

Mainstreaming Gender in Rural Development Projects in Latin America and the Caribbean

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Technical note 8

Mainstreaming Gender in Rural Development Projects in Latin America and the Caribbean

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I. Introduction

This technical note provides guidance for project managers and policy makers to integrate a gender perspective in rural development projects in Latin America and the Caribbean (LAC). It provides a general context to highlight why it is important to include women in rural development interventions in the region; reviews gender equality challenges that should be taken into account when designing rural development policies or projects; and identifies opportunities and proposes actions to mainstream gender, which project managers can adapt to the type of intervention and the context in which they will operate. The annexes provide a list of important questions to answer during the stages of the project cycle and a list of proposed indicators to monitor and evaluate gender-related results and the project's impact on women and men.

Agriculture is one of the keys to promoting growth and reducing poverty and food insecurity in LAC. It represents almost 8 percent of the region's combined gross domestic product (GDP) and employs 20 percent of the population. It is also the most pro-poor sector, with growth in agriculture more effective than nonagricultural growth at reducing poverty (Dewbre, Cervantes-Godoy, and Sorescu 2011). Almost two-thirds of the region's rural population still lives in poverty, and women are overrepresented among the poor. For that reasons, mainstreaming gender in agriculture not only is essential for the sector's performance but is also essential for poverty reduction, food security, and gender equality.

The public sector can play a critical role in reducing gender gaps. Laws, policies, and projects can lessen gender disparities if the differing rights, resources, and responsibilities of men and women within the household and the community are taken into account, but they can also reinforce them if those differences are ignored (ADB 2013; Quisumbing 2003). Properly conceived and implemented, rural development operations can contribute to gender equality through preventive and proactive actions from the farm to the sector policy level.

In 2010, the IDB approved the Operational Policy on Gender Equality in Development,¹ which aims at:

- Promoting attention to gender equality in Bank projects and analytical work (including gender mainstreaming);
- Seeking opportunities for investments and analytical work that directly encourage gender equality or women's empowerment; and
- Avoiding unintended negative consequences for gender equality in operations. The IDB is the first multilateral Bank to include gender as part of its safeguards review.

The IDB has focused on ensuring that gender-related results are integrated into the results matrices of projects that identify gender equality as a relevant issue. Hence, the gender policy includes an indicator that tracks the inclusion of gender-related results in IDB projects and country strategies.

¹ According to the Bank's Operational Policy on Gender Equality (IDB 2010), "gender mainstreaming is the process that seeks to have gender equality and the needs of women addressed in the design, implementation, monitoring and evaluation of the Bank's interventions, with special emphasis on public and private-sector loan operations."

II. Women in rural development

Women are at the nexus of rural development, food security, and agriculture. They are a large but statistically underestimated contributor to rural life through paid and unpaid employment. Working more hours than men (FAO 1999; Ponce 2012), rural women in the region have an important role in post-harvest and commercial tasks, as well as with livestock and subsistence crops, and in providing for their family's basic needs by collecting water and fuel wood, tending the vegetable garden, and preparing meals.

The region's rural women have less access than men to resources, particularly to productive assets such as land, water, credit and agriculture inputs. This disparity helps account for women's higher levels of poverty and vulnerability (Quisumbing 2013; Deere 2005; FAO 2011b). The latest data available for the region show that women in rural areas are poorer than men, except in Guatemala and El Salvador (figure 1).² The gap is most pronounced in Uruguay and the Dominican Republic, where women are 20 percent and 18 percent poorer than men, respectively.

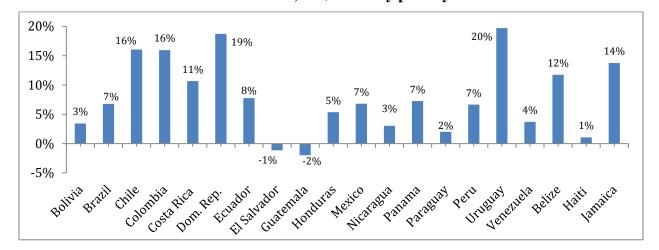
Ownership and control over assets such as land contribute to economic empowerment; they provide direct and indirect benefits to individuals and households, including protection during emergencies and collateral for credit that can be used for investment or consumption (Doss, Grown, and Deere 2008). Men in Guatemala, for example, score higher than women on all indicators of agricultural empowerment (IFPRI 2012).³

² The data from SEDLAC used in many of the figures of this report are the latest available for each country. http://sedlac.econo.unlp.edu.ar/eng/.

³ The five domains of the index of relative empowerment within households are (i) decisions about agricultural production, (ii) access to productive resources and power to make decisions about use of those resources, (iii) control over use of income, (iv) leadership in the community, and (v) use of time.

Figure 1.

Ratio of women in poverty relative to men in rural areas of the region Headcount ratio, US\$2.5-a-day poverty line



Source: Authors' calculation and data from SEDLAC (CEDLAS and World Bank).

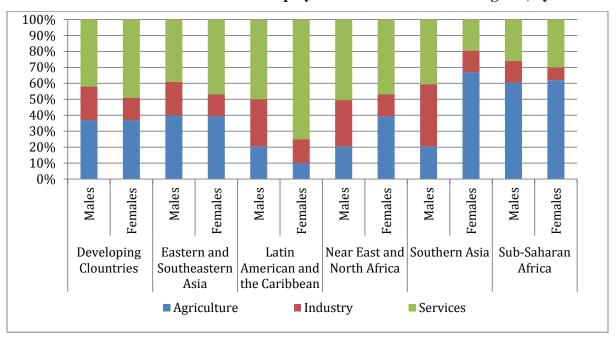
If rural women in developing countries had the same access to productive resources as men, they could increase yields on their farms by 20–30 percent (FAO 2011b; IFPRI 2003). This could raise total agricultural output in developing countries by 2.5–4 percent, which could in turn reduce the number of hungry people in the world by 12–17 percent. If men and women had equal access to productive inputs, gender differences in yields and productivity could disappear (Udry 1996; Udry et al. 1995). Discrimination against women as food producers, therefore, is not only a violation of their rights; it also has social and economic costs because of the considerable productivity losses it entails (De Schutter 2012).

Women's role in the rural development in the region has been increasing in recent years. In fact, women now manage about 30 percent of the agricultural land in LAC (FAO 2011b). However they continue to face inequalities and constraints that often are embedded in social and institutional norms and practices and encoded in legal provisions. In fact, poorly conceived interventions and a paucity of public policies to reduce gender gaps in land inheritance laws, water rights, coverage of extension services, access to productive assets, and subsidies are cutting into the performance of the agricultural sector. Women in LAC have high overall labor-force participation rates, but much lower participation in agriculture, compared with other developing regions. Today, between 10 and 20 percent of the region's economically active women work in agriculture, compared to 54 percent in Sub-Saharan Africa and almost 40 percent in Middle East and North Africa and East Asia and the Pacific (FAO 2011b and figure 2). LAC region has the lowest level of economically active women working in agriculture in the world.

Behind these regional figures on women's employment in agriculture, large differences exist across countries. Their participation in agriculture varies from a low of 10 percent in Central America to 43 percent in Paraguay, 70 percent in Brazil and more than 86 percent in Bolivia (Katz 2003; FAO 2011b).

Official statistics on rural women's participation in agriculture in the region may reflect significant misreporting (IICA 1994; Kleysen and Campillo 1996; Deere 2005; Chiappe 2005; Ballara and Parada 2009; Dirven 2011; FAO, ILO, and IFAD 2010; and part III of this report). The latest available study of the accuracy of official statistics showed that more than 5.5 million rural women from 18 LAC countries were not captured by official household surveys or censuses. The authors of the study estimated that women's participation in agriculture was from two to five times higher than reflected by national employment surveys, as is made clear in section 3.5 on data and measurement.

Figure 2.



Distribution of male and female employment in different world regions, by sector

Permanent and temporary migration of the region's men to the United States is accelerating the feminization of agriculture in the LAC region, particularly in Central America. This change is having important implications for the agricultural sector, as women face specific constraints that prevent them from fully compensating for lost labor due to male migration (Coello et al. 2015). But very little is known in this regard since national statistics and most of current agricultural projects do not capture this transformation. (This topic is discussed further in part III of this note.)

Women tend to be more engaged in raising subsistence crops and men in raising cash or export crops. The standard explanation for this disparity is that women are directly responsible for feeding the family and thus choose to grow food for the household, whereas men are more responsible for providing cash income. It is difficult to know if women grow lower-value subsistence crops because they have different preferences and immediate concerns or because they do not have access to the productive assets needed to grow other types of crops (World Bank, FAO, and IFAD 2009). It is worth noting, however, that in certain countries in Latin

Source FAO 2011b.

America, women have been specializing in segments of the fresh vegetables and flowers value chain such as the packaging or post-processing (Deere 2005; Katz 2003; FAO 2011a).

The growing role of women in agriculture has not been accompanied by the legal reforms and structural investments that could allow women to increase their economic empowerment and agency.⁴ Although women are gradually gaining leadership positions in the sector, until recently they have been operating in a man's world, where gender equality, both as an issue of fairness and of economics, has not been well understood by decision makers.

III. The challenges of gender equality in agriculture—the evidence

This part of the note discusses the areas in which women experience particular inequalities. Opportunities for project managers and policy makers to take action to redress those inequalities in each area are identified in the next section.

The areas covered are:

- Employment and social participation
- Tangible assets (financial, physical, and technical)
- Knowledge and extension services
- Gender sensitivity among counterpart organizations and implementing teams
- Data and measurement.

It is crucial to understand the gaps and the particular constraints of women in the areas of intervention. Even if investments are gender neutral (by offering services or assets to both men and women), they may still exacerbate gender gaps if the distinct initial conditions of men and women are not taken into account in the design of the project or policy. Policy makers and

⁴ Definition 1: "A person's 'agency freedom' refers to what the person is free to do and achieve in pursuit of whatever goals or values he or she regards as important." (Sen 1985: 203). Definition 2: "Agency is about one's ability to make choices— and to transform them into desired actions and outcomes" (World Bank 2011: 6).

project managers have the opportunity to reduce gender inequalities by customizing the design of their interventions.

3.1. Employment and social participation

Rural women in LAC work more than 12 hours per day to contribute to the livelihood of their households (FAO 1999). Women are estimated to put in at least three times more hours than men in unremunerated activities. For example, in Ecuador and in Mexico women dedicate 30 and 44 hours a week, respectively, to unremunerated domestic tasks (Ponce 2012). In Central America, rural women reported working between 14 to 18 hours a day, with about half of that time dedicated to productive activities and the other half to domestic labor.

Women also are more likely than men to work at part-time jobs, in seasonal employment, and in informal arrangements, which pay less and offer fewer benefits but allow the greater flexibility that women require (FAO 2011a). Their lower participation in the formal labor market, meanwhile, limits their communities' (and their own) recognition of their economic contribution. This phenomenon also affects the visibility of women's work in the national accounts (see table 1 and the discussion in the section on data and measurement). Rural women in Bolivia and Peru dedicated more time to agricultural production, animal production, product transformation, and marketing livestock products than did men (Kleysen and Campillo 1996).

Men's and women's contribution to total time worked in and out of the system of national accounts (hours per week)										
	Ecuador (2007)			Mexico (2009)			Guatemala (2006)			
Activity	Men	Wom	Total	Men	Wom	Total	Men	Wom Total	Total	
		en			en		TATCH	en	Total	
Productive time										
in system of	41.72	22.84	32.40	45.17	13.72	28.87	7.23	2.44	4.66	
national accounts										
Productive time										
outside system of	9.99	40.17	24.89	15.73	60.21	38.78	0.65	6.70	3.90	
national accounts										
Total	51.72	63.01	57.29	60.90	73.92	67.65	7.88	9.14	8.56	

Table 1.

Source: Ponce 2012.

The income gap between men and women varies significantly across countries. For example, the income from labor of rural women in Uruguay is 52 percent lower than that of men, whereas in El Salvador it is only 9 percent lower than men's (figure 3). Rural women heads of household have a household per capita income that is 16.5 percent and 15 percent lower than that of male heads of household in Jamaica and Paraguay, respectively, much greater than the disparities in El Salvador and Guatemala (figure 4).

The gender gap in formal and informal wage employment is also large. As noted, women are more likely than men to work in informal jobs. For example, in Honduras and Bolivia, the proportion of women in informal jobs is 29 percent and 24 percent higher, respectively, than the proportion of men in such jobs (figure 5).⁵

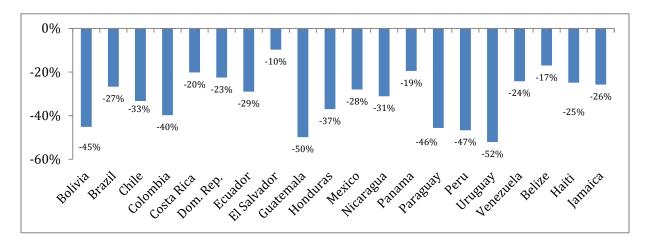
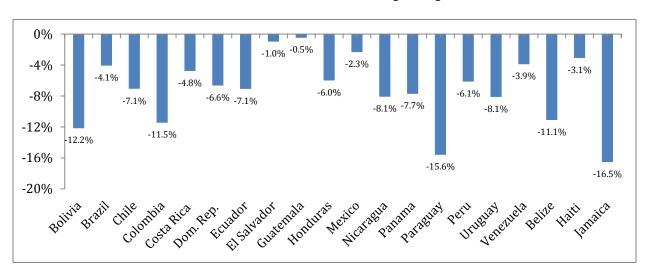


Figure 3. Ratio of women's income relative to men's in rural areas

Source: Authors' calculation and data from SEDLAC (CEDLAS and World Bank).

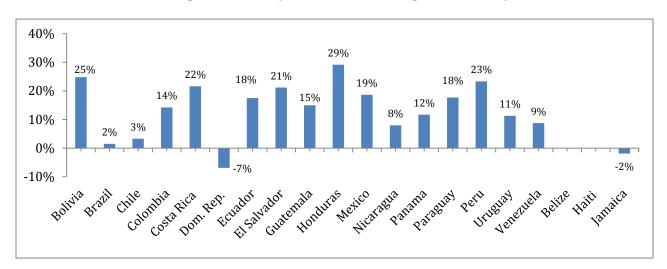
⁵ Men working in informal jobs are usually involved in the limited number of permanent positions and in supervision and management positions.

Figure 4. Ratio of female-headed to male-headed households' per capita income in rural areas



Source: Authors' calculation and data from SEDLAC (CEDLAS and World Bank).

Figure 5. Ratio of women working in informal jobs to men working in informal jobs in rural areas



Source: Authors' calculation and data from SEDLAC (CEDLAS and World Bank).

Note: Informality refers to salaried workers in small firms, nonprofessional workers, selfemployed workers, and zero-income workers.

No data available for Belize and Haiti.

There has been little change in the gender division of labor within the household. As women have increased their participation in on-farm and off-farm productive activities, men have not taken on more domestic and familial tasks. The distinctions between men's and women's tasks in agriculture is complex, varying with the season and with opportunities for external employment. Yet, as sole or principal caregivers, women often face a heavy burden of unremunerated household work—cooking, cleaning, fetching water, collecting firewood, and caring for the very young and the elderly. Seasonality further influences labor allocations. If seasonal demands coincide with migration by men, women's burdens become even heavier, taking a toll on crop production as women allocate their time between food and cash crops (World Bank, FAO, and IFAD 2009).

Uncompensated activities result in lost opportunities for women, who do not have the time to attend classes, obtain training, travel to markets to sell produce, or undertake other activities to improve their earning power (De Schutter 2012; FAO 2011). This lost opportunity is exacerbated by the fact that farms run by female-headed households tend to have less labor available for farm work because they are typically smaller and have fewer working-age adult members (Croppenstedt, Goldstein, and Rosas 2013).

Women's ability to undertake some types of work continue to be constrained by cultural norms that assign different productive tasks to women than to men. Some agricultural tasks, such as tree felling or plowing, require substantial physical strength. If women cannot assume such tasks owing to social norms or physical requirements, they need to procure male labor (FAO 2011b; Croppenstedt, Goldstein, and Rosas 2013). Women's more precarious rights to land, labor, water, and other resources often lead export companies to prefer contracts with men (Croppenstedt, Goldstein, and Rosas 2013). Finally, women face greater safety risks than men with regard to activities that must be performed at night or in insecure areas.

Women are less likely to belong to or lead producer organizations, cooperatives, workers' unions, and out-grower schemes. Women's and men's producers' groups are usually not gender mixed and, when they are, women rarely hold decision-making positions. Women's groups tend to be less aware of information about production or details about interventions and policies. These constraints, combined with others such as lack of time, lower educational levels and low

political and civic representation, decrease women's opportunities to participate in networks that convey important information from the outside world.

The resulting underrepresentation of women in voice and decision-making power can lead to an inefficient allocation of resources and a lower level of project success.

3.2. Tangible assets: financial, physical, and technical

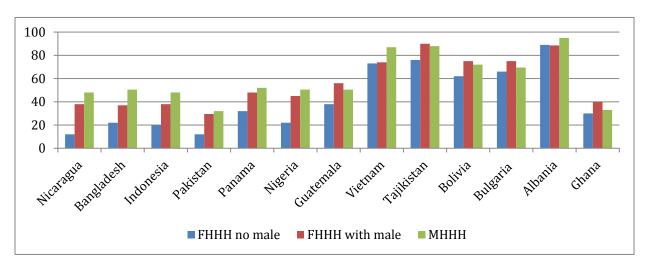
To increase gender equality in rural development, women must gain greater access to tangible assets. Ownership of land and other tangible assets, as well as access to credit and technology are necessary to increase households' resilience to financial, climatic, or food-related shocks (Croppenstedt, Goldstein, and Rosas 2013). The first comprehensive and standardized measure of women's empowerment and inclusion in the agricultural sector in Guatemala revealed that lack of access to credit and lack of decision-making power over income were the most salient attributes of disempowerment of Guatemala's rural women (IFPRI 2012).

The benefits of any project or policy (new inputs, irrigation, etc.) depend on the availability of complementary assets such as land, credit, education, and labor, all of which tend to harder to come by for female-headed households (FAO 2011b)..

3.2.1. Land

The extremely unequal distribution of land is one factor accounting for the high incidence of rural poverty typical among rural women in Latin America. The region has the highest concentration of land ownership in the world (Ferranti et al. 2004), as well as a high degree of gender inequality in ownership. Figure 6 compares the situation in several countries of the region with other selected developing countries. Nicaragua shows the starkest disparity in land ownership between female- and male-headed households.

Figure 6. Household land ownership in rural areas of selected countries, by type of household



Source: Croppenstedt, Goldstein, and Rosas 2013.

Note: FHHH = female-headed households; MHHH = male-headed households.

Between 18 percent and 30 percent of all landholders in LAC are women (table 2). Their plots are smaller in almost all countries for which data are available (FAO 2011b; Parada 2008). The gap can be small in some countries, but in others farms operated by female-headed households are on average less than a tenth the size of farms operated by male-headed households.

Rate and area of land ownership in selected Latin American countries, by gender (area in hectares) Holdings Area Male Female Male Female Chile 1997 78.1 21.9 81.0 19.0 23.8 Chile 2007 76.2 70.1 29.9 Nicaragua 2000 81.9 18.1 89.0 11.0 Ecuador 2002 10.5 74.6 25.4 89.5 Panama 2001 79.9 29.1 93.1 6.9 Peru 1994 79.6 20.4 85.0 15.0 Uruguay 2000 81.7 18.2 84.8 15.1

Table 2.

Source: Parada 2008.

Gender inequality in land ownership is related to male preference in inheritance, male privilege in marriage, male bias in land-distribution programs, as well as gender bias in the land market (figure 7). Inheritance is the primary means by which most women become landowners; men are much more likely than women to acquire land through others means (such as distribution by communities or the state and via the market) (Deere and Léon 2003). Women are less likely than men to be successful buyers owing to a combination of failures in the labor and credit markets (FAO 2011b).

Access to land via state allocation and titling has become more gender-equitable over the past decade as several countries have found ways to include more women in these programs. Nonetheless, a substantial gap persists between women's legal right to own land and actual ownership, a gap that is unlikely to be closed through state action, since agrarian reform programs have been rare in most countries.

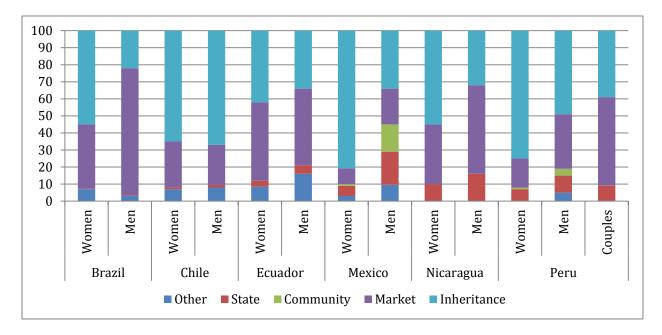


Figure 7. Methods of land acquisition by gender in selected Latin American countries

Source: Deere and Léon 2003; Croppenstedt, Goldstein, and Rosas 2013.

Overall, women have been less likely than men to acquire land from the state, as through land-redistribution programs. In 13 Latin American land-reform programs, the share of women beneficiaries was just 11–12 percent of (Deere and Léon 2003). The most likely explanation is that the beneficiaries targeted by the programs are usually household heads, who, until recently, were identified solely as male. These issues are discussed in greater detail further on in this report.

Land markets rarely favor the rural poor (Carter and Salgado 2001), and they are not gender neutral. Thus it is particularly worrisome that in a several countries the land market is becoming the primary arena through which land may be acquired. Pro-active measures will be necessary to assure a reduction in the gender gap if land banks—with substantial state subsidies for the purchase of land—become the primary means through which poor rural men and women can aspire to acquire land (Deere and Léon 2003).

3.2.2. Irrigation

In most countries in Latin America, women have limited access to water for productive uses, which depresses agricultural productivity. Because women in Latin America are overrepresented in arid and semiarid areas, climate change may have a more adverse effect on them than it does on men (Parada 2008). On the other hand, women's concentration in such areas may allow them to become key players in the implementation of the United Nations Convention to Combat Desertification and Drought.

Access to water and irrigation depends not only on the availability of water, but also on the legal and regulatory systems governing its distribution and use and on the negotiating power of different actors, as well as on the technological and institutional development of irrigation. In the context of a "water market," women may find it hard to negotiate for water rights and defend their interests. Where water and its management are exclusively public or communal, there is still no guarantee that women will have equitable access to water. In most countries in the region, access to water is contingent on land tenure, and as a result, women may find themselves disadvantaged in relation to irrigation (Parada 2008).

3.2.3. Access to credit

Around the world, female smallholders' access to credit is lower than that of male smallholders (FAO 2011b). In rural Ecuador, only 14 percent of the beneficiaries of the Fondo Ecuatoriano Populorum Progresso were women (Deere and Léon 2003). This unequal access to credit may affect economic efficiency. For example, in rural Paraguay, where households in which *men* have inadequate access to credit are 25 percent less economically efficient, a married women's inability to meet her need for capital results in an additional 11 percent drop in economic efficiency (Croppenstedt, Goldstein, and Rosas 2013).

One key constraint for women is their unequal possession of the collateral needed to obtain credit. Women's collateral levels are lower than those of men because they are generally poorer than men, paid less for their labor time, and own fewer assets (FAO 2011b). Other potential issues include lower levels of education, access to financial institutions mobility constraints, and more limited social networks, which may be important for reaching the appropriate person within a bank, for example. Moreover, in cases where credit comes from nonbanking institutions, norms may play a key role in restricting female access (Croppenstedt, Goldstein, and Rosas 2013). For all these reasons, rural women are easy prey to illegal credit at high interest rates (so-called unconventional forms of credit). Women may keep cash at home or accumulate savings in the form of grain or animals—usually small livestock that can be sold in times of need (Parada 2008).

3.2.4. Access to technology

There are gender gaps for a wide range of agricultural inputs and technologies, including machines and tools, improved plant varieties and animal breeds, fertilizers, pest-control measures, and management techniques. Women are much less likely to use purchased inputs such as fertilizers and improved seeds or to make use of mechanical tools and equipment than men; also what is interesting to note is that this gender gap seems to be higher in LAC countries than in the rest of the world (Croppenstedt, Goldstein, and Rosas 2013). The constraints discussed below lead to gender inequalities in access to and adoption of new technologies, and in the use of purchased inputs and existing technologies (FAO 2011b).

Various studies argue that women's lower adoption of technology is due to lower access to land, labor, and credit and lower levels of education, which are related to market failures in these areas (Croppenstedt, Goldstein, and Rosas 2013).

One argument used to explain gender gaps in the use of mechanization, and animal traction in particular, is that women face physical constraints such as limited upper-body strength (Alesina, Giuliano, and Nunn 2011). However, the disparity between male- and female-headed households' in the rate of use of mechanization is higher in middle-income countries where, all else being equal, tractor-driven agriculture is more common, making the argument from physical strength less convincing.

In certain parts of the world, it is a common belief that the very fact of women's participation in plowing and threshing decreases the amount of crop produced. It is possible that norms regarding animal traction have extended to the use of machines. Unquantifiable barriers such as ridicule and intimidation may help explain the lower adoption of technology by women.

Where adoption of improved crops varieties is lower among women, the main factors seem to be overall production constraints rather than norms affecting women's use of new technologies

In many countries women are only half as likely as men to use fertilizers for several possible reasons, including a lower level of financial resources to buy the fertilizer and lack of information, as well as a lack of access to extension services and producer groups (FAO 2011b). Because they generally have less collateral than men, women are more averse to risky investments in new technologies.

Women farmers with smaller holdings suffer disproportionately from the disadvantages of working small plots of land and are likely to face higher unit costs than men in the use of fertilizers (Croppenstedt, Goldstein, and Rosas 2013). Female farmers are more likely to grow staple/food crops on smaller plots than are men, who tend to grow cash crops on larger plots. That a fixed amount of time is needed to procure knowledge about fertilizer and to purchase it (setting aside the significant costs of transporting it) may make fertilizer uneconomical for very small farms. Fertilizer is usually sold in large bags, which are not only heavy and require significant labor to transport but also exclude a significant swath of small farms as a result of credit constraints and lack of storage.

3.3. Knowledge and extension services

Good and timely information on the effectiveness of new technologies and techniques is essential for farmers when deciding whether or not to adopt an innovation, and, by providing such information, agricultural extension services can lead to significant yield increases. Yet extension services for women remain rare; where they are available, women tend to make less use of them than do men.

Agricultural research and development, including extension services, have been dominated by men and have largely ignored women's role in crop production (Jiggins, Samanta, and Olawoye 1997) and failed to recognize their need for technology and information. A study by FAO (2011b) found that only 5 percent of all extension resources were directed at women worldwide, and only 15 percent of extension personnel were female.

Extension service agents tend to approach male farmers more often than female farmers because of the general misconception that women do not farm and that extension advice will eventually "trickle down" from the male household head to other members. Time and transportation constraints, as well as cultural reservations, can hinder women from participating in extension activities, and in some social contexts in which meetings between women and men from outside the immediate family are restricted, a lack of female extension agents effectively bars women from participating (Meinzen-Dick et al. 2010).

Rural women throughout the world, including LAC, tend to have lower levels of literacy and technical knowledge than men. In rural Peru, for example, the women's literacy rate is 25 percent lower than men's (figure 8). But beyond basic skills, education affects agricultural productivity through a number of channels, including limiting the adoption of improved technology and access to credit. Women's lower participation in agricultural development projects also tends to decrease their technical knowledge relative to men, which results in a lessefficient use of resources. They also tend to be less aware of their rights, which hampers their efficient use of such resources.

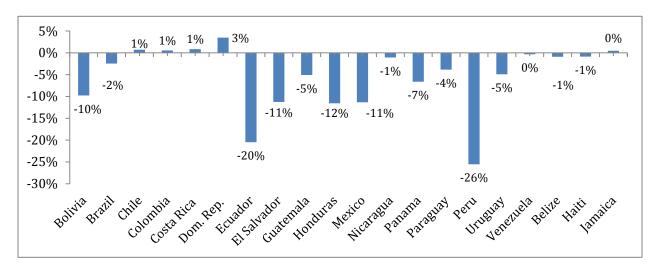


Figure 8. Ratio of women's literacy to men's in rural areas of Latin America

Source: Authors calculation and data from SEDLAC (CEDLAS and World Bank).

The way in which extension services are delivered can also prevent women farmers from receiving information on innovations. Rural women tend to have lower levels of knowledge of Spanish than men, and they also have less available time, which may cause them to miss training opportunities. Or women may exclude themselves from training or other activities because they believe they lack the necessary education to participate. Extension services are often directed toward those farmers who are most likely to adopt modern innovations, for example, farmers with sufficient resources in well-established areas. Since women are less likely to access resources, extension service providers may bypass those (Meinzen-Dick et al. 2010). Rural women also have less access to information and communication technologies, such as Internet, radio, and cell phones, which makes it less likely that they will have information about input availability, access to technologies, prices, and so on.

3.4. Gender sensitivity in counterpart organizations and implementing teams

Most public institutions and implementing agencies do not involve men and women equally in the design, implementation, management, monitoring, and evaluation of policies or projects. Officials and managers may not be aware of existing gender policy or legislation, and implementing teams may lack the capacity or the resources to translate the gender policy into action.

3.5. Data and measurement

The feminization of agriculture in LAC is starting to become visible in statistical terms, but methodological issues in data collection still prevent an accurate measurement of the phenomenon. Very few agricultural surveys differentiate agricultural tasks or crops produced by gender. The paucity of accurate sex-disaggregated agricultural data leads to an underestimation of the evolving role and contribution of women in the agricultural labor force (FAO 2006; FAO 2011b).

Women's participation in agriculture is difficult to measure because agricultural data are usually collected at the farm level, and only the gender of the "principal farmer" is usually reported. In the best cases, agricultural inputs and outputs are listed for each plot, but only rarely are sex-disaggregated roles detailed. Lack of harmonization of the definition and role of the farm's head may lead to important measurement errors between countries and regions.

Most current surveys pay little or no attention to essential matters such as the genderdifferentiation of asset ownership, how assets are acquired, or the person using them (Deere and Léon 2003). Agricultural census data very rarely disaggregate by sex the use of and access to mechanization, fertilizers, and so on.

Time-use data disaggregated by gender are lacking and, when they exist, the distinction between home food production and production for sale is quite blurry and inconsistent across countries and communities. Furthermore, women are generally less likely than men to define their activities as work, and less likely to report themselves as being engaged in agriculture (FAO 2011b).

Available measurement methods and tools lack the ability to capture the medium- to long-term spillover effects of agricultural investment on women, notably in areas such as family nutrition and health, children's educational performance, and food security at the local, regional and national level. Available instruments and evaluation methods generally do not capture the change in so-called soft (or life) skills such as confidence, aspiration, and social norms that a given policy or program may induce. Data collection is usually limited to measuring investment success over a short-term period (usually the life of the project) or quantitative indicators for the sector in which the investment is made. In the case of agriculture, such indicators will, at best, disaggregate by sex statistics on productivity and income. However, if these outcomes are measured without also taking into account women's constraints in the other domains that affect them indirectly—such as size of holdings, access to improved seeds, participation in groups, irrigation, credit, time, and so on-investments in the sector will always be targeted to men. Moreover, when the impact of investments is measured based only on their effects on productivity and income, the total impact is only partially captured; in either case, men will show or obtain better results. The pass-through effects on education, nutrition and other positive aspects of mainstreaming gender in an intervention usually go unnoticed because they are not measured—for lack of adequate data and incentives to capture such data.⁶

Finally the agriculture sector has always focused activities and data collection on production-related activities. Other activities, such as transformation, logistics, or commercialization, lying at the end of the agricultural value chain where women tend to be more concentrated, have received less attention, producing a gap in understanding roles, constraints, and investment needs. Most analyses simply do not try to disentangle gender roles.

⁶ Project managers may not be willing to add a gender indicator that has not previously been used, because they do not want to be the first to take the risk of not reaching the target set by a result indicator. The success of a project is measured by reaching the results that have been adopted at the beginning of the project, and, without previous experience, it is always difficult to guess at results.

The suggested actions that follow are grouped into the same categories as in the previous section on challenges and are expressed as recommendations and examples.

But first, a general recommendation: Many of the proposed actions can be made more effective when preceded by a gender analysis or gender-sensitive social analysis of the context in which the action will be implemented.

A gender analysis is a systematic approach for assessing the differences in men's and women's development needs and preferences and the potential impacts of a development intervention on women and men. It examines men's and women's access to and control over resources, including the division of labor between genders, and their control over the inputs and outputs (benefits) of their labor. Gender analysis takes into account how class, race, ethnicity, and other factors may interact with gender to produce greater inequality (World Bank 2005).

A social assessment allows lenders and donors to understand the gender gap and take action to for closing this gap by designing specific interventions and setting appropriated targets. It should involve examining the project's sociocultural, institutional, historical, and political context and stakeholder views and priorities, including as many relevant stakeholders as feasible in the project cycle. To ensure that social analysis provides a thorough picture, social scientists use five "entry points," or dimensions of inquiry, to structure their work: (i) social diversity and gender, (ii) institutions, rules and behavior, (iii) stakeholders, (iv) participation, and (v) social risks (World Bank 2003).

4.1. Employment and social participation

- Take into account women's time, spatial, and security constraints in designing and executing project activities
 - Plan project activities (meetings, training) at times that are well aligned with women's needs and responsibilities to foster more active participation. In general, it is more difficult and more dangerous for women to leave the household in the evening or at night. Interventions should take into account the local context by, for example, setting up partnerships with local organizations to decrease barriers that may impede women' participation, particularly in areas that are unsafe for women
 - Assess the possibility of offering a financial contribution to encourage women to participate, thereby lowering the opportunity costs of participation (related to family responsibilities), the transportation costs (which can be high in rural areas), or both.
 - Ease women's time constraints by providing affordable childcare or investing in infrastructure (World Bank 2012a).
- Ensure that the promotion of the project and the registration process are gender-sensitive
 - Customize the communication and promotion of the project by taking appropriate steps to inform women in the area of the intervention. This can be undertaken with the support of a gender specialist.
 - Target communication activities to include venues that women producers frequent. Local markets, churches, and civic groups may be better places to reach women than traditional producer groups.
 - Have women communicate with women, as sometimes-invisible social norms may deter women from asking questions of male facilitators, leading to misunderstanding and possibly discouraging women from participating.
 - Conduct project activities and communications in the language or languages that will ensure participation of both women and men..

• Before choosing communication technologies, ensure that certain categories of women are not excluded (for example, those who do not have a mobile phone or Internet access).

> Target women's agricultural activities and set a representative sex-disaggregated target

The usual beneficiaries of agricultural projects are farms or households. Project results could be maximized if individuals were targeted according to their specific roles within the farm and along the value chain.

- Conduct gender-sensitive social analysis to enable project managers and policy makers to target the right people in the household, instead of simply the head of household.
- Target a minimum number of women in farm-field school projects in which a model farmer demonstrates new technology. A project will be gender-equitable if the number of women chosen is representative of women's share in the given activity or crop. If the number of women exceeds their share, the demonstration can contribute to decreasing the gender gap, helping to reduce social norm in the area of intervention.

> Develop and introduce time-saving technologies

- Monitor the supplementary time allocated to the project's activities to ensure that household tasks, such as childcare and food preparation, are not too negatively affected when a new technology is promoted. Interventions can become more effective if they adopt a gender perspective that heightens understanding of the distinct roles, needs, and opportunities, as well as time constraints, of different household members.
- Provide more support to women producers in the technological package
 - When designing vouchers and technological-packages in different interventions, take into account women's particular preferences and conditions—such as time

constraints, lower access to inputs, their need to contract male labor for heavy physical tasks, and participation in different stages of the value chain. Policies and projects should provide more support in areas where women face inequalities, such as labor costs and possession of tools like a tractor (or other types of machinery).

Example: The technological package for the Haiti Projet de Transfert de Technologies aux Producteurs (PTTA, project HA-L1059) was designed to differentiate labor costs for particular crops and activities (planting, harvesting, and so on). The same idea could be used to customize men's and women's technological packages according to their initial inequalities, or at least to permit flexibility in the design of the package so that beneficiaries or local implementation firms can customize support according to men's and women's initial conditions (such as the fact that women are less likely to have collateral).

- Strengthen women's groups and ensure that leadership positions in mixed groups are diversified
 - Support rural women's producer organizations and workers' unions that can play a vital role in negotiating fairer and safer conditions for employment, including better product prices and wages, and in promoting gender equity and decent employment (FAO 2011b).
 - Support a participatory framework to ensure women's involvement in the design of
 policies and to guarantee equal access to economic and natural resources (Parada
 2008). Interventions will never decrease gender gaps unless women participate in
 local decisions to prioritize the community's needs.

Women's representation and voice

Offer women the skills that will allow them to build their social and political capital and increase their confidence and self-esteem (often called "soft" or "life skills"). These types of activities should target women's-only groups where cultural norms tend to be patriarchal. At the same time, it is very important to sensitize men to

women's unequal representation in decision-making positions and to the benefits to men of ensuring social cohesion in the household and the community.

Increase women's empowerment and leadership by providing visibility and social recognition for their activities (whether remunerated or not) on farm, in the household and the community. There is a need for effective empowerment of women among the membership and leadership of producer organizations, cooperatives, workers' unions, and out-grower schemes to ensure that rural women have a stronger voice and decision-making power. Projects' operational policies can create incentives for women's membership in organizations, groups and networks. It may be necessary to set quotas for women in producer organizations or water users' groups to ensure proportional representation and help the community in choosing women. At the same time, it is necessary to promote gender sensitivity within representative bodies by training both men and women representatives, as gender sensitivity does not flow automatically from women's participation.

Promoting increased market opportunities for women's crops

Increase market opportunities for women's crops as a way to improve women's discretionary income and decision-making power. Agricultural project planners are accustomed to assessing market prices and agronomic characteristics when selecting crops to be included in projects—gender characteristics could also be included as a criterion. In many areas, specific crops are female-controlled. Projects focused on cash and major commodity crops generally have low potential to reach women farmers effectively: Even if women are targeted with training and technologies, the household dynamics of income control usually result in male heads of households reaping the financial benefits from big-ticket crops.

Example: In Kenya, Farm Concern International won an award from the World Bank's Consultative Group to Assist the Poor (CGAP) for its work on commercialization of traditional leafy vegetables, which targeted women explicitly by virtue of the vegetables being a female-controlled crop. Later analysis showed that this intervention was effective in increasing consumption of the micronutrient-rich vegetables (Herforth, Jones, and Pinstrup-

Andersen 2012). The project exemplified that capitalizing on the income-generation potential from female-controlled crops was an important factor in motivating women to participate and in improving their access to income.

4.2. Tangible assets: financial, physical, and technical

- Land reforms and gender equality
 - To decrease the gender gap, take into account women's needs and roles when designing different types of land-titling projects (land distribution, property regularization, legal reform, and so on). Particular attention should be paid to gender issues and discriminatory measures toward women in land-reform interventions that aim to regulate land ownership through revision of agrarian laws and civil codes.
 - Seek mandatory joint titling of land to couples and pro-active measures such as priority for female heads of household or quotas for women. Link land registers with the marriage registry to systematically register women and inform them about their rights.

Example: In Colombia, the share of female beneficiaries from agrarian reform increased from 11 to 45 percent after joint titling for land parcels was mandated and enforced (Deere and Léon 2003).

- > Adapt the collateral required for participation in the intervention
 - In matching-grant projects, allow a lower amount of collateral for women. Agricultural projects usually require borrowers to show formal ownership of the assets (generally land or cash) used to match the project grant. In view of the initial financial constraints of women and women's groups, consider adopting a system of point accumulation to prioritize assistance to women and women's groups or relaxing eligibility criteria for agricultural investment or services so as to facilitate women's participation.

Example 1: The World Bank's Global Agriculture and Food Security Program (GAFSP) project in Haiti (RESEPAG II) is lowering the amount that producer groups must match to participate in postharvest projects that mainstream gender and nutrition.

Example 2: The Programa de Apoyos Productivos Agroalimentarios (APAGRO, agrifood support program) project in Nicaragua (project NI-L1020), accepted women into the project on the strength of a letter from the (male) owner specifying that she was the actual producer (i.e., user) of the land.

- Understand women's needs and context when customizing assistance
 - Assess women's access to water and include water availability as a topic in agroecological efforts and interventions. The solutions proposed in a national or regional program may not decrease the gender gap if they are accessible or useful only to men. Providing women a more complete package of support redress the market failure that deprives women of access to required new technology because of their lower access to assets and credit. Providing technology together with inputs and extension is effective (Gilbert, Sakala and Benson 2002).

Example. The positive impact of actions by Chile's National Irrigation Commission to mainstream gender perspectives into irrigation support programs and projects is illustrated in table 3.

Type of irrigation	1997	2007
Traditional	11.7	20.7
Mechanical	13.7	26.7
Micro	14.0	24.4

Table 3.Women's share of irrigated area in Chile, by type of irrigation, 1997 and 2007

Source: Parada 2008.

All

11.8

21.3

4.3. Knowledge and extension services

- Ensure that extension services and research are gender-sensitive, and recruit women into model farming programs
 - Identify gender differences in local knowledge and recognize the contribution women can make in the area of traditional farming practices, where they are frequently involved. Knowledge differences can reveal important opportunities for women to improve crops or to select crops and varieties. The effectiveness of any process of technology dissemination or extension also depends on a good understanding of knowledge differences between women and men (World Bank, FAO, and IFAD 2009).
 - Include the gender perspective in agriculture research centers and in ministries of agriculture to better understand and address the constraints facing women. In some contexts, it may be culturally more acceptable for female farmers to interact with female extension agents, but in many cases properly trained male extension agents may be able to provide equally effective services. Whether male or female, extension agents must be sensitive to the realities, needs, and constraints of rural women. Extension services for women must consider all of the roles that women play. Presently, women's needs as farmers are often neglected in favor of programs aimed at household responsibilities. Extension systems must be more innovative and flexible to account for social and cultural obstacles and for time and mobility constraints. Farmer field schools, in which a model farmer demonstrates recently adopted technology to the community, have proven an effective way of empowering and transferring knowledge to women farmers (FAO 2001b).

Example: In the Sustainable Agricultural Productivity Development Program in Nicaragua (NI-L1067), 30 percent of the demonstration farms established must be headed by women and 30 percent of the adaptive research projects and technology validations in integrated demonstration farms must include a gender perspective. The pool of eligible women was increased through an alternative solution to the traditional property-titling criterion required for participation.

- Give women scientists, research managers, lecturers, and professors a chance to participate in the project. They can provide different insights and perspectives, help research agencies better address the challenges faced by women farmers, and serve as role models for students and other women in agriculture (FAO 2011b).
- Customize training to take into account women roles, needs, and constraints
 - Undertake an initial assessment to understand how women allocate their labor time, to which type of crop, and to which tasks within the agricultural value chain. Agricultural policy makers and project managers tend not to consider all types of agricultural activities, yet all are relevant to the overall objectives of the sector.
 - Design training courses to build relevant skills and reduce knowledge gaps between men and women. In areas where women have seen chronic underinvestment, special emphasis should be given to extension services and vocational training. Targeting of beneficiaries should be conditional on individual roles rather than on decisions to participate made at the household level. Activities in interventions should be determined in a participatory manner, with local stakeholders taking into account women's time, transport, and economic constraints. Financial stipends for attendance may encourage women to participate by reducing the costs they would otherwise face (for example, in terms of transportation and household tasks forgone).
 - Offer an example to beneficiaries by including women in high-level responsibility positions on the teams that finance, manage, implement, and execute the project. Projects aimed at increasing institutional capacity should reserve a specific number or share of training and educational grants for women.

Example: In the Sustainable Agricultural Productivity Development Program in Nicaragua (NI-L1067), a target of 30 percent of the masters and postgraduate degrees financed by the project was established for women.

4.4. Institutional capacity and awareness

- "Engender" the human resources of counterparts
 - Allocate specific resources for gender purposes—for example, to provide gender training for agencies responsible for implementing projects and delivering services. Involve the women's ministry in project steering committees. Hire project-based gender specialists. Grassroots organizations should be able to come up with candidates who have a good understanding of the local context.
 - Monitor the budget to ensure that gender-related actions included in the project design are in fact funded and implemented (during project execution gender mainstreaming is frequently seen as difficult or of low importance.

Example: In Haiti's Programme d'Intensification Agricole d'Ennery Quinte (PIA-EQ, Ennery Quinte agricultural intensification project, 2390/GR-HA), preference was given to an implementing agency that proposed allocating part of the budget to gender activities. However, when the assessment was done during the course of the project none of the budget had actually been spent on the latter activities.

- Incorporate a "gender lens" in the various project stages
 - Recruit a gender specialist to help project managers or policy makers minimize any negative impact of the project on women or men (or particular groups of women or men) and maximize the gender equality benefits of the intervention.

4.5. Data and measurement

- *Expand agricultural data collection and research*
 - Data collection should aim to narrow gender disparities at all levels and to measure women's role at the macro-level through policies, legislation, and regulations; at the meso-level through social, political, and economic institutions of government; and at the micro-level through measures aimed at farms, households, and individuals

(Parada 2008).Measure all the steps across the value chain to better understand the value added by each type of actor—from the seed to the consumer's plate. Doing so will make it possible to design projects that respond to the specific constraints faced by different actors, constraints that may be blocking better agricultural outcomes and greater food security. Data collection and research are sorely needed to understand the spillover effects of mainstreaming gender in agriculture and rural development across subsectors.

Example: Adding to an agricultural census a specific question to capture women's productive roles raised the report of rural women's participation in productive activities from 29 percent to 47 percent in Colombia and from 8 percent to 25 percent in Costa Rica (Chiappe 2005).

- Improve data collection to measure individuals' roles and responsibilities
 - Ensure that women farmers are interviewed and that their voices are heard. In order to avoid bias introduced by social norms, expectations, and stereotypes about gender, include women among interviewers and supervisors to facilitate responses to culturally sensitive questions that may be difficult to deliver to members of the opposite sex. In addition, the interview protocol or questionnaire should make it possible to identify everyone involved in agricultural production, whether as owners, managers, workers, or decision makers. Allowing a range of answers can demonstrate how gender patterns, roles, and responsibilities in agriculture are changing in Latin America (Parada 2008). Finally, collecting data about institutions related to agricultural production and marketing would reveal the gender-based constraints and opportunities they present (Doss 2013).

Annex 1. Key questions for policy makers and team leaders to ensure gender-mainstreaming throughout the project cycle

Women play a critical and potentially transformative role in agricultural growth in developing countries, but they face persistent obstacles and economic constraints that limit their participation in agriculture.

Asking the following questions will enable project team leaders and policy makers to better mainstream gender in their project.

General

Is there an existing gender analysis of the sector in which the intervention will occur? Have gender studies been done on the sector or community in which the project will be implemented? Where do the greatest gender inequalities lie in the affected region?

How can the project promote gender equality and decrease gender gaps in the beneficiary communities?

What are the differences in gender roles in the sector within the region, and country?

Could existing barriers for women or women-headed households limit their participation in the project?

Do women face particular constraints in accessing inputs, credit, and use of land?

Are gender data available that could inform the project?

Does the central and local government have institutional mechanisms to complement the genderequality goals of the project?

How are women represented on the project team and in the area of intervention? Do women occupy leadership positions?

Is the project targeting a minimum number of women leaders to lessen the existing gender gap?

Employment and social participation

Do women face additional constraints in participating in project activities? Are the opportunity costs of participation different for men and women?

Should the project compensate the opportunity cost of women's participation by providing a

stipend to ensure their participation?

Are the activities (meetings, training sessions, and so on) consistent with women's time constraints?

Are there safety and security issues in the area or at certain times that might impede women's participation in project activities?

Are there mechanisms or services, such as childcare, that the project could put in place to facilitate the participation of women?

Do women already have a voice in their community, or does that voice need to be promoted by a project activity? Will the project promote women's voice and leadership in the community?

Can the project promote women's agricultural activities to increase their market share or their price premium?

Through what channels do women in the communities typically obtain important community information?

Is the project communicating directly with women? Should it communicate with women in a particular way in order to decrease asymmetry of information between men and women?

Will women and men in married households be reached and invited individually about project activities?

Will the language to be used in training sessions be understood by the women in the community? If the project is relying on information and communication technologies, do women have the same access as men to the technologies that will be used?

Does it make sense for the project to target women and men or only head of households?

Will time-saving technologies be introduced to ease women's time constraints?

Can the project help women's organizations and unions to promote gender equality and better working conditions in the sector?

Will the project promote trade in subsectors where women are involved?

Do women occupy different agro-ecological zones than men?

Tangible assets: financial, physical, and technical

Will the project conditions exclude de facto most women by requiring land title, a minimum amount of cultivated land, or a previous experience with a specific type of crop? Is the required

collateral too high to ensure women's participation?

Is the land-reform component of the project designed in such a way as to decrease gender inequality in land ownership?

Will the technological package to be offered to beneficiaries help reduce gender gaps?

Do women have the same amount of irrigated land as men?

Knowledge and extension services

Have training courses been designed to build relevant skills and reduce knowledge gaps between men and women?

Is the educational level of women different from men in the project communities?

Are women being targeted as promoters of the technologies supported by the project?

Will the project involve local gender specialists from research institutions or civil society?

Will the project raise awareness of gender issues in the training offered to extension agents?

Institutional capacity and awareness

Does the project allocate specific resources to mainstream gender?

Will a gender specialist be recruited to mainstream gender in the project's various components?

Does the implementation agency plan include a gender component?

Data and measurement

Are sex-disaggregated data being collected during the phases of the project?

Is the intervention able to measure impact on gender equality?

Will the data to be collected contribute to a better understanding of gender specificities in the sector and the country?

Does the survey design make it possible to capture data that will measure the project's contributions to the sector under analysis?

Annex 2. List of indicators for gender mainstreaming

The indicators below are organized according to different areas covered in the note: agricultural services in general; research, extension and modernization services; land titling and registration; and infrastructure and market access. Each section contains proposes output and outcome indicators. The minimum target for women should correspond to the official statistics or to a gender assessment. Depending on the available information, the indicator could be the levels, shares, or gender ratio that will contribute to close the gender gap

1. General indicators for all agricultural services projects

Output indicators

Diagnostics: % of time spent daily on paid and unpaid activities (disaggregated between the domestic work and other economic activity), by sex and age

Diagnostics: Time spent and/or distance walked by household members to collect water, disaggregated by sex and age

% beneficiaries integrated in new or strengthened organizations, cooperatives, and groups, by sex

% beneficiaries in leadership positions in new or strengthened organizations, cooperatives, and groups, by sex

% beneficiaries who received capacity building, training, or technical assistance, by sex

Average hours of training received by men and by women

and percent training on conservation-oriented practices targeted to men and/or to women

Support payments for farmers: % beneficiaries who received direct financial support (matching

grant, conditional cash transfer, vouchers, other)--individuals, couples, households, by sex

Outcome indicators

% increase in agricultural producers' adoption of environmentally friendly technologies, by sex

% population that benefited from the project out of total eligible population (for women: # beneficiary women/total eligible women), by sex

% change in population owning or co-owning equipment and tools for production, processing, commercialization, and other services associated with natural resources, and % by sex

% increase in men's and women's productivity resulting from project

% increase in men's and women's revenue resulting from project

% increase in men and women with jobs in the formal sector resulting from project

2. Research, extension, and modernization services

Output indicators

Share (%) of new technologies developed with emphasis on tasks and crops or livestock managed by men and by women

Share (%) of extension services targeted to activities managed by men and by women

% extension agents in project who were trained on gender issues, by sex

% farmers who have access to extension services and/or received visit from extension agent, by sex

% farmers who have access to mechanized tools, by sex

% farmers who have access to high-quality, locally adapted seed, by sex

% farmers participating in community seed bank management, by sex

and % persons actively involved in participatory research and innovation (disaggregated by education level and/or sector), by sex

Outcome indicators

% increase in farmers adopting a new technology and/or new farming practices, by sex

% increase in farmers satisfied with access to and quality of extension services, by sex

% increase in farmers with access to productive resources (specify which resources), by sex

3. Land titling and registration

Output indicators

% increase in new titles registered, by sex

% beneficiaries obtaining land title through project out of total population without land title, by sex

% beneficiaries who benefit from natural resource concessions, by sex

% disputes related to land solved in favor of men and women

Outcome indicators

% change in ownership of agricultural land and property, including homes and home gardens, by sex

4. Infrastructure and market access

Output indicators

% improvement in access to water for agricultural and domestic use (connection and/or satisfaction levels), by sex

% landless farmers with access to water from irrigation schemes, by sex

% participation in infrastructure planning and decision making regarding levels of local contribution, by sex

% members of operations and management committees of irrigation projects, by sex

% beneficiaries actively participating in water user groups, by sex

Changes in % of women in local maintenance crews, before and after project activities

and % of newly registered businesses started per year, by sex

% business owners rating their business as successful, by sex

% business men and women using computers and Internet, and frequency of use

% farmers involved in organic, fair trade, or certified marketing schemes, by sex

Share (%) of beneficiaries trained and participating in user groups and operations and management committees (including bank account signatory roles), by sex

% increase in beneficiary population with access to services and facilities (irrigation, electrification, water supply, and sanitation), by sex

Outcome indicators

% beneficiaries that rated their access to water for agricultural and domestic use as having improved during the period covered by the project, by sex

% changes in access to markets for producers as a result of infrastructure development (increase in production sold in the market; reduction in travel costs; improved consumption patterns), by sex

% increase in producers' profits from market sales traceable to project investment (infrastructure, marketing, value added, etc.), by sex

Source: ADB 2013; World Bank 2005; World Bank 2012b; World Bank, FAO, and IFAD 2009.

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