



LIVESTOCK-CLIMATE CHANGE CRSP

Report for Livestock Climate Change CRSP Gender Analyses of the LCC CRSP Portfolio

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(photo by Sarah McKune)

Introduction

The Livestock Climate Change Collaborative Research Support Program (LCC CRSP), funded by USAID, supports integrated research that helps small-scale livestock holders adapt to environmental and health impacts of climate change in Sub-Saharan Africa and South Asia (<http://lcccrsp.org>). The LCC CRSP programs address one or more of these four themes:

- Climate extremes and long-term change (Nepal, Senegal, Ethiopia)
- Animal Health: disease distribution and resiliency (Tanzania, Mongolia, Nepal)
- Ecosystem Health: resiliency of socio-ecological systems (Mali, Kenya, Asia)
- Pro-Poor Value Chains: market access and reliability (Kenya, Ethiopia, Mali)

This report examines the LCC CRSP projects efforts to integrate gender, using USAID directives and frames them within the new Women's Empowerment in Agriculture Index (WEAI). Although the Index is new, it provides a framework for LCC CRSP researchers to assess their gender inclusion plans in the multi-year projects. The Principal Investigators (PIs) of current and soon-to-be funded projects will thus have the opportunity to make such adjustments as necessary to align with USAID guidance on gender inclusion.

Livestock are often a key asset for rural livelihoods (IFAD, 2009) so that it is important to understand livestock use by men and women, the various gender roles as relates to livestock production and management, and the economic and cultural roles of livestock within households and within communities (IFAD, 2009). Although gender roles in livestock production vary, and although livestock management varies as well, it should be acknowledged that women's participation has often been overlooked, ignored and underestimated. Women themselves may underestimate their roles, especially when asked, "Are you a livestock producer?"

Women play a critical but often overlooked role in livestock production throughout the LCC CRSP countries. For many years, in fact, women's roles in agricultural production were – and still are – overlooked. In livestock production, this diminution of women's engagement in productive activities means they do not learn about best practices, are not included in technical training, and are blocked from increasing their incomes and the familie's nutrition. For example, in Tanzania and Kenya, research has shown that livestock are an important and accessible asset for women, that livestock production and marketing is a promising pathway out of poverty for women and by having a strategic focus on women, poverty reduction can be achieved (J. Njuki et al., Gender and Livestock Value Chains in Kenya and Tanzania, ILRI, 2011).

Women's access to livestock production is limited by gender-based constraints. Clear patterns of livestock ownerships, differentiated by sex, is usually the case. Women often do not own the means of production – the livestock, land, water, feed resources – yet they are involved in and might control production. Research shows that women can gain access to livestock by purchase, although for smaller stock. Births of chickens, sheep or goats into existing herds are the main way women acquire more livestock. Research also has shown there is inequitable gender participation in commercialized livestock markets, especially for cattle, sheep and goats. Women usually sell livestock products or livestock inputs (e.g., fodder) at the farm gate; very few deliver their products to traders or city markets. They might use middlemen to sell their products.

With respect to climate change, women might also be differentially impacted by climate change and the necessary adaptations that will need to be made. These climate change impacts – economic, environmental, social and health – are more likely to be felt by women. Changes in crop patterns and crop types, changes in

location and quality of water sources, changes in migration patterns – all of these might increase women’s workload and impact the health and nutrition of the household. Men will possibly migrate, leading to changes in women’s responsibilities. People might resort to environmentally degrading practices, such as deforestation, overgrazing and overuse of water points. Women, too, need access to information about climate change predictions and associated risks. As incomes decrease and savings/assets diminish, women might be forced into early marriage or prostitution. Gender-based violence becomes more common with social and economic stress. Thus, for the LCC CRSP, it is clearly important to understand the potential impact of climate change on the populations that the projects are working with and to especially assess the interface between gender, community-based natural resources management, and crop and livestock management.

Feed the Future and the LCC-CRSP

USAID launched the Global Hunger and Food Security Initiative a few short years ago, has brought increased attention to improving agriculture sector growth. Feed the Future (FtF) investments include expanding agricultural productivity, expanding markets and trade, and increasing the economic resilience of vulnerable rural communities. Twenty countries are the focus of FtF efforts although many more countries in the USAID portfolio participate in the global effort to improve agricultural productivity.

Almost all of the focus countries developed Implementation Plans (IP) in 2010; most of those countries now have FY 2011-2015 Multi-Year Strategy (MYS) documents. Both the FtF IPs and the MYS represent whole-of-government approaches to addressing food security. Feed the Future supports the inclusion of poorer and more economically vulnerable populations in agricultural projects. Because women play a prominent role in agricultural production and are often disproportionately economically constrained, women’s empowerment in agriculture has become a main feature of Feed the Future efforts. A recent report (September 2011) emphasizes the importance of promoting women’s leadership in agriculture, fostering policy changes that increase women’s land ownership and strengthen their access to financial services and encouraging female farmers to adopt new agricultural technology and invest in improved nutrition outcomes.

Because all of the LCC CRSP multi-year projects and most of the seed grant projects are in Feed the Future countries, project designs had to include one or more of the FtF objectives or areas related to agricultural production, specifically livestock production. However, in some countries the research is not directly on livestock production, i.e., a focus on animal feeds rather than animals. In all LCC CRSP projects, attention to climate change and to gender inclusion is also expected. The section below briefly summarizes the strategies for each of the FtF countries where the LCC CRSP projects are working, with specific attention to livestock, climate change, and gender.

Nepal

USAID/Nepal’s Feed the Future strategy focuses on four areas:

- Improving agricultural productivity
- Increasing income
- Improving nutrition
- Expanding trade and markets

Despite more than 80 percent of its population working in the agricultural sector, Nepal is a food deficit country. By improving agriculture, USAID believes incomes and nutrition can be improved. Using a value chain approach, USAID Nepal projects have engaged in horticulture, fisheries, and the production of coffee, tea, non-timber forest products, spices, livestock and poultry. They have also developed input supply and output market service providers. Climate change will impact agricultural production in Nepal and producers are being assisted with the introduction of improved varieties of crops and livestock, as well as better climatic forecasting.

With respect to women and vulnerable populations, USAID expresses concern about the poor nutrition of women and children in Nepal. Women are the last to eat and the first to give up food. Their labor burden is excessively high. Women have only 42 percent literacy. Female-friendly farming practices are needed as well as interventions that address positive behavior change in order for women, youth, and other vulnerable groups (ethnic, linguistic, and religious) to have more equitable treatment.

Ethiopia

USAID/Ethiopia's approach to improving agricultural production is highly nuanced, reflecting the complexities of agriculture in Ethiopia. The USG divides Ethiopia into three sections: Productive Ethiopia, Pastoral Ethiopia, and Hungry Ethiopia with different strategies for each of the target groups. Across all target areas, the four core areas of investment are:

- Increasing agricultural and livestock production through increased production of staple foods and support to viable pastoralism;
- Reducing transaction costs and increased market linkages in agricultural and livestock commodity chains;
- Increasing purchasing power of poor consumers through promotion of alternative livelihoods;
- Using food efficiently with improved access to balanced diets, potable water and sanitation, proper food storage and processing, health care and other services.

For Pastoral Ethiopia, the focus will be on improved animal health, emergency de-stocking, natural resources management, and nutrition education. Climate change will have differential impacts on production due to varied topographies, but in any case a stronger focus on watershed management will be needed. Cutting across the Three Ethiopias approach, USAID prioritizes and targets underserved groups, i.e., the ultra-poor and women. This is in support of the government's framework for reducing gender inequalities. Despite this support and recognition of women's important roles in agricultural production, women's needs are still not adequately addressed. Priorities will be given to interventions that include women's participation as beneficiaries, as agents of change, and as project partners.

Kenya

The Feed the Future strategy for Kenya consists of six intermediate results:

- Improving agricultural enabling environment
- Expanding markets and trade
- Improving productivity of selected value chains

- Improving access to diverse and quality foods
- Improving nutrition-related behaviors
- Improving utilization of mother and child nutrition and nutrition services

USAID/Kenya focuses its agricultural support to improving over 25 commodity value chains including eight staple crops, 11 horticultural commodities and five livestock categories. In particular, some of the staple crop and livestock value chain programs focus on improving household nutritional status in marginal areas and pastoral areas with high malnutrition rates. Technical approaches to improve adaptive capacity to climate change focus on agronomic practices. Further analyses of climate risk and vulnerability are planned. The high poverty zones that include pastoralists will add programs on markets and incentives to adopt improved practices. Improved agriculture sector growth must be matched with improved market access and trade, and increases in employment generation and opportunities.

Women are critical to food production in Kenya, providing 80 percent of the labor and managing 44 percent of smallholder households. All of the value chain projects target women as producers, managers, employers, micro-entrepreneurs, and wage earners. In the livestock sector, women primarily manage small stock. Efforts to make improvements in the informal milk chain, for example, and technologies that reduce women's labor burden will reduce gender inequalities in agricultural production in Kenya. Youth who are currently unemployed and disenfranchised could significantly improve productivity as well.

Mali

USAID/Mali's core investment areas under Feed the Future are:

- Increasing agricultural productivity – support to applied research, irrigation sector development, natural resource management, and capacity building
- Reducing trade and transport barriers – value chain development and regional trade promotion
- Promoting sound market-based principles for agriculture – policy development capacity and support to CAADP
- Accelerating participation of the very poor in rural growth

With 80 percent of the population depending on agriculture in a mostly arid country, it is not surprising to note that Mali has high rates of malnutrition. Diets are cereals-based, low in protein and lack diversity. Gender dynamics and skewed income distribution within households contributes to the nutritional problems, especially of children. Priority value chains are millet and sorghum, rice, and livestock. The attention to the cattle and small ruminants' livestock value chains is noteworthy. Improving livestock productivity will improve nutrition, incomes, and will have the potential to even increase income for women owners of small stock.

Women have little control over household income and limited access to technology, information, land, equipment, education, and credit. Gender roles require women to be responsible for domestic care and agriculture production. Women are acknowledged to have some control over lowland rice production, small ruminants, grain processing, and artisanal food production. These can provide entry points to improve women's access to credit, technical and business skills training, and nutritional information. USAID/Mali integrates gender into all its value chain work and is working on specific tools that will enable partners to integrate gender into their work. With respect to livestock, women are heavily involved in small ruminant production and it is easy for them to get into production. They need information on improved feeding

practices, management practices and marketing. Additional earned income could go towards improving the nutrition of their families.

Senegal

USAID/Senegal's FtF main focus is to reduce poverty and undernutrition. Agriculture accounts for 14 percent of GDP with 68 percent of the labor force engaged in agricultural production. Lack of a long term vision and lack of investment have characterized Senegal's agricultural sector for the past twenty years. This has slowly changed, with country investments to increase rice, maize, millet and fisheries as well as rural infrastructures. The FtF plans are to address the persistent moderate, chronic undernutrition (anemia and protein/micronutrient deficiencies) which particularly affects children under five. The numerous challenges (e.g., cereal based diets, hungry periods, poor hygienic practices) will be addressed in multiple ways. USAID/Senegal chooses to not focus on livestock or dairy value chains although recognizing that livestock play a key role in agricultural production. Instead, the focus on maize as a feed crop is expected to help reduce livestock production costs. Cheap, subsidized dry milk and lack of cold storage and an energy infrastructure are major impediments to improved dairy production which require attention by the government of Senegal.

The core investment areas in the FtF multiyear strategy are:

- Increasing agriculture productivity and market linkages
- Bringing to national scale essential nutrition actions and integrate nutrition into the agriculture value chain approach
- Enhancing policy environment
- Improving rural infrastructure and access to finance
- Increasing institutional and human resource capacities

Gender is a cross cutting issue and it is important to understand and integrate gender issues into the agricultural production and nutrition programs. Women work at all levels in agriculture, from the field to post harvest processing and marketing. Women do not have access to important assets, however, and have difficulty obtaining training, technology, information, and credit.

Why Gender Integration in the LCC CRSP?

The directives and mandates from USAID regarding gender all have the same messages: women must be included, gender analyses are required to ensure that design and implementation includes women, many tools are available, and all activities will report on gender impacts. A new Women's Empowerment in Agriculture Index highlights important domains for women's empowerment and provides guidance as to what will be important indicators to measure project progress. In general, there are three approaches to integrating gender:

- Transforming gender relations to promote equality
- Overcoming gender-related barriers by shifting the balance of power, the distribution of resources or the unequal allocation of duties between men and women in the household or the community.
- Making it easier for women to fulfill the duties ascribed to them by their gender roles.

In deciding which approach to use, the local context must be taken into consideration and, in fact, an approach that achieves one objective at one site might not achieve that objective at another site. Labor-saving technologies are a good example. Most rural women bear a double burden of household and reproductive chores (cooking, childcare, fetching water) and production chores (planting, weeding, caring for livestock). Labor saving devices would seem to be a good idea but have had uneven success rates. Improved cooking stoves don't always provide the type of heat preferred for cooking. A forage chopper run from a bicycle might not be accessible to women because they are not allowed to ride bicycles, can't afford to buy a bicycle, or can't afford to pay for the chopper's services if someone else owns it. Cleaning or milling equipment that requires cash payment may make access unaffordable whereas if women can exchange the use of the equipment for something else, such as their labor, they might use the equipment. However such an exchange is unlikely to work if their workloads are too high and they are not able to exchange labor. A new borehole closer to the village might negatively impact women's access to their social networks or may get used by large livestock owners and not be accessible to women for domestic purposes. Care must be taken when deciding on which gender integration approach to use.

Brief review of current LCC projects gender efforts

All of the seed grant project reports and new multi-year project design documents were reviewed. The emphasis on gender inclusion in the LCC CRSP RFPs meant that each project paid some attention to gender but to a greater or lesser extent, i.e., for the most part, the LCC CRSP projects have included gender in some way into their projects. An earlier gender review of the GL-CRSP offered the following questions as a means for assessing gender inclusion (Rubin 2005):

1. Were gender issues taken into account during project design and implementation?
2. Is sex disaggregated data collected?
3. Are gender components in all activities?

All of the LCC CRSP projects could answer Questions 1 and 2 affirmatively. Each project had one or more activities that included gender, e.g., identifying women as a category for training.

Domain	Gender constraints	Gender opportunities	Examples of livestock specific issues
Production	Lack of decision-making about production	Determine under what conditions women could make production decisions.	What are women's roles in livestock production?
Resources	Lack of access to assets, information, technology, and credit Possible negative impacts of climate change on availability of resources	Understand the causes of lack of access and control of resources in order to design interventions that will work for women	Is there a species or product difference between women and men? If women produce small stock, milk, or eggs, address their needs accordingly.
Income	Lack of control of income or inability to earn own income	Determine women's roles in production and where they could control the income; provide access to markets; understand how women prefer to earn and save	Women often produce and sell for the farm gate, e.g., milk, eggs. Would access to a producers' organization, cooperative, or regional market improve their income earning abilities?
Leadership	Fear of public speaking, not belonging to a group	Work with existing groups; form new groups; provide opportunities for all women to have a voice	Do women belong to livestock producer groups, do they need their own group, are they in leadership positions?
Time	Excessive workload	Find labor-saving technologies that will work for women	Labor-saving technologies are needed that include: improved feeds, forage choppers and creative ways that allow women to access these technologies.

Table 1. Determining gender issues relevant for livestock project design and implementation

Nevertheless, the *devil is in the details* in some of the targeted gender components. This goes back to the assumptions that are made about gender research by non-experts.

- For projects that are highly biophysical in research approach with limited people-level contact, the gender components are weaker. Climate change will impact vegetation and water sources which will, in turn, impact herd movements and land use. People move (or not) with those herds and make decisions about mobility, marketing, health care, and food security. These people are impacted by the research and should be included; activities to include them should be gender sensitive.
- For projects that intend to include female researchers, it is unclear whether the project team fully understands that simply being female is not a substitute for having gender expertise. A female GIS specialist is probably not any more aware of gender dynamics in a rural village than a male GIS specialist, nor would it be fair to assume that a female scientist would “handle” all of the gender work for the project.
- For projects that want to intentionally recruit males and females equally and even recognize that training might be needed to bring females qualifications up to the level that is needed by the project, there may yet be other issues that would prevent this from happening. These would be related to cultural and social norms in the community or area and should be carefully (and candidly) discussed with knowledgeable local people.
- For projects that intend to recruit females for further training, e.g., for graduate school or even scientific exchange visits, there may be institutional barriers limiting women’s full participation which have to be understood.
- For projects that intend to distribute mobile phones to households or put mobile phones in the hands of women, recent research is indicating that this approach may not work for several reasons. One phone per household generally means that a male in the household gets the phone. One phone per woman generally means that a male gets the phone. Also, women seem to not be comfortable using text messaging for receiving and sending information (USAID, 2012). These data are relatively new and fly in the face of conventional wisdom about mobile technologies. It would be worth checking with the users to see if the phones are being used as intended.
- For most projects, people level data collection is being disaggregated by sex. All projects should be sure they are doing this. Some gender analysis is being done to modify training approaches so as to be sure to include women. Positive affirmative action, as mentioned above, is being practiced for capacity building and participation as researchers. How will the team know if their gender efforts are being successful? Are they able to modify their activities if gender differences appear? The gender indicators that they select should go beyond process and output indicators.

Conclusion and next steps

As noted above, almost all the current and completed projects have included gender into their project designs. Still, project designs and activities may have to be re-thought immediately or as soon as monitoring and evaluation shows that there is an issue. If women are not attending meetings, why not? If women are not participating in research activities, e.g., participatory research or community design sessions, why not? Is the research that is being done important to women, does it meet their needs?

Recommendations for LCC CRSP to build on niches and incorporate gender equity concerns

1. Assist the project teams in developing gender indicators by utilizing either gender specialists or engaging other team members (including local staff) and monitor these carefully
2. Assist the project teams to carefully review planned gender inclusion activities to ensure that results are positive and not harmful to women participants
3. Address gender differences in capabilities to cope with climate change adaptation
4. Provide training, as needed, to build capacity to deliver gender interventions
5. Develop a gender, livestock and climate change database (some of it is started here) that researchers can access
6. Offer a joint conference that engages gender, livestock and climate change researchers globally to exchange ideas and research results.

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