Gender & Community Development

Experiences of GL CRSP projects in Ethiopia, Ghana, Kazakhstan
Kenya and Kyrgyzstan
GENDER & COMMUNITY DEVELOPMENT

Experiences of GL CRSP projects
in Ethiopia, Ghana, Kazakhstan,
Kenya and Kyrgyzstan

By Deborah Rubin
About the Author. Deborah Rubin is a cultural anthropologist and co-owner of Cultural Practice, LLC, a woman-owned small business applying knowledge of cultural systems to the practice of international development in Bethesda, MD (USA). Email: drubin@culturalpractice.com.

Photos by Susan L. Johnson.
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ADDRESSING GENDER DISPARITIES IN ECONOMIC GROWTH, PARTICULARLY IN AGRICULTURE, IS NOT A NEW GOAL FOR DEVELOPMENT INTERVENTIONS, BUT AFTER A HIATUS IN THE 1990S IT HAS RECEIVED NEW ATTENTION IN THE PAST DECADE. FOUR RESEARCH AND OUTREACH PROJECTS OF THE GLOBAL LIVESTOCK COLLABORATIVE RESEARCH SUPPORT PROGRAM WORKING IN ETHIOPIA, GHANA, KAZAKHSTAN, KENYA, AND KYRGYZSTAN IMPLEMENTED ACTIVITIES WHICH BOTH RAISED WOMEN'S INCOMES AND INCREASED WOMEN'S INCOME-earning OPPORTUNITIES AND CONTRIBUTED TO LARGER GOALS OF COMMUNITY DEVELOPMENT AND WELL-BEING. THE PROJECTS FACILITATED INCREASED WOMEN'S PARTICIPATION INTO DIFFERENT TYPES OF GROUP-BASED ACTIVITIES, WITH CONSEQUENCES FOR IMPROVED INCOMES, HEALTH, AND EDUCATION OUTCOMES. THE CAPACITY-BUILDING PROCESS USED IN THESE DIFFERENT PROJECTS AND SOME OF THE RESULTS THEY ACHIEVED ARE DESCRIBED IN THIS REPORT.
“Women are the backbone of farming in Africa, just as they are in most of the world...so we need a good collaboration to make sure that women are equal partners with men farmers...to enable farmers who are women to make a contribution that will transform agriculture...”

Hillary Rodham Clinton, June 2009
US Secretary of State
The goal of development is to improve people's well-being. How best to achieve that goal and for whom are the questions that drive development research and impact assessments. For decades, the dominant narrative on "how" to do development has emphasized targeting of individuals, with increased income a common indicator of a successful effort. The "for whom" in agricultural development has predominantly emphasized men (World Bank 2009), particularly men who, as heads of households, were presumed to act on behalf of the entire household (Quisumbing and Maluccio 2000).

Broader and more flexible approaches to wealth have resulted in attention to a wide range of assets beyond income as important measures of economic level (Doss, Grown, and Deere 2008). A renewed appreciation for outcome indicators related to health and well-being has led to greater interest in the gender aspects of intrahousehold resource allocations. Earlier studies that challenged the idea of a unitary household in which income and assets where shared equitably among members (Dwyer and Bruce 1988; Haddad, Hoddinott, and Alderman 1997; Quisumbing 2003) and which have illuminated the productive contributions of women in rural economies (Boserup 1970; Warren and Bourque 1989) are being
revisited, updated, and reanalyzed as part of donors' efforts to find more effective pathways to development.

There are increasing indications that the targets of development are no longer considered to be men only, and that a willingness to work with people in groups is growing. The dramatic impact of the food price crisis of 2008 on poor women and their children drew attention to the inadequacies of continuing to implement so-called "gender-blind" agricultural development programs. The World Bank's "Agriculture for Development" (2008) report reviewing the sector was quickly supplemented by a multi-donor supported Sourcebook of over 700 pages in 2009 *Gender in Agriculture.* USAID's consultation document on its evolving global hunger and food security strategy explicitly notes the critical role of women as "key contributors of agriculture-led growth" and the need to link them with greater opportunities in market value chains (USAID 2009:8). USAID has also recently released a handbook on "Promoting Gender Equitable Opportunities in Agricultural Value Chains" (Rubin, Manfre, and Nichols Barrett 2009). Efforts to identify and address gender-differentiated needs and opportunities are steadily increasing.

For over ten years, researchers supported by USAID's Global Livestock Collaborative Research Support Program (GL CRSP) have contributed to this larger body of knowledge. This report reviews the experiences of four projects that have used a variety of mechanisms including both working with individuals and collective action approaches as pathways towards community development with a special focus on reducing gender inequalities by targeting women. The four projects include (in alphabetical order) the Enhancing Child Nutrition through Animal Source Food Management (ENAM) project in Ghana, the Improving Pastoral Risk Management on East African Rangelands (PARIMA) project in Ethiopia, the Sustainable Management of Rural Watersheds (SUMAWA) Project in Kenya, and the Developing Institutions and Capacity for Sheep and Fiber

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1The full project name was “Sustainable Management of Rural Watersheds (SUMAWA) Project: Biophysical, Livestock, and Human Interactions in the Njoro River Watershed.”
Marketing in Central Asia (WOOL) project in Kazakhstan and Kyrgyzstan. Other projects have also worked with women and communities and many aspects of their work are reported on in the GL CRSP Final Report and associated documents.

The results of these four projects in supporting women's income-earning efforts and their contributions to community development are in part a product of the GL CRSP's efforts to take gender issues more seriously in its research and outreach activities. CRSP-supported research is always tied to the thematic direction of the larger program, and not all university-based researchers see gender inequalities as relevant to their research topics. The GL CRSP succeeded in helping its researchers see how to incorporate attention to gender as part and parcel of its research efforts. In 2003, three of these projects were the subject of a desktop review of the key gender aspects of the research which identified ways for researchers to enhance gender analysis in their activities, and provided suggestions for gender-sensitive indicators (Rubin 2003). The assessment resulted in the GL CRSP holding two half-day trainings on gender analysis for most of the researchers (including those with the fourth project covered here, ENAM) at a program conference in Dublin, Ireland in 2005. The GL CRSP also refined both its requests for proposals and its proposal review procedures to ask that gender issues be addressed. Proposals and project reviews such as the external evaluations conducted periodically during the research periods asked such questions as whether gender issues were taken into account during project design and implementation, whether sex-disaggregated data was being collected and analyzed, and if gender components were being incorporated into all activities, among others.5

2Component activities in Kazakhstan and Kyrgyzstan were labeled the "WOOL" project. It was not an acronym.
3The author had the opportunity to visit each of these projects during the past five years (ENAM in 2007, SUMAWA in 2006, and WOOL in 2006) as part of the GL CRSP's External Evaluation Panel and to visit PARIMA in 2010. A focus of these visits was a discussion about the gender components of the work with the researchers.
4The efforts made by the GL CRSP to integrate gender into its activities are also described in the program final report to USAID (2010).
5See the External Evaluation Panel Scopes of Work for the WOOL and ENAM projects.
Each of these projects, even those that started with only a vague notion of how gender inequalities were relevant to their research platforms, ended up by making a positive impact on women in the communities in which they worked, and all appear to have changed or have the potential to change both men's and women's attitudes towards women's role in community development. Although the topics of gender and community development were addressed in different ways and had different priorities in each of the projects, there are useful lessons to be learned from all the activities.

Each of the projects had to address the following issues in implementing their activities:

• Identifying local needs and priorities and how these differed for men and for women

Each of the projects spent time learning about the specific needs of the men and women in the communities. Some, like the PARIMA and SUMAWA project, utilized techniques drawn from participatory development including rapid community appraisals and focus groups to identify and articulate community priorities (Coppock et al. 2007; Tezera et al. 2008a; Lelo et al. 2005; Jenkins et al. 2004). ENAM and WOOL collected information about the localities and community needs, meeting with and interviewing a wide range of stakeholders, and working separately with women in the community (Marquis et al. 2008, 2009; Brent 2007).

• Cooperating with the local government authorities and other NGO groups working on related issues

The projects and the communities they worked with all benefited by forming partnerships with local authorities and other NGOs working in their localities. ENAM had excellent support from the Ministry of Agriculture, including two seconded employees, and formed alliances with several local NGOs and local banks to establish a strong foundation for the sustainability of their microcredit and nutrition education programs (Marquis et al. 2009). PARIMA also worked in partnership with the Ministry of Cooperative Development and other NGOs to spread
information about their savings and credit group formation and operation process (Tezera et al. 2008a). SUMAWA's community-based efforts to improve watershed management were closely tied to the Government of Kenya's efforts to create Water Resources User Associations and to have communities establish development action plans. More recently, it established partnerships with local finance institutions as part of its effort to locally manufacture and sell its BioSand Filters (BSF) in the community (GL CRSP 2009). Both the Department of Fisheries and the Kenya Wildlife Service were partners in the project. Finally, the WOOL project built partnerships with local research institutions and created networks between producers, processors, buyers, and exporters of fiber and fiber products (Brent 2007).

- Managing women's and men's participation and attitudes about participation in the activities.

The process of engaging and sustaining women's participation in development activities is extremely difficult. The first hurdle is recognizing that women should be involved. The hard work begins, however, in designing ways to encourage women's participation in the face of resistance from their spouses or other men in their households and in the community, finding time within already overcrowded workdays spent in household care and maintenance, food cultivation and preparation, and fuel and water collection. Recent research on gender and collective action reveals that men and women differ in their abilities to take part in group efforts in three fundamental ways. First, they have different initial levels of assets, they face different types of vulnerabilities, and they are differently treated by local norms, legal structures, and expressions of power. Second, men and women are not able to take action in the same ways, as a result not only of personal preferences, but also as a result of the resources they have available and the norms for social bargaining. Third, men and women have different patterns of interaction, in both collective and individual situations (Pandolfelli et al. 2008).

Each of the projects described here sought to ease women's participation in their activities by first explaining the purpose of the project to the
GLOBAL LIVESTOCK CRSP

community at large and its leaders and gaining their agreement. The programs took into account the "initial conditions" (Pandolfelli et al. 2008) of men and women. They also tried (if not always successfully) to consider women's schedules and limitations on their mobility in the design of their programs.

• Building on local skills and culturally appropriate enterprises
The communities in which the projects operated were all relatively poor. Participants' literacy and numeracy skills ranged from none to primary school level, with only a few individuals having more education. All of the income-generating or microcredit schemes encouraged participants to start with enterprises or activities that were known and had a market in the community, e.g., calf fattening in Ethiopia, yarn spinning and felt handicrafts in Central Asia, and vegetable and fish marketing in Ghana. In all three of these situations, the GL CRSP project provided training and capacity building programs on topics from nutrition education, business development, marketing skills, and literacy (Tezera et al. 2008a; Marquis et al. 2009; Brent 2007).

• Measuring the extent of the changes
Since 2004, the ENAM microcredit and nutrition project in Ghana, now partnering with Freedom From Hunger-Ghana, managed to "increase program membership in the Women's Credit Savings Associations (WCSA) from 184 to 2,257 women, and drastically increase the outreach of the program from six to 32 communities through the establishment of 96 WCSA" in part as a result of supplementary funding from USAID's Women in Development (WID) Office. The funds also allowed ENAM to partner with Heifer Project International and develop a program on poultry and egg production that has increased participants monthly income by 83% (Colecraft et al. 2010). The PARIMA project microcredit activities have reached an estimated 2,300 group members in southern Ethiopia (of which three-quarters are women) since 2000 (Tezera et al. 2008a). Although CRSP activities closed down in each country in 2009, the microcredit activities are continuing to thrive and to expand through
members' and local partners' efforts, including government offices, rural banks, and NGOs.

The SUMAWA project component on the impacts of the BioSand Filters reports that tests show the filters are successful in removing bacteria and viruses and reduced child diarrhea disease by 54% in the 59 trial households (Jenkins et al. 2010). The WOOL project outreach activities were the smallest in scope, with a pilot project on handspun yarn production working with six women in one Kazakh village and a marketing network established among twelve women's groups in Kazakhstan and Kyrgyzstan (Brent 2007).

While all projects made progress in reaching women and improving their health and/or livelihoods, the projects were uneven both in the scale of their efforts and in their ability to measure and report on the gender-relevant changes occurring under their programs. The three to five year scale of most of the programs meant that the processes were just taking off as they were ending. In some cases, coordination has been handed off to other local groups, either with the government or with local NGOs.

Considerations for the future would be to require each research and outreach activity to design and monitor gender-sensitive on a range of variables including not only income but also the purchase and management of new assets, support to children's education, entrepreneurial activity, and expansion of social networks.
The Enhancing Child Nutrition through Animal Source Food Management (ENAM) Project started operating in Ghana in 2004, following a planning grant and assessment process that identified research sites in consultation with the Ministry of Agriculture. The team also conducted preliminary data collection on the characteristics of the communities, women caregivers, and their children. The assessment data, including a qualitative review of different microcredit approaches (see Marquis et al. 2008), were used to prepare the final research proposal for the project activities that started in 2005. The critical obstacle to improving the feeding of animal source foods to young children was found to be poverty, and project staff determined that starting a microcredit program to support income-generating activities would best achieve their objectives of getting more animal source foods into young children's diets. The project activities targeted groups of mothers with small children (ages 2 to 5) in six communities across three different ecological regions of Ghana: near Tamale in the north, near Techiman in the center, and near Winneba in the south. During the main period of the project, a total of 180 women participated in the microcredit groups. This figure has increased dramatically over the last year as the program has been handed over to a local NGO and rural banks for implementation.
The objective in the ENAM project was also to raise incomes through new or expanding enterprises, particularly for women with small children. Project participants reported using their loans to engage in a range of economic enterprises including fish smoking and processing, and retail trade of various agricultural crops, including groundnuts, sweet potatoes, coco yams, peppers, and dried tomatoes. Others started businesses to dye cloth and shops in which they sold local vegetables, household items, and canned foods; some sell used clothes and/or prepared food, including the local fermented maize dish (kenkey). Some women’s enterprises were associated with animal source foods, such as trading in fresh and smoked fish and raising poultry, while others were not. Research concluded that several factors including the geographic/ecological region in which the women lived and the extent to which microcredit programs included nutrition education played a large part in influencing the level of dietary diversity from animal source foods in their young children’s diets (Christian et al. 2008; Homiah et al. 2009).

The researchers report both qualitative and quantitative measures of improvements to children’s nutrition as a result of the increased income and nutrition education. Some women reported feeling more comfortable about spending money on their children’s food because they know their businesses can survive. Other women report that the nutrition education classes helped them to overcome traditional taboos against giving food from animal sources, such as meat and eggs. They also cite a decrease in the illnesses their children experience (Anyidoho et al. 2009). These perceptions have been supported by quantitative findings. Comparisons between the households participating in the microcredit and nutrition programs and non-participating households revealed that as a result of participating in the project, the participating women knew more about nutrition and that they fed their children a more diverse array of nutritious foods (Sakyi-Dawson et al. 2009) including more animal source foods (Lartey et al. 2009).
One of the intriguing findings emerging from the ENAM work is the way that the women’s entrepreneurial activities are both influenced by the support of their spouses and have an impact on the household dynamics. Research by Linda Hagen et al. (2010) suggests that men who are household heads influence how their wives use their loans. Although only preliminary, the research conducted on ninety-one men found a positive association between higher levels of children’s intake of animal source foods and the perception that the women’s microcredit efforts were making a contribution to family expenses. The implication seems to be that wives whose husbands support their entrepreneurial work feel free to use some of their income to feed their children more nutritious foods. They conclude that working with men to ensure that they have a good understanding and appreciation of women's contributions to the household can be an avenue towards greater women's empowerment.

Equally interesting is the observation that some women with successful enterprises are now getting their husbands to work with them. The longer-term dynamics of the impact of women's nutrition and business education and their successful participation in microcredit loan programs deserves follow-up investigation. Case studies of some of the women entrepreneurs is underway; formal evaluation and additional analysis of the characteristics of both successful and unsuccessful entrepreneurs would also be valuable (see also Anyidoho et al. 2009).

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6 Personal communication from Susan Johnson, Associate Director, GL CRSP, on observations during her visit to the ENAM project sites in January 2010. Some of these findings will be documented in a film by Robert Caputo.
The Improving Pastoral Risk Management on East African Rangelands (PARIMA) Project began its research activities in 1997 in southern Ethiopia and northern Kenya, investigating ways to improve the diversity of livelihood options for agro-pastoralists to protect themselves more effectively from the risks of disease, drought, environmental degradation, growing population pressure, ethnic conflict, and market failures. The outreach component that is the focus of this report ran from 2000-2009. Building on results from a sequence of participatory appraisals and action research methods that highlighted the felt needs of the local communities, the PARIMA field staff and researchers initiated saving and credit groups across southern Ethiopia (see also Tezera et al. 2008a). In total, 59 groups were established. The large majority (75%) of members have been women, as part of either women-only or mixed groups of men and women.

In the outreach program, with supplemental funding from USAID/Ethiopia, PARIMA first conducted community participatory assessments together with local officials and community participants, which, although initially intended as a training exercise, soon evolved into a chance to raise awareness, to identify community needs and to create action plans to achieve them. The sessions revealed that one of the top community goals was to find a way to diversify their incomes. From this beginning, participatory assessments were held in twelve communities, all of which
led to the formation of savings and credit (S&C) groups. Other communities later volunteered for abbreviated participatory assessments with similar results.\(^7\) In most cases, the S&C groups were seen as a mechanism for achieving both the community and the individual goals identified through the assessment process (Desta et al. 2006; Tezera et al. 2008a; Coppock et al. 2009).

As reported elsewhere (Coppock et al. 2007), the idea of the S&C groups diffused to other pastoralist communities across southern Ethiopia. The model was said to be culturally appropriate, similar in structure and operation to local mutual assistance networks. The report also notes that these new groups have been attracting participants who are among the poorest in the community, including some women.

By September 2009, at the end of the GL CRSP funding for the PARIMA project, the fifty-nine S&C groups that had benefited from the project's guidance had become 37 registered savings and credit cooperatives managed under the local government cooperative office (Tezera et al. 2009).

**Learning about Women's Health Needs.**\(^8\) One of the community development activities supported by PARIMA with supplementary funds from USAID's Office of Women in Development involved a series of participatory assessments to learn about the health needs of women on the Borana Plateau. A field assessment and analysis was conducted in six locations in three districts in southern Ethiopia where PARIMA had already been supporting the formation and operation of microcredit groups. In some places, these groups were comprised entirely of one ethnic group; others were made up of several different ethnicities. For this exercise, the

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\(^7\)Two additional papers detailing the PRA process are forthcoming from Coppock and from Tezera et al.

\(^8\)Information in this section draws on both published and unpublished reports prepared by the PARIMA as well as field notes from travel to Ethiopia in January 2010.
During participatory assessments, community groups prioritized a number of health problems including those specific to women. The groups developed action plans to improve maternal health through additional training, field visits to specialized women's health hospitals and provision of medical kits.

participants were almost entirely women (Tezera and Desta 2008; Tezera, Desta, and Coppock 2008).

This pilot project that started in 2007 had four goals that were addressed in a sequential manner. Two data collection efforts were started. First, the project sought to understand what health problems women experienced and which they thought were most important. Second, the project conducted a mapping exercise to establish a baseline of the health services available, their locations, and their costs (Tezera and Desta 2008; Tezera, Desta, and Coppock 2008).

To start the process, the PARIMA team first conducted a training in participatory rapid appraisal (PRA) techniques with local government
health officers and women's affairs officers. Once trained, these officers, together with the PARIMA team, conducted the PRA activities in the villages. Using the findings from these participatory assessments, the second phase of the activity involved working with the community groups to develop an action plan to address their health needs and to help them find ways to meet those needs (Tezera and Desta 2008; Tezera, Desta, and Coppock 2008). Some of the participants were also taken on field visits to Addis Ababa to view specialized women's health hospitals and to learn about opportunities for treatment.

Initial findings of the health services mapping revealed that most people relied on traditional medicines and prayer. Government clinics and private health services were only available in those villages near towns such as Moyale, near the Kenyan border, and Yabello, along the main north-south road. Group participants reported that private services, particularly those on the Kenyan side of the border, were better than those provided by the government, but much more expensive (Tezera and Desta 2008; Tezera, Desta, and Coppock 2008).

The priority health concerns for the groups included diarrheal and other gastro-intestinal diseases from the lack of clean and safe drinking water as well as high levels of malaria. The groups also prioritized health problems more specific to women, and these included sexually transmitted infections and pregnancy-related conditions such as bleeding, still births, fistulas, and other problems resulting in maternal mortality (Tezera and Desta 2008; Tezera, Desta, and Coppock 2008).

Following the PRA activities and discussions, each of the six communities developed a community action plan identifying how they would begin to address the problems that they had agreed upon. To improve maternal health, the groups agreed to provide additional training to traditional birth attendants and to help provision them with first-aid and delivery kits (Tezera and Desta 2008; Tezera, Desta, and Coppock 2008).
PARIMA also arranged for thirty women, including traditional birth attendants and other representatives from the women's groups, and some of the local government health and women's affairs officers to participate in a field trip to Addis Ababa to visit the fistula hospital there. Obstetric fistulas are caused by the pressure of a baby during delivery that cuts off blood supply to internal tissues. The loss of blood causes the tissues to die, making a hole between the bladder, rectum, and/or vagina, which allows urine and/or feces to pass. Women with this condition may be divorced by their husbands, ostracized by their families, and made to live alone. Fistulas may also be the result of forcible sexual intercourse (see http://www.fistulafoundation.org).

The field trip to the hospital revealed to the women that a relatively simple surgery can resolve the fistula problem. The Addis Ababa Fistula Hospital provides both surgery and long-term care, offering training in skills that will help them earn an income after their return home. The women who visited the hospital were urged to identify women with fistula problems and to report them to the local government health offices so that they can be brought to the hospital for treatment at no expense to the woman or her family. In one of the communities, four women have been identified and three have already received treatment. One of the women explained, "We have saved the lives of these people. We are searching for more patients."

Some of the traditional birth attendants who participated in the trip explained that they had learned a great deal. They now knew that if the later stage of labor is lasting more than one and a half hours, it is likely that the baby is in danger and they should take the mother to a hospital.
THE SUMAWA PROJECT

The Sustainable Management of Watersheds (SUMAWA) Project started operating in Kenya in 2002. It was a multi-disciplinary research effort focusing on the River Njoro watershed, involving collaboration between scientists at Egerton and Moi Universities in Kenya and three US universities. SUMAWA sought to improve understanding of the biophysical and human factors governing watershed health in the River Njoro catchment area and, through a range of outreach and stakeholder engagement activities, to improve watershed health and contribute to livelihood security and sustainability for those living in the watershed. The long-term goal of SUMAWA was to build an overall conceptual model of watershed processes and response, synthesizing outputs from each of its components to improve local and regional watershed management decision-making. Key achievements included developing a Watershed Evaluation and Planning (WEAP) tool (Jenkins et al. 2005) and developing BioSand filters to improve the quality of drinking water in households (Jenkins 2010).

Engaging Women in Community Associations. The Njoro watershed has been experiencing environmental degradation for many years as increasing population pressure and expanding agricultural and other industries change patterns of land use and contribute to poor water
quality, deforestation, and erosion. In addition to documenting the extent of these changes, an important part of the SUMAWA project agenda was to mobilize community members and other stakeholders to "reverse negative trends and enhance the integrity and sustainability of water and environmental resources" in the watershed (Lelo et al. 2005: 14-1).

As a first step, the project worked with stakeholders in the watershed in conducting an assessment to document existing patterns of land use and decision-making over resource use. The research identified that men and women had different responsibilities and different levels of authority over various livelihood activities. Adult women held responsibilities for collecting water and firewood for domestic use from the river and its banks; adult men herded cattle and were involved in irrigation. Younger men were often involved in extractive efforts such as collecting water or timber for sale, cutting fodder, or digging sand for construction (Lelo et al. 2005: 14-5).

Building on the findings of the assessment, and to achieve the goal of community involvement in resource conservation, the project supported a series of opportunities to allow government and community representatives to engage in dialogue and a planning process for community development. The process was complicated by the multiplicity of ethnic groups and their differing livelihood activities in the watershed and the commonality of their negative attitudes towards conservation (Lelo et al. 2005: 14-4). A participatory approach helped communities to develop Community Watershed Action Plans which identified local goals. The activity took steps to ensure that an adequate number of and appropriate type of women's representatives attended and had an opportunity to contribute to the proceedings.

**Developing Household BioSand Filters.** The community assessments and water quality testing in the watershed revealed that the multiple uses of the river, including bathing, laundry, and watering of livestock, among others, were contributing to high levels of pollution and water-borne diseases such as typhoid and bacteria causing diarrheal diseases (Jenkins
et al. 2004). In addition to working on environmental actions to protect the river, SUMAWA researcher Marion Jenkins and colleagues started to design and test a household level solution to water quality: BioSand Filters. With supplementary funding from USAID's Office of Women in Development, the team was able to conduct a household trial of the filter prototypes and to test their efficacy in real-world conditions. Sixty households were initially enrolled in the six-month trials to monitor the filters' performance in capturing bacteria and virus and in the levels of diarrheal disease among children and adults in the household.

At the end of the six months, the filters were found to have performed well, with only minor functional problems. The households reported satisfaction with the filters. Monitoring showed that the prevalence of diarrhea among small children decreased (Jenkins and Twiari 2010).

Particularly exciting is that a partnership with Colorado State University MBA students has led to the formation of a new business, Running Water International - Maji Salama (Safe Water), registered in Kenya, to manufacture and sell the BioSand Filters. A business plan has been prepared and investors have been identified. A partner facility to produce the filters has also been found and orders are being taken, including from another GL CRSP project that has been able to continue its work with new funding from other sources (Jenkins et al. 2010).

Women and children are those most likely to be responsible for drawing water from the river and thus puts them at higher risk of exposure to river-borne disease, the local manufacture of these filters promises to have a greater impact on women's and children's health.
THE WOOL PROJECT

The Developing Institutions and Capacity for Sheep and Fiber Marketing in Central Asia (WOOL) project ran from 2003-2006 and involved research on topics related to wool and cashmere production, processing, and marketing in Kazakhstan and Kyrgyzstan as part of the larger goal to establish a functioning value chain for fiber and fiber products. Several different components made up the larger project. One component of the project sought to learn more about the production side and investigated socio-economic characteristics of sheep and goat producers and the costs involved in fiber production in southeastern Kazakhstan. A cost-benefit analysis of cooperative transport and marketing was also conducted. Another focus assisted producers, buyers, and processes in improving wool marketing standards and the quality of the wool marketed. It included collecting and testing the quality of over 8,000 wool and cashmere samples as well as training of actors along the value chain in sorting and grading.

The larger project in Kazakhstan included Uzumbulak village in the Raimbek region of southeastern Kazakhstan. The researchers identified the village with assistance from Kazakh researchers already working there, who introduced them to local residents. Brent notes that a lack

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9The WOOL project was an outgrowth of three assessment team projects that had operated during 2002.
of local knowledge about the characteristics of wool producers, the wool marketing system, and the quality of the local wool was initially a challenge for the research team (Brent 2007:21). By conducting surveys and key informant interviews, however, the researchers began to develop relationships with stakeholders along the wool value chain and to exchange ideas about development possibilities, many of which emerged from the community members themselves: “The innovative concepts of improving wool marketing, including the production of handspun yarn, emerged from the synergies of local and external ideas, capacities, interests and resources in the course of interaction between the researchers and the community members” (Brent 2007:22).

**Developing Income-Generating Activities for Women.** The roles and responsibilities of men and women in rural Kazakhstan are distinct. Soviet-era principles of gender equality continue in the constitution, but the realities of the market transition with its dissolution of state farms and state social services have created an increasingly sex-segregated labor force (Somach and Rubin 2010; Brent 2007). On the farms, men historically worked with the livestock and women were responsible for processing livestock products, including both food and fiber. During and after the transition, women have again turned to handicraft production as a way to earn income (Brent 2007: 29-30).

In collecting information about the wool marketing system, researchers had recognized that men typically controlled the income from raw wool sales. Other income-earning opportunities would be needed to benefit women more directly. One option was to build on women’s skills at working with the raw wool and turning it into finished products. Women had access to higher quality Merino wool from the local cooperative farm and the project was able to help them obtain their initial equipment of spindles, spinning wheels, carding combs, dyes, and soap. The GL CRSP also provided training on using the equipment and on the operation of the American yarn market (Brent 2007: 39-40).
Brent, the researcher, functioned as a facilitator, carrying finished yarn back to the United States for examination by yarn marketers and relaying the comments back to the women who produced it. Problems with uneven dying and overspinning were identified by the vendors and discussed with the artisans. Since the project ended in 2006, continued marketing was to be arranged through the Central Asian Craft Support Association, an NGO based in Bishkek, Kyrgyzstan that operates throughout the five Central Asian countries of Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, and Uzbekistan.

Although the women involved in this pilot activity had not yet begun to earn money from their spinning work, Brent noted that the husbands of the ethnic Oralman women engaged in the project had started to assist with preparing wool for spinning, even though they did not typically help with other household chores. Brent speculates that their encouragement and assistance is in anticipation of the income that future sales might earn for the household (Brent 2007: 45-46).
Another activity worked with twelve women's groups in Kyrgyzstan who were processing wool into felt and creating products for markets. The groups produced crafts made from wool, including yarn, knitted items such as sweaters and scarves, and felt scarves, hats, shoes, souvenirs, and rugs. The project supported an outreach program to link these artisans to markets in the USA and elsewhere.

In Kyrgyzstan, and Kazakhstan, Brent worked with twelve women's groups who started to fashion both traditional and contemporary styles of clothing and other items out of felt and knitted items including sweaters and scarves aimed for the export market. Because these groups had problems finding quality fibers, an effort was initiated to link small wool producers to these groups to supply them with higher quality wool and yarn. Support for this initiative ended in 2006.

Brent filmed the process of yarn and felt making, as well as the production of the crafts in Kyrgyzstan. Where the process continues in the traditional fashion, it is a laborious effort that requires many hours of hands-on attention to clean the wool and cut it into small pieces. The wool pieces (natural or dyed) are spread in even layers onto a woven mat and soaked with hot soapy water to make the fibers swell and lock together. The mat is then rolled up, wrapped in plastic, and tied with rope. The rolled mat is then kicked and beaten to flatten the fibers. The mat is unrolled and the felt is removed, only to be soaked, rolled, and flattened again. The process is repeated several times before the felt is dried and cured.

The film clearly portrays that felt making requires collaborative effort and much of it has historically been done by groups of women. The soaking and flattening of the large sections of raw felt cannot be handled by a single person, but are worked by groups of three to five people. Interestingly,

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10 "Kyrgyz Felting Traditions" by Liba Brent, a DVD prepared in 2006. Bigbite productions.
in recent years, some families have mechanized parts of the production process, using electric wool carding machines and even inventing new machines from car parts and scrap metal to beat and flatten the felt. The mechanization process appears to be attracting more men into the process as well.

Both the pilot activity to produce and market handspun yarn in Kazakhstan and the effort to link women’s groups in Kyrgyzstan making felt products to export markets have the potential to grow into successful income-earning opportunities for the women and their families. Based on market prices in Wisconsin in 2006-7, it was estimated that the women could earn a gross income of US$60 for one kilogram of finished yarn. After their expenses for the raw wool, dye, soap, and shipping, and marketing costs to the crafts association, the women could potentially receive US$47.50 net profit. The women estimated that they could easily make two kilos of finished yarn per month, which at that price would earn them almost US$100—doubling their household incomes. Unfortunately, neither activity had reached a sustainable point at the time when the project closed down. Brent is currently working with the International Fund for Agricultural Development in Tajikistan on a similar project, which, if successful, could bring a capable spinner a monthly income of US$240.11
CONCLUSION

The experiences of the GL CRSP research and outreach activities summarized in this report reveal a growing attention to the importance of addressing gender issues over the course of the program, as well as an increase in their scope and quality. This attention has been made without any sacrifice in research quality. The science of the work on income and asset building, nutrition, water quality, and health monitoring has been of high quality and the results have been presented at professional conferences and published in scientific journals as well as by the CRSP.

The GL CRSP took important steps in calling for attention to gender in its requests for proposal and proposal reviews. Additional attention can be paid in the future, by other USAID funded research, to ensure that there are sufficient funds to allow researchers to collect needed sex-disaggregated baseline data so that changes in men's and women's relative measures can be captured as the project proceeds. Only with the relevant sex-disaggregated data designed and collected is it possible to analyze the gendered impact of the project. Because researchers who are soil scientists or water engineers cannot automatically be expected to have the skills of gender analysis, it is also important to build in collaboration
with other partners who can provide technical assistance in this area, especially from partners in the host countries.

The support of USAID's Women in Development Office was critical to the expansion and likely sustainability of several of the projects reported on here. Although only a one-time occurrence, it was an important contribution to the research and to improving the lives of the participating women and their families.

Further analysis and documentation of the results of the work is also recommended, including:

- Conducting formal evaluations of project impact on key measures of women's empowerment, nutritional outcomes in the household, and asset ownership;

- Documenting the life stories of some of the successful (and even the less successful) entrepreneurs assisted by the projects. An effort to document the success stories has begun with the ENAM and PARIMA projects but it could be expanded to include additional analysis of the characteristics of successful and unsuccessful entrepreneurs.

- Conducting additional research on the implications of these project efforts on intrahousehold resource allocation and gender relations.
REFERENCES


