer's expense. In addition, it is “women's tasks,” such as spraying, that are paid on a daily basis rather than with a fixed contract. Key benefits for women were increases in women's compensated productive work through plantation labor and *berondol* collection.⁷

⁶ All of the information in these case studies comes from the aforementioned two sources unless otherwise noted.

⁷ *Berondol* collection involves scavenging for palm oil seeds that have fallen during harvesting; these seeds are resold at a lower value than the market price. Although this activity is not legal, it has become a major source of income generation for many local women.

Environmental impacts: The loss in biodiversity that results from monocrop production means women no longer have access to raw materials used to make local rattan handicrafts, which formally were a means of income generation.

Land tenure impacts: Women's rights to own and use land were eroded by the practice of companies registering smallholder land—traditionally held by women and men—in the name of the male household head.

Community impacts: Plantation expansion has been accompanied by increases in the number of commercial sex “cafés” operated largely by local women, which increases the community risk of sexually transmitted diseases.

Enforcement: On the community level there were also a number of additional problems, notably disparities between what was promised to local populations and what they actually receive. A key instance is when communities hand over customary land to companies with the understanding that they will be allocated smallholder plots in return; years after villagers have handed over these plots, many people report that they have not yet received their smallholder plots as promised. Also problematic is when one palm oil company buys out another and subsequently refuses to recognize or deal with the problems and unresolved issues between the original company and the local community. Such conflicts are pervasive in plantation areas throughout Indonesia.

Maputo Province, Mozambique (Andrade et al. 2009)

Context: Mozambique is a largely agrarian country in southeastern Africa with upward of 80 percent of the population working in the agricultural sector, largely as smallholder farmers (CIA 2010b). Since the end of the Mozambique civil war in 1992, the government has actively been promoting the privatization of the sugarcane industry as a major economic opportunity for the country. As a result of favorable government policies, sugarcane production rose rapidly, from less than 20,000 metric tons in the early 1990s to upward of 265,000 metric tons in 2005, and in recent years Mozambique has become the site of a number of large-scale land projects for the production of sugarcane or *Jatropha* to be used for biofuels.

Preexisting situation: Maputo Province—the site of the case study—is dominated largely by smallholder agricultural production and larger sugarcane plantations. Rural male and female smallholders in the province often lack formal land titles, and women face a number of additional challenges. Because rural women and men often live together in “common unions” rather than certified state-recognized marriages, women often have no claim to the land of their husbands in cases of spousal death or marital conflict or dissolution. Single women also face difficulties accessing land and asserting ownership, a fact that is becoming increasingly problematic because increases in male migration to South Africa for employment purposes mean that the number of de facto female household heads is on the rise.

Identity of those with the authority to lease and legality of the acquisition process: In 2007 the government of Mozambique introduced a new Green Revolution strategy to promote increased productivity and production among smallholders and encourage investment with larger commercial ventures. Consideration of gender was largely absent from the Green Revolution strategy document.

Identity of investors: The government has succeeded at attracting foreign investors, and there is a heavy presence of foreign companies—notably from South Africa or Mauritius—in the Mozambique sugarcane industry. In light of the aforementioned Green Revolution policy, the South African sugar giant Illovo expanded into Maputo Province, a move that had a number of ramifications on rural male and female smallholder and commercial producers.

Service provision: A key tenet of the Green Revolution policies geared to smallholder farmers was the increased provision of extension services. However, many female farmers were not able to benefit from these services because they lacked the necessary mobility to attend extension demonstrations and seminars.

Production impacts: The expansion of Illovo in Maputo Province led to a general displacement of food production for household purposes and a displacement of commercial banana production, which had been run by the woman-dominated cooperative and had supplied the Maputo market. The overall results of expansion were displaced production—including commercial production—by women in favor of sugarcane production dominated by men, as well as male-dominated employment in the sugar mill at Maragra.

Community impacts: The increasing need for land for smallholder or commercial purposes has also created new conflicts within the community as people fight over increasingly scarce resources.

4. PROMISING INITIATIVES AND RECOMMENDATIONS

Throughout the literature on gender and land tenure, a number of promising initiatives to increase the land security of poor female farmers have been identified (Quisumbing and Pandolfelli 2010); such initiatives are particularly relevant to consider when thinking about mechanisms for making land deals more gender equitable. For example, in an Ethiopian land certification scheme, land administration committees at the kebele level (the smallest administrative unit in Ethiopia) were required to have at least one female member, and land certificates were issued after public registration for transparency (Deininger et al. 2008). In regions where a photo, in addition to a name, was required for certification, females were considerably more likely to have their names on a deed for two notable reasons: (1) photos made it more difficult for husbands to sell or rent out land without a wife's consent and (2) photos are a useful form of identification in a society with low literacy rates. The Ethiopian experience of a low-cost, rapid, and transparent community land registration process increased the confidence and tenure security of female heads of household and subsequently increased their ability to rent out land for profit (Holden, Deininger, and Ghebru 2007). In Rwanda and Tanzania, legislation mandates that local land committees throughout the country and local government management committees be composed of at least 30 percent women, which has increased the voices and visibility of rural women throughout land reform projects in the country (Daley et al. 2010; Walker 2002).

Several innovative pilot interventions have been used throughout Africa to build awareness about women's property rights. In Zambia, the Justice for Widows and Orphans Project, a network of NGOs, has established community-level advice groups for women and trains them on property law and the writing of wills. In Zimbabwe, Women and Law in Southern Africa trains community-based paralegals on inheritance laws. And in Rwanda and Kenya, NGOs are promoting marriage registration, oral and holographic wills, and memory books because lack of identification cards and low literacy rates among women constitute a major impediment to acquiring land title (Knox et al. 2007). In Uganda, the International Center for Research on Women and the Uganda Land Alliance have launched a pilot program that will strengthen the capacities of grassroots paralegals to aid women in asserting their property rights (ICRW 2010).

All of these promising initiatives are predicated on the principle that gender-equitable land reform is a prerequisite—not a hindrance—to rural development. Giovarelli and Duncan (1999) argue that ensuring that women have secure land tenure will increase productivity and reduce poverty by (1) allowing women—who often are already charged with working the family plot—to receive the incentives and resources to maximize investments in land and productive inputs; (2) providing agency and resources to women in their role as the guardians of household food, nutrition security, and healthcare; (3) reducing environmental degradation by providing women with resources and incentive to invest in soil enrichment, terracing, or other environmental practices to protect land; and (4) reducing economic pressures for women to have children so that they can gain access to land via male heirs.

If large-scale land investments are properly executed with appropriate attention to gender dimensions, land deals can provide opportunities for both women and men through the introduction of new employment and income generation opportunities, new technologies, and new services. In fact, appropriately designed land deals may even aid in the distribution of local resources in a more gender-equitable fashion. Investors also stand to benefit from land deals that take into account the full range of skills, labor potential, and knowledge of local women and men. In contrast, if land deals do not take into account local contextual issues and gender dimensions, investments will at best perpetuate existing gender inequalities and at worst contribute to increased levels of resource scarcity, poverty, and conflict. Investor will lose out from any plan that ignores the labor potential of half of the population or causes community unrest.

Although large-scale land deals are often treated as an isolated issue, they actually are linked with many other types of policies, including land reform and titling, agricultural investments, and trade policy, as well as legislation to promote gender equality, to attract potential investors, and to regulate

investments. Too often, these policy choices are seen as independent of one another, when in reality they are interrelated. The challenge is to see how this overall policy framework fits together and influences land deals, as well as how this framework can have gender built in, rather than being an afterthought. For example, land reform and titling can include the names (and even photos) of both husband and wife, which will help to secure the land against expropriation. Agricultural research and infrastructure investments in developing countries could increase the productivity of existing land users, obviating the need for foreign investment. Trade policy will affect the profitability of land deals and the incentives for foreign investors to acquire land as a tool for obtaining food. Legislation to promote gender equality—for example, in inheritance and local governments—can raise the voice and bargaining power of women, making government services more gender equitable.

Several broad recommendations for a variety of different actors at local, national and international levels can be made toward the goal of ensuring that land deals are gender equitable (for a detailed list see Appendix). Among the international development, policy and research community it is important that any international standards and guidelines on land deals include provisions that promote gender equity and that such provisions be publicized for example, with a common website, to which investors, governments, nongovernmental organizations (NGOs), and communities can refer. The international development, policy and research community can also monitor implementation through the creation of an international governance body that monitors performance of land deals across a variety of indicators including attention to gender or through a ranking of investors based on past performance across a variety of indicators including attention to gender. In addition, there is a valuable role for international research community to play in addressing critical knowledge gaps through research on gendered effects of land deals to inform donors, investors, and governments. Likewise, the international development community can support capacity strengthening for governments and communities to include gender issues in negotiation and implementation of land deals.

Among national governments, a series of efforts can be made to ensure that large scale land deals are gender equitable. To start, national governments can strengthen the property rights of communities by recognizing customary tenure and common property, so that land is not given to investors without the consent of local users. At the same time, governments should ensure that women can hold land and are included in any land titling or certification programs, such as through joint landholdings and spousal consent clauses. National governments can also promote fair labor market and employment regulations through the development or strengthening of regulations to ensure the health and safety of agricultural workers and the prevention of gender based discrimination (including provision for maternity leave). When conducting negotiations with investors, national governments should consider past investor actions and performance when authorizing deals and ensure that local communities are involved in negotiations and that women's concerns are represented. It is also important that national governments ensure that investors abide by labor laws—including laws concerning health and safety—and meet promises to invest in public services and communities.

Local governments, NGOs, communities and civil society organizations also have an important role to play in ensuring that land deals are gender equitable. It is essential that these groups recognize traditional land rights of male and female land users (not just male household heads), particularly when conducting land certification. Local governments or community groups involved in land deal negotiations should also include both women and men in consultation and negotiation processes related to land deals. At the same time, local NGOs, Community Based Organizations or community groups should focus on capacity strengthening including, strengthening the capacity of women to participate in negotiations and assert their rights via legal literacy courses or other relevant training on property rights and providing opportunities for women and girls to have schooling so that they qualify for better jobs at higher management levels.

Domestic and international investors play an essential role in the development of gender equitable land deals. It is of utmost importance that investors disseminate information on the acquisition process to male and female community leaders and through information channels that will reach a wide audience (not just dispersion of information through male community leaders). Likewise, investor need to consult

with local men and women on short- and long-term goals, wants, and needs throughout the acquisition process. Given that the preexisting situation will largely shape the ways in which the land deal will affect the community investors need to develop an effective monitoring and evaluation system including baseline (prior to acquisition) gender-disaggregated data on time use, income generation, and production; monitoring at regular intervals to look at how these outcomes change over time; and long-term follow-up to assess effects that may not be apparent in the short term.

In instances where land deals take the form of contract farming arrangements, investors should target female and male farmers (not just male household heads) and provide appropriate extension services to ensure that men and women are properly informed about new technologies and receive agricultural information. On the other hand, when land deals lead to the development of plantation systems investors need to take a number of measures to ensure that plantation labor is gender equitable. This includes hiring local women and men to work as wage laborers in fixed-contract positions (rather than only as temporary or casual workers), assigning males and females to tasks based on appropriate assessment of task requirements and abilities rather than stereotypes about “male” and “female” tasks and including opportunities for promotion to higher-level positions for talented local male and female employees. In addition, it is important to provide appropriate safety equipment for all activities involving potentially hazardous materials and to provide childcare facilities to increase the probability of women’s participation in the labor force, to improve women’s mobility, and to minimize the incidences of child labor. Investors should also ensure that new development does not decrease water quantity or quality for local users and—if possible—provide an improved water supply (for example, through boreholes or piped water systems). Provision of community services, such as healthcare and education that are particularly beneficial to marginalized groups, including women is also a relevant mechanism to ensure that land deals are gender equitable.

5. KNOWLEDGE GAPS

Thus far most of the discussion has centered upon actions that need to be taken at the government or investor level; there is also a role for the international research community to play. The gender dimension needs to be incorporated into further work, and the research community and donor community alike need to put serious commitment, including funding, behind these research questions. Of utmost importance is the current lack of empirical evidence on the differential effect that large-scale land deals have on men and women and a corresponding need for rigorous empirical work exploring this topic. Future research must include gender-disaggregated data on time use, income generation, and production prior to acquisition and should monitor how these outcomes change over the course of the land deal. To better understand the diverse array of contexts in which land deals take place, there is also a need for detailed case studies that consider the wide range of issues discussed in Section II of this paper. In addition to exploring gender dimensions, empirical work and case studies also need to look at how a variety of other factors—including age, marital status, and ethnicity—may affect whether local populations will benefit from land deals and if certain groups are more likely to benefit than others.

Although there is increasing documentation on certain aspects of land deals, such as drivers of acquisition, scale and magnitude of deals, and contract typologies, there remains a dearth of information on several key topics. For example, there is limited information on how local populations are affected by eviction and resettlement, an issue that has important ramifications for local men and women. In addition, there is a significant lack of qualitative evidence on the perceptions and understandings of local men and women regarding large-scale land deals in their communities. Further research needs to explore the following questions: What aspects of large-scale land deals are viewed as opportunities and what aspects are viewed as threats by men and by women? What are the perceived gains and losses of land deals, and how do these gains and losses vary by gender? How do men and women's perceptions of land deals change before, during, and after the acquisition process? How might the answers to these questions change based on the type of land deal and context in which land deals take place?

An updated overview of the different legislative mechanisms implemented by host governments in response to land deals would be valuable for researchers and policymakers, particularly because much of this legislation is very new and has yet to be documented. Relevant questions include the following: What types of legislation are governments implementing to ensure transparency in land deal processes? What enforcement mechanisms (legislative or otherwise) are put into place by local and national governments to ensure that investors follow through on promises to local populations? Do policies and legislation specifically target female farmers, or are gender dimensions largely ignored?

6. CONCLUSIONS

It is too easy to laud outside “investment” in agriculture without looking at the gender distribution of benefits, or to deride land deals and the processes that accompany them as bad or unfair without looking at the ways in which they can be beneficial to local men and women. For example, commercialization per se is not bad; once subsistence farmers produce a larger marketed surplus, commercialization is inevitable. In past experience on commercialization, it was the lack of guarantees for women’s land rights and control of income that was detrimental to women, particularly in cases where women ended up working on their husbands’ farms without any control of additional resources.

Whether or not women and men will benefit from land deals depends in part on the rights and responsibilities women and men have prior to the land deal and in part on how the implementation of the land deal will build upon, improve, or distort these roles and responsibilities. The institutional environment where these land deals occur—the laws and legal framework for property ownership—all have to be in place for land deals to be gender equitable or favorable for poor women. Land deals do not occur in isolation; the environment has to be created so that land deals have the potential to be more gender equitable and maybe even benefit poor men and women. To create a more enabling environment, a number of different actors—including the international community, governments, investors, and local communities—all have important roles to play. At the government level, appropriate institutional mechanisms must be developed and implemented. Likewise at the community level, practices that benefit women must be adopted and promoted.

APPENDIX: RECOMMENDATIONS FOR GENDER-EQUITABLE LARGE-SCALE LAND DEALS

International Development, Policy, and Research Community

Implement International Standards and Guidelines:

- Insure that gender equity is included in international standards and guidelines on land-related investments.
- Publicize international guidelines on land, labor, and related issues— for example, with a common website to which investors, governments, nongovernmental organizations (NGOs), and communities can refer.

Monitor Implementation:

- Create an international governance body that monitors performance of land deals across a variety of indicators including attention to gender.
- Create a ranking of investors based on past performance across a variety of indicators including attention to gender, with yearly updates to be publicized.

Address critical knowledge gaps through research on gendered effects of land deals to inform donors, investors, and governments.

Support capacity strengthening for governments and communities to include gender issues in negotiation and implementation of land deals.

Recommendations: National Governments

1. Securing land rights:
 - Strengthen property rights of communities by recognizing customary tenure and common property, so that land is not given to investors without the consent of local users.
 - Ensure that women can hold land and are included in any land titling or certification programs, such as through joint landholdings and spousal consent clauses.
2. Fair labor market and employment regulations:
 - Develop or strengthen regulations to ensure the health and safety of agricultural workers.
 - Ensure that men and women are treated equitably by preventing discrimination and making provision for maternity leave.
3. Negotiations:
 - Consider past investor actions and performance when authorizing deals (see I.B above).
 - Ensure that local communities are involved in negotiations and that women's concerns are represented.
4. Enforcement mechanisms:
 - Ensure that investors abide by labor laws, including laws concerning health and safety.
 - Ensure that investors meet promises to invest in public services and communities.
 - Promote linkages between national and local governments to ensure that initiatives taken at the national level are carried out on the ground.

Recommendations: Local Governments, NGOs, and Communities

1. Land rights: Recognize traditional land rights of male and female land users (not just male household heads), particularly when conducting land certification. Emerging experience on low-cost and effective community land registration could help inform this process.
2. Negotiations: Include women and men in consultation and negotiation processes related to land deals.
3. Capacity strengthening:
 - Strengthen the capacity of women to participate in negotiations and assert their rights via legal literacy courses or other relevant training on property rights.
 - Continue providing opportunities for women and girls to have schooling so that they qualify for better jobs at higher management levels.

Recommendation: Investors

1. Inclusive negotiations:
 - Disseminate information on the acquisition process to male and female community leaders and through information channels that will reach a wide audience (not just dispersion of information through male community leaders).
 - Consult with local men and women on short- and long-term goals, wants, and needs throughout the acquisition process.
 - Develop an effective monitoring and evaluation system including baseline (prior to acquisition) gender-disaggregated data on time use, income generation, and production; monitoring at regular intervals to look at how these outcomes change over time; and long-term follow-up to assess effects that may not be apparent in the short term. Ideally, monitoring and evaluation would be conducted by an outside party to prevent bias.
2. Contract farming:
 - Target female and male farmers (not just male household heads) in contract farming systems.
 - Provide appropriate extension services to ensure that men and women are properly informed about new technologies and receive agricultural information.
3. Labor:
 - Hire local women and men to work as wage laborers in fixed-contract positions (rather than only as temporary or casual workers) that ensure job security.
 - Assign males and females to tasks based on appropriate assessment of task requirements and abilities rather than stereotypes about “male” and “female” tasks.
 - Provide childcare facilities to increase the probability of women’s participation in the labor force, to improve women’s mobility, and to minimize the incidences of child labor.
 - Use appropriate safety equipment for all activities involving potentially hazardous materials.
 - Include opportunities for promotion to higher-level positions for talented local male and female employees.
4. Other services:
 - Ensure that new development does not decrease water quantity or quality for local users and provide an improved water supply (for example, through boreholes or piped water systems) where possible.
 - Provide community services, such as healthcare and education that are particularly beneficial to marginalized groups, including women.

REFERENCES

- Agarwal, B. 1994. *A field of one's own: Gender and land rights in South Asia*. Cambridge, U.K.: Cambridge University Press.
- Alden Wily, L. 2010. The tragedy of public lands: Understanding the fate of the commons under global commercial pressure. Draft Report for the International Land Coalition's Global Study of Commercial Pressures on Land. Rome: International Land Coalition.
- Andrade, X., A. Cristiano, I. Casimiro, and I. Almeida. 2009. Empowering women through access and control over the land. Forum Mulher Report. Maputo, Mozambique: Forum Mulher.
- Anker, R. 1998. *Gender and jobs: Sex segregation of occupations in the world*. Geneva: International Labour Organization.
- Bangwe, L. M., and B. van Koppen. 2010. *Zambian smallholder out growers in irrigated agriculture*. Working Paper. Colombo, Sri Lanka, and Lusaka, Zambia: International Water Management Institute and Farming Systems Association of Zambia.
- Barrientos, S., A. Bee, A. Matear, and I. Vogel. 1999. *Women and agribusiness—Working miracles in the Chilean fruit export sector*. London: Macmillan.
- Barron, A., and F. Rello. 2000. The impact of the tomato agroindustry on the rural poor in Mexico. *Agricultural Economics* (23): 289–297.
- Bending, T., and M. Taylor. 2009. Increasing commercial pressure on land: Building a coordinated response. Working Paper. Rome: International Land Coalition Secretariat.
- Braun, J. von, and E. Kennedy. 1994. *Agricultural commercialization, economic development, and nutrition*. Baltimore: Johns Hopkins University Press.
- Braun, J. von, and R. Meinzen-Dick. 2009. Land grabbing by foreign investors in developing countries: Risks and opportunities. Policy Brief 13. Washington D.C.: International Food Policy Research Institute. <<http://www.ifpri.org/sites/default/files/publications/bp013all.pdf>>. Accessed August 2, 2010.
- Braun, J. von, D. Hotchkiss, and M. Imminck. 1989. Nontraditional export crops in Guatemala: Effects on production, income, and nutrition. Research Report 73. Washington, D.C.: International Food Policy Research Institute.
- Bulow, D. von, and A. Sorensen. 1988. Gender dynamics in contract farming: Women's role in smallholder tea production. Project Paper 88.1. Copenhagen: Centre of Development Research.
- Carletto, C., T. Kilik, and A. Kirk. 2009. Non-traditional crops, traditional constraints: Long-term welfare impacts of export crop adoption among Guatemalan smallholders. World Bank Policy Research Working Paper 5142. Washington, D.C.: World Bank.
- Cernea, M. 1988. Involuntary resettlement in development projects: Policy guidelines in World Bank financed projects. World Bank Technical Paper 80. Washington, D.C.: World Bank. <http://books.google.com/books?hl=en&lr=&id=EO_U4rF3wJ4C&oi=fnd&pg=PA1&dq=dams+Cernea&ots=CPF1gAwvvQ&sig=6AYmzIhHjEeeLW-r0P3nsRaOD24#v=onepage&q=dams%20Cernea&f=false>. Accessed August 24, 2010.
- Cernea, M. 1997. The risks and reconstruction model for resettling displaced populations. *World Development* 25 (10): 1569–1587.
- CIA (Central Intelligence Agency). 2010a. CIA world fact book 2010: Indonesia. <<https://www.cia.gov/library/publications/the-world-factbook/geos/id.html>>. Accessed August 23, 2010.
- _____. 2010b. CIA world fact book 2010: Mozambique. <<https://www.cia.gov/library/publications/the-world-factbook/geos/mz.html>>. Accessed August 24, 2010.
- Colson, E. 1999. Engendering those uprooted by development. In *Engendering forced migration: Theory and practice*, ed. D. Indra. Oxford, U.K.: Refugee Studies Program.

- Cotula, L. 2010. *Investment contracts and sustainable development: How to make contracts for fairer and more sustainable natural resource investments*. London: Design.
- Cotula, L., S. Vermeulen, R. Leonard, and J. Keeley. 2009. Land grab or development opportunity? Agricultural investment and international land deals in Africa. <<http://fr.allafrica.com/sustainable/resources/view/00011918.pdf>>. Accessed August 2, 2010.
- Daley, E. 2010. Commercial pressures on land gender study. Final Report for the International Land Coalition's Global Study of Commercial Pressures on Land. Headington, U.K.: Mokoro.
- Daley, E., R. Dore-Weeks, and C. Umuhoza. 2010. Ahead of the game: Land tenure reform in Rwanda and the process of securing women's land rights. *Journal of Eastern African Studies* 4 (1): 131–152.
- Deininger, K., D. Ayalew Ali, S. Holden, and J. Zevenbergen. 2008. Rural land certification in Ethiopia: Process, initial impact, and implications for other African countries. *World Development* 36 (10): 1786–1812.
- Dolan, C. 2002. Gender and witchcraft in agrarian transition: The case of Kenyan horticulture. *Development and Change* 33 (4): 659–681.
- Dolan, C., and K. Sorby. 2003. Gender and employment in high-value agriculture industries. Agriculture and Rural Development Working Paper 7. Washington, D.C.: World Bank.
- Dolan, C., and K. Sutherland. 2002. Gender and employment in the Kenya horticulture value chain. Globalization and Poverty Working Paper. Norwich, U.K.: Overseas Development Group, University of East Anglia.
- Doss, C. 2002. Men's crops? Women's crops? The gender patterns of cropping in Ghana. *World Development* 30 (11): 1987–2000.
- Doss, C. 2009. If women hold up half the sky, how much of the world's food do they produce? Background paper prepared for the 2010 Food and Agriculture Organization of the United Nations State of Food and Agriculture. Rome.
- Drimie, S. 2003. HIV/AIDS and land: Case studies from Kenya, Lesotho, and South Africa. *Development Southern Africa* 20 (5): 647–658.
- Duvane, L. 2010. Mozambique case study. 2010 Institute for Poverty Land and Agrarian Studies Regional Workshop on Commercialization of Land in Southern Africa, March 24–25, 2010, in Cape Town.
- Eaton, C., and A. Sheppard. 2001. Contract farming: Partnerships for growth. Food and Agricultural Organization of the United Nations Agriculture Services Bulletin 145. Rome: FAO. <http://books.google.com/books?hl=en&lr=&id=K7qM_i8yj1sC&oi=fnd&pg=PR3&dq=women+AND+contract+farming&ots=j904wsB0f_&sig=EUM-vJ4PgdlbgA9gzUN0BX4hZyw#v=snippet&q=women&f=false>. Accessed August 2, 2010.
- FAO (Food and Agricultural Organization of the United Nations). 2009. International investment in developing country agriculture—What are the issues? Rome.
- Germany. 2009. Development policy stance on the topic of land grabbing—The purchase and leasing of large areas of land in developing countries. Bonn: Discourse.
- Gillespie, S., and S. Kadiyala. 2005. HIV/AIDS and food and nutrition security: From evidence to action. *Food Policy Review* 7. Washington, D.C.: International Food Policy Research Institute.
- Giovarelli, R., and J. Duncan. 1999. Women and land in Eastern Europe and Central Asia. Working Paper. Seattle: Rural Development Institute. <http://pdf.dec.org/pdf_docs/Pnacl400.pdf>. Accessed September 21, 2010.
- GRAIN. 2008. Seized! The 2008 land grab for food and financial security. GRAIN Briefing. Barcelona: Genetic Resources Action International. <<http://www.grain.org/briefings/?id=212>>. Accessed May 14, 2010.
- Hakim, C. 1996. Key issues in women's work: Female heterogeneity and the polarization of women's employment. London: Althone.
- Hallman, K. 2000. Mother-father resources, marriage payments, and girl-boy health in rural Bangladesh. Washington, D.C.: International Food Policy Research Institute. Unpublished manuscript.

- Hamilton, S., L. Asturias, de Barrios, and G. Sullivan. 2001. Economic and social impacts of non-traditional export crop production in highland Guatemala: Impact perception survey. IPM CRSP (Integrated Pest Management Collaborative Research Support Program). Working Paper 01-3 (October). Blacksburg, Va., U.S.A.: Virginia Polytechnic Institute and State University, IPM CRSP.
- Holden, S., K. Deininger, and H. Ghebru. 2007. Impact of land certification on land rental market participation in Tigray region, northern Ethiopia. Paper submitted for the Nordic Development Economics Conference, June 18–19, in Copenhagen. Washington, D.C.: World Bank.
- ICRW (International Center for Research on Women). 2010. Training grassroots paralegals to help women exercise their property rights. Washington, D.C.: ICRW. <<http://icrw.org/where-we-work/training-grassroots-paralegals-help-women-exercise-their-property-rights>>. Accessed September 8, 2010.
- ILO/FAO/IUF (International Labor Organization/Food and Agriculture Organization of the United Nations/International Union of Food Workers). 2007. Agricultural workers and their contribution to sustainable agriculture and rural development. Geneva: International Labor Organization.
- Johnson, F. X., and F. Rosillo-Calle. 2007. Biomass, livelihoods and international trade. Stockholm Environment Institute Climate and Energy Report 2007-01. Stockholm: SEI.
- Julia, and B. White. 2010. Agro-fuels, enclosure and incorporation: Gendered politics of oil palm expansion in a Dayak Hibun community in West Kalimantan. Working Paper.
- Karlsson, G. 2008. Engaging women in small scale production of biofuels for rural energy. The International Network on Gender and Sustainable Energy (ENERGIA). PowerPoint presentation.
- Kasante, D., M. Lockwood, J. Vivian., and A. Whitehead. 2001. Gender and the expansion of non-traditional agricultural exports in Uganda. In *Shifting burdens: Gender and agrarian change under neo-liberalism*, ed. S. Razavai. Bloomfield, Conn., U.S.A.: Kumarian.
- Katz, E. G. 1992. Intra-household resource allocation in the Guatemalan Central Highlands: The impact of non-traditional agricultural exports. PhD dissertation, University of Wisconsin, Madison, Wisc., U.S.A.
- Kevane, M. 2004. Women and development in Africa: How gender works. Boulder, Colo., U.S.A., and London: Lynne Rienner.
- Klausen, S. 2002. Low schooling for girls, slower growth for all? Cross-country evidence on the effect of gender inequality in education on economic development. *World Bank Economic Review* 16 (3): 345–373.
- Knox, A., A. Kes, N. Milici, and N. Duvvury. 2007. Mending the gap between law and practice: Organizational approaches for women’s property rights. Washington, D.C.: International Center for Research on Women.
- Lastarria-Cornhiel, S. 1997. Impact of privatization on gender and property rights in Africa. *World Development* 25 (8): 1317–1333.
- Loewenson, R. 2000. Occupational safety and health for women workers in agriculture. *Labour Education* 1–2 (118–119): 35–45. Geneva: International Labour Organization.
- Mankunike, C. 2010. Large scale agricultural investment in Africa: Points to ponder. In *Land grab? The race for the world’s farmland*, ed. M. Kugelman and S. Levenstein. Washington, D.C.: Woodrow Wilson International Center for Scholars.
- Markelova, H., and R. Meinzen-Dick. 2009. Agriculture and climate change: An agenda for negotiation in Copenhagen. The importance of property rights in climate change mitigation. Focus 16, Brief 10. Washington, D.C.: International Food Policy Institute. <http://www.ifpri.org/sites/default/files/publications/focus16_10.pdf>. Accessed September 8, 2010.
- Mbilinyi, M. 1988. Agribusiness and women peasants in Tanzania. *Development and Change* 19 (4): 549–583.
- Mehta, L., and B. Srinivasan. 2000. Balancing pains and gains: A perspective paper on gender and large dams. Prepared for Thematic Review I.1: Social Impacts of Large Dams Equity and Distributional Issues. World Commission on Dams Working Paper. <<http://oldwww.wii.gov.in/eianew/eia/dams%20and%20development/kbase/contrib/soc188.pdf>>. Accessed August 24, 2010.

- Meinzen-Dick, R., and E. Mwangi. 2008. Cutting the web of interests: Pitfalls of formalizing property rights. *Land Use Policy* 26 (1): 36–43.
- Meinzen-Dick, R., A. Quisumbing, J. Behrman, P. Biermayr-Jenzano, V. Wilde, M. Noordeloos, C. Ragasa, and N. Beintema. 2010. Engendering agricultural research. IFPRI Discussion Paper 973. <<http://www.ifpri.org/publication/engendering-agricultural-research>>. Accessed August 24, 2010.
- Nhantumbo, I., and A. Salomao. 2010. Biofuels, land access and rural livelihoods in Mozambique. International Institute for Environment and Development Working Paper. London: IIED.
- Oxfam. 2007. Biofueling poverty: Why the EU renewable-fuel target may be disastrous for poor people. Oxfam Briefing Note. Oxford, U.K.: Oxfam.
- Oxfam. 2010. Report on the regional land grabbing workshop, June 10–11, 2010, in Lukenya Getaway, Nairobi, Kenya, Oxfam–Horn East and Central Africa.
- Oyewumi, O. 1997. *The invention of women: Making African sense of Western gender dialogues*. Minneapolis, Minn., U.S.A.: University of Minnesota Press.
- Peterman, A., J. Behrman, and A. R. Quisumbing. 2010. A review of empirical evidence on gender differences in non-land agricultural inputs, technology and services in developing countries. International Food Policy Research Institute Discussion Paper 001003. Washington, D.C.: IFPRI.
- Peterman, A., J. Behrman, A. R. Quisumbing, and E. Nkonya. 2010. Understanding complexities surrounding gender differences in agricultural productivity in Uganda and Nigeria. *Journal of Development Studies*, Forthcoming.
- Peters, P. 2010. “Our daughters inherit our land, but our sons use their wives’ fields”: Matrilineal matrilocal land tenure and the new land policy in Malawi. *Journal of Eastern African Studies* 4 (1): 179–199.
- Quisumbing, A. R. 1996. Male-female differences in agricultural productivity: Methodological issues and empirical evidence. *World Development* 24 (10): 1579–1595.
- Quisumbing, A. R. 1998. Women in agricultural systems. In *Women in the third world: An encyclopedia of contemporary issues*, ed. N. Stromquist. New York: Garland Publishing.
- Quisumbing, A. R. ed. 2003. *Household decisions, gender, and development: A synthesis of recent research*. Washington, D.C.: International Food Policy Research Institute.
- Quisumbing, A. R., and L. Pandolfelli. 2010. Promising approaches to address the needs of poor female farmers: Resources, constraints, and interventions. *World Development* 38 (4): 581–592.
- Rajagopal, D. 2007. Rethinking current strategies for biofuel production in India. Paper presented at the International Conference “Linkages between Energy and Water Management for Agriculture in Developing Countries,” January 29–30, in Hyderabad, India.
- Rath, S. 2003. Grape cultivation for exports—Impact on vineyard workers. *Economic and Political Weekly* 38 (5): 480–489.
- Raynolds, L. 2002. Wages for wives: Renegotiating gender and production relations in contract farming in the Dominican Republic. *World Development* 30 (5): 783–798.
- Rosen, S., and J. R. Vincent. 1999. Household water resources and rural productivity in Sub-Saharan Africa: A review of the evidence. Development Discussion Paper 673. Cambridge, Mass., U.S.A.: Harvard Institute for International Development.
- Rossi, A., and Y. Lambrou. 2008. *Gender and equity issues in liquid biofuels production: Minimizing the risks to maximize the opportunities*. Rome: Food and Agriculture Organization of the United Nations.
- Saito, K., H. Mekonnen, and D. Spurling. 1994. Raising the productivity of women farmers in Sub-Saharan Africa. Discussion Paper 230. Washington, D.C.: World Bank.
- Schneider, K., and M. K. Gugerty. 2010. Gender and contract farming in Sub-Saharan Africa—Literature review. Seattle U.S.A.: Evans School of Public Affairs, University of Washington.

- Schutter, O. de. 2009. Large-scale land acquisitions and leases: A set of core principles and measures to address the human rights challenge.
- Singh, S. 2003. Contract farming in India: Impacts on women and child workers. International Institute for Environment and Development Gatekeepers Series 111. <<http://www.iied.org/pubs/pdfs/9281IIED.pdf>>. Accessed July 21, 2010.
- Smaller, C., and H. Mann. 2009. A thirst for distant lands: Foreign investment in agricultural land and water. Winnipeg, Canada: International Institute for Sustainable Development.
- Smith, L. C., U. Ramakrishan, A. Ndjaye, L. Haddad, and R. Martorell. 2002. The importance of women's status for child nutrition in developing countries. Research Report 131. Washington, D.C.: International Food Policy Research Institute.
- Sørensen, A., and D. von Bülow. 1993. Gender and contract farming in Kericho, Kenya. *Review of African Political Economy* 20 (56): 38–52.
- Strickland, R. 2004. To have and to hold: Women's property and inheritance rights in the context of the HIV/AIDS in Sub-Saharan Africa. Working Paper. Washington, D.C.: International Center for Research on Women.
- Tandon, N. 2010. Land investments are wholesale sell-outs for women farmers. Pambazuka News 484.
- Torres, G. 1997. The force of irony: Power in the everyday life of Mexican tomato workers. Oxford, U.K.: Berg.
- Toulmin, C., and J. Quan, eds. 2000. Evolving land rights, policy and tenure in Africa. London: Department of International Development/International Institute for Environment and Development/National Resources Institute.
- Udry, C., J. Hoddinott, H. Alderman, and L. Haddad. 1995. Gender differentials in farm productivity: Implications for household efficiency and agricultural policy. *Food Policy* 20: 407–423.
- Ullenberg, A. 2009. Foreign direct investment (FDI) and land in Madagascar. Global Business Review. Federal Ministry for Economic Cooperation and Development (GTZ). Eschborn, Germany. doi: 10.1177/097215090000100201.
- UN-Energy. 2007. Sustainable bioenergy: A framework for decision makers. <<http://esa.un.org/un-energy/pdf/susdev.Biofuels.FAO.pdf>>. Accessed August 14, 2010.
- UN-Habitat (United Nations Human Settlements Program). 2006. Progress report on removing discrimination against women in respect of property and inheritance rights. Tools on Improving Women's Secure Tenure Series 1, Number 2. Nairobi: UN-Habitat.
- UNICEF (United Nations Children's Fund). 2007. The state of the world's children 2007: Women and children—The double dividend of gender equality. New York.
- United Nations. 2010. Foreign land purchases for agriculture: What impact on sustainable development? Sustainable Development: Innovation Briefs. Issue 8. New York.
- Unnevehr, L., and M. L. Stanford. 1985. Technology and the demand for women's labor in Asian rice farming. In International Rice Research Institute: Women in rice farming: Proceedings of a conference on women in rice farming systems. Aldershot, United Kingdom: Gower Publishers.
- Vermeulen, S., and L. Cotula. 2010. Making the most of agricultural investment: A survey of business models that provide opportunities for smallholders. Rome and London: International Institute for Environment and Development and Food and Agricultural Organization of the United Nations.
- Walker, C. 2002. Land reform in Southern and Eastern Africa: Key issues for strengthening women's access to rights in land. Unpublished manuscript prepared for the Food and Agriculture Organization, Rome.
- White, G., D. Bradley, and A. White. 1972. Drawers of water: Domestic water use in East Africa. Chicago: University of Chicago Press.
- Wiley, L. A. 2010. Whose lands are you giving away Mr. President? PowerPoint presentation at the Annual World Bank Conference on Land Policy and Administration, April 2010, in Washington, D.C..

World Bank. 2001. Engendering development through gender equality in rights, resources, and voice. World Bank Policy Research Report. Management 1, Report 36546-MW. Washington, D.C.: World Bank.

World Bank. 2010. Rising global interest in farmland: Can it yield sustainable and equitable benefits? Report 55600-GLB. Washington, D.C.: World Bank.

World Bank and IFPRI (International Food Policy Research Institute). 2010. Gender and governance in rural services: Insights from India, Ghana, and Ethiopia. Gender and Governance Author Team. Washington, D.C.: IFPRI and World Bank.

World Bank and Malawi. 2007. Malawi poverty and vulnerability assessment (PVA): Investing in our future. Synthesis report: Main findings and recommendations. Poverty Reduction and Economic Management 1, Report 36546-MW. Washington, D.C.: World Bank.

RECENT IFPRI DISCUSSION PAPERS

For earlier discussion papers, please go to <http://www.ifpri.org/publications/results/taxonomy%3A468>. All discussion papers can be downloaded free of charge.

1055. *Impact of global change on large river basins: Example of the Yellow River basin*. Nicola Cenacchi, Zongxue Xu, Wang Yu, Claudia Ringler, and Tingju Zhu, 2010.
1054. *Strategic grain reserves in Ethiopia: Institutional design and operational performance*. Shahidur Rashid and Solomon Lemma, 2010.
1053. *Foreign aid to agriculture: Review of facts and analysis*. Nurul Islam, 2010.
1052. *Impacts of global change on the Nile Basin: Options for hydropolitical reform in Egypt and Ethiopia*. Anja Kristina Martens, 2010.
1051. *Estimating the role of spatial varietal diversity on crop productivity within an abatement framework: The case of banana in Uganda*. Norman Kwikiriza, Enid Katungi, and Daniela Horna, 2010.
1050. *Strengthening innovation capacity of Nigerian agricultural research organizations*. Catherine Ragasa, Suresh Babu, Aliyu Sabi Abdullahi, and Baba Yusuf Abubakar, 2010.
1049. *Asset dynamics in northern Nigeria*. Andrew Dillon and Esteban J. Quiñones, 2010.
1048. *Review of agricultural extension in India: Are farmers' information needs being met?* Claire J. Glendenning, Suresh Babu, and Kwadwo Asenso-Okyere, 2010.
1047. *Recent findings on trade and inequality*. Ann Harrison, John McLaren, and Margaret S. McMillan, 2010.
1046. *An analysis of institutions and policy processes for selected antipoverty interventions in Bangladesh*. Akhter U. Ahmed and Mubina Khondkar, 2010.
1045. *Clustering as an organizational response to capital market inefficiency: Evidence from handloom enterprises in Ethiopia*. Merima Ali, Jack Peerlings, and Xiaobo Zhang, 2010.
1044. *Access to improved water source and satisfaction with services: Evidence from rural Ethiopia*. Degnet Abebaw, Fanaye Tadesse, and Tewodaj Mogues, 2010.
1043. *Valuing the environment in developing countries: Modeling the impact of distrust in public authorities' ability to deliver public services on the citizens' willingness to pay for improved environmental quality*. Ekin Birol and Sukanya Das, 2010.
1042. *Climate change impacts on food security in Sub-Saharan Africa: Insights from comprehensive climate change scenarios*. Claudia Ringler, Tingju Zhu, Ximing Cai, Jawoo Koo, and Dingbao Wang, 2010.
1041. *In-depth assessment of the public agricultural extension system of Ethiopia and recommendations for improvement*. Kristin Davis, Burton Swanson, David Amudavi, Daniel Ayalew Mekonnen, Aaron Flohrs, Jens Riese, Chloe Lamb, and Elias Zerfu, 2010.
1040. *Do geese migrate domestically? Evidence from the Chinese textile and apparel industry*. Ruan Jianqing and Xiaobo Zhang, 2010.
1039. *In pursuit of votes: The capture of the allocation of local public goods by the central state in Ghana*. Leah Horowitz and Nethra Palaniswamy, 2010.
1038. *An econometric investigation of impacts of sustainable land management practices on soil carbon and yield risk: A potential for climate change mitigation*. Edward Kato, Ephraim Nkonya, Frank Place, and Majaliwa Mwanjalolo, 2010.
1037. *Effects of inclusive public agricultural extension service: Results from a policy reform experiment in Western China*. Ruifa Hu, Yaqing Cai, Kevin Z. Chen, Yongwei Cui, and Jikun Huang, 2010.
1036. *Food as the basis for development and security: A strategy for Yemen*. Clemens Breisinger, Olivier Ecker, Jose Funes, and Bingxin Yu, 2010.
1035. *Purpose and potential for commodity exchanges in African economies*. Shahidur Rashid, Alex Winter-Nelson, and Philip Garcia, 2010.
1034. *Investigating economywide and household-level impacts of sector-specific shocks in a poor country: The case of avian flu in Ethiopia*. Gezahegne Ayele, Ekin Birol, Xinshen Diao, Dorene Asare-Marfo, Devesh Roy, and Marcelle Thomas, 2010.

**INTERNATIONAL FOOD POLICY
RESEARCH INSTITUTE**

www.ifpri.org

IFPRI HEADQUARTERS

2033 K Street, NW
Washington, DC 20006-1002 USA
Tel.: +1-202-862-5600
Fax: +1-202-467-4439
Email: ifpri@cgiar.org

IFPRI ADDIS ABABA

P. O. Box 5689
Addis Ababa, Ethiopia
Tel.: + 251 (0) 11-617-2500
Fax: + 251 (0) 11-646-2927
Email: ifpri-addisababa@cgiar.org

IFPRI NEW DELHI

CG Block, NASC Complex, PUSA
New Delhi 110-012 India
Tel.: 91 11 2584-6565
Fax: 91 11 2584-8008 / 2584-6572
Email: ifpri-newdelhi@cgiar.org

IFPRI ACCRA

CSIR Campus
Airport Residential Area, Accra
PMB CT 112 Cantonments,
Accra, Ghana
Tel.: +233 (0) 21 780-716
Fax: +233 (0) 21 784-752