



## MODULE 5

# Gender and Agricultural Markets

## Overview

The feminization of poverty is the tragic consequence of women's unequal access to economic opportunities.

—UNDP 1995: 36

In many part of the world, women play a major role as farmers and producers, based on materials presented in the different Modules of this *Sourcebook*. However, their access to resources and opportunities to enable them to move from subsistence agriculture to higher value chains is much lower than men's.

Women increasingly supply national and international markets with traditional and high-value produce, but compared to men, women farmers and entrepreneurs face a number of disadvantages, including lower mobility, less access to training, less access to market information, and less access to productive resources. Evidence suggests that women tend to lose income and control as a product moves from the farm to the market (Gurung 2006). Women farmers can find it hard to maintain a profitable market niche. Men may take over production and marketing—even of traditional “women's crops”—when it becomes financially lucrative to do so. Women-owned businesses face many more constraints and receive far fewer services and less support than those owned by men (Bardasi, Blackden, and Guzman 2007; Ellis, Manuel, and Blackden 2006; World Bank 2007a, 2007b). These disadvantages reduce women's effectiveness as actors in value chains and reduce overall market effectiveness. Providing women producers and entrepreneurs with the same inputs and education as men

in Burkina Faso, Kenya, and Tanzania could increase their output and incomes by an estimated 10–20 percent (World Bank 2005). Apart from efficiency gains, food security and welfare gains are also strongly linked to the provision of greater economic opportunities for women. Studies show that resources and incomes controlled by women are more likely to be used to improve family food consumption and welfare, reduce child malnutrition, and increase the overall well-being of the family (FAO 2006; see also Module 1).

Although this Module supports enabling both poor men and women to access market opportunities and resources, it focuses more on women's economic empowerment. In many societies and countries, women are excluded from more lucrative and profitable markets than men, and it is this inequality in access to resources and opportunities that is analyzed and discussed here. Bringing women into lucrative markets requires targeted analysis and program interventions. One important consideration, as presented in the Thematic Notes, is that projects and programs that aim to increase women's economic empowerment should involve both women and men as partners.

The value chain concept is a useful analytic tool to understand a series of production and postproduction activities—whether it is a basic crop, such as vegetables, or a highly processed good, such as cotton textile or canned tuna—and the enterprises and individuals who are involved. This Module uses the value chain concept as an analytic tool. A value chain incorporates the full range of activities required to bring a product or service from

conception to production, delivery to consumers, and final disposal after use (Kaplinksky and Morris 2002). Gender differences are at work in the full range of activities making up value chains. A gender approach to value chain analysis makes it possible to consider the access to productive activities of men and women individually and in groups, differential gender-based opportunities for upgrading within the chain, the gender-based division of activities in a given value chain, and how gender power relations affect economic rents among actors throughout the chain.<sup>1</sup>

This Module suggests ways of making value chains work for smaller actors—especially women working as farmers or in micro- and small enterprises—by enabling them to capture a larger slice of the revenues. It highlights the importance of building trust and understanding among partners in a targeted value chain. It emphasizes the need to strengthen relationships between partners to open channels for the transfer of technology, information, and gains. Because men and women usually pursue distinct activities in value chains, building mutual understanding of their respective needs and responsibilities as “chain actors” ensures that product quality is maintained as it passes along the chain, which results in efficiency gains. Greater equity gains can be achieved by encouraging women to take on new roles in value chains, for example, by engaging in value-adding strategies, or to take on new roles in value chains.

## **REGIONAL OPPORTUNITIES AND CONSTRAINTS**

As the following sections indicate, the opportunities and constraints in agribusiness vary by region, and no “one-size-fits-all” gender strategy will be appropriate to guide interventions. In-depth research and tailored support programs are required in each location.

### **Sub-Saharan Africa**

In sub-Saharan Africa, women are largely responsible for selling and marketing traditional crops such as maize, sorghum, cassava, and leafy vegetables in local markets. In countries where urban markets for these traditional crops are expanding rapidly, such as Cameroon and Kenya, the challenge is to ensure that women retain control over their production, processing, and marketing. In Uganda strong demand for leafy vegetables (traditionally a woman’s crop) in Kampala markets caused men to take over their cultivation.<sup>2</sup>

Women are the traditional producers and marketers of horticultural crops throughout sub-Saharan Africa.

Although horticultural production has risen steadily in most regions of the world over the past few decades, the average annual growth in per capita supply of horticultural produce was negative in sub-Saharan Africa between 1971 and 2000. Inadequate transportation infrastructure and inability to comply with international standards—especially GLOBALGAP standards<sup>3</sup>—limit participation in export markets. Because many producers, particularly women, lack good access even to local and regional markets, the development of cold chain, transportation, and communications infrastructure will be critical to link producers with these markets. Building capacity to manage horticultural businesses and to conduct research is a priority.

### **Latin America and the Caribbean**

Latin American and Caribbean countries currently export a high percentage of their horticultural products, especially to the United States. Despite some notable exceptions, however, most smallholders in the region remain disenfranchised from the export market. Around one-third of the rural poor across the region are indigenous, a marked inequality can be seen in the distribution of wealth and income, and the majority of agricultural producers work small plots, usually in marginal areas with low productivity. Rural women have become one of the poorest population groups as a result of internal conflicts, migration by men both within and outside the region, natural disasters, and the consequences of structural adjustment. Women’s ability to participate in markets will not improve unless they gain land ownership, access to formal financial and technical assistance, and a good level of education and training (IFAD 2002).

Assisting women farmers to access niche export markets for high-value and brand-marketed products such as fair trade and certified organic products is one way forward. Another is to conserve, research, and commercialize indigenous fruit varieties. Significant potential exists to expand production and consumption for local markets and supermarkets, but product quality and reliability must be enhanced.<sup>4</sup>

### **East and South Asia and the Pacific**

The wide agroclimatic diversity of East and South Asia and the Pacific—ranging from fertile irrigated tracts to rain-fed cultivation, mountain cultivation, and coastal ecosystems—has fostered the development of indigenous species of regional interest, permits production of many different crop species, and has resulted in a very rich dietary diversity.<sup>5</sup> Although

much of the region suffers from poor market distribution, domestic markets generally are growing strongly. Several countries, such as China, India, and Thailand, already have mature agroprocessing industries, and there are good opportunities to supply processed and other value-added products to domestic and international markets. However, in Southeast Asia, where countries remain in the early stages of moving from a centrally planned to a market-oriented economy, businesswomen generally lack entrepreneurial skills. The use of poor-quality technology and equipment is another problem; in the Lao People's Democratic Republic, only 5 percent of women-owned enterprises use electrical or motorized equipment compared with 48 percent of men-owned enterprises.<sup>6</sup>

Producers in the small island economies of the Pacific find it particularly difficult to compete with enterprises in industrial countries (such as in Australia and New Zealand) and with the large developing country producers of the region. The previous emphasis on cash crops grown by men, such as sugar and sandalwood, has resulted not only in a collapse of livelihoods as global markets have weakened but also in a shortage of the traditional products normally grown by women—which are now in high demand owing to tourism and the development of the export sector. Until recently no analytical work had been performed to capture women's work in farming, fishing, and natural resource management, which resulted in a lack of attention from policy makers. Today the pivotal role of Pacific Island women in ensuring rural livelihoods and food security is better understood and recognized (Booth 1999).

### **Central and West Asia and North Africa**

Women's participation in the labor force remains significantly lower than that of men across Central and West Asia and North Africa (CWANA). Statistics for the Middle East and North Africa, a subset of the countries in the larger CWANA region, show that women labor force participation was 29.5 percent in 2006, compared to 77.3 percent for men, less than any other region in the world. Yet growing unemployment in CWANA, men's increasing inclination to train for other occupations, and rising levels of poverty in some regions suggest that men's traditional role as the sole or main breadwinner is no longer guaranteed (IFAD n.d.).

Agriculture across CWANA is becoming feminized at different rates. Women form more than 50 percent of the agricultural labor force in Egypt, Morocco, Somalia, and Turkey but just 4 percent in the United Arab Emirates. Women head more than 20 percent of rural households in Pakistan and

more than 10 percent in Cyprus, Egypt, Lebanon, Morocco, Oman, and Tunisia. More middle-aged and older women work in agriculture than younger women. Women are frequently responsible for handling livestock and for growing and processing vegetables, whereas men are generally responsible for cereal production. Women farmers across the region lack sufficient labor and appropriate energy-saving farm and household technologies. Social biases that associate machinery use with men further limit women's use of technological improvements. Not surprisingly, the output from women-dominated farms is generally low. Women are more likely to work within the family-related farm or business, often without pay, or in the informal sector. The percentage of women unpaid workers to total women agricultural workers is 79 percent in Yemen, 66 percent in Syria, 60 percent in Egypt, and 45 percent in the West Bank and Gaza. Even when remunerated, women receive salaries well below those of men; for example, on average, Syrian women are paid 41 percent of what men workers are paid (IFAD n.d.).

### **TRENDS IN WOMEN'S ACCESS TO MARKETS**

The following section describes the constraints and opportunities facing women and men in accessing agricultural product markets and how they are impacted by the changing trends in the international and local markets.

#### **Constraints and opportunities**

As is clear from the regional picture presented above, women are significantly excluded from markets, and bringing women into markets requires targeted analysis and program interventions. Women often hold distinct rights and obligations within the household, and they often perform distinct functions with regard to market activities. These circumstances affect their ability vis-à-vis men to take up opportunities, to invest, and to take risks. Most women farmers are smallholders who cultivate traditional food crops for subsistence and sale, whereas men are more likely to own medium to large commercial farms and are better able to capitalize on the expansion of agricultural tradable goods. Farms managed by women are generally characterized by low levels of mechanization and technological inputs, which often translate into low productivity (FAO 2006). Globally integrated markets mean that international prices affect even smallholders producing only for the domestic market. The free entry of traditional agricultural products into domestic markets can hit small-scale farmers hard if they are not prepared. In the Philippines, for example, machine-sliced, ready-to-fry

potatoes from the United States flooded the local market following its opening up of trade. Local prices collapsed by half, affecting around 50,000 potato farmers, most of them women (Oliveros 1997, cited in FAO 2006).

Women also have a lower presence in the formal sector and in more urbanized and developed markets. Their ability to participate in markets will not improve unless women gain land ownership, access to formal financial and technical assistance, and a higher level of education and training (IFAD 2002).

Yet there *are* opportunities for women farmers. If they use traditional production systems, they may find it relatively simple to meet some certification requirements, such as those for organic production. Many high-value crops require labor-intensive production techniques, such as pruning and trellising, which cannot be mechanized and in which women often specialize.

There is increasing demand for high-value products such as vegetables and local crops in expanding urban markets. The challenge is to ensure that women retain control over their production, processing, and marketing; product quality and reliability must be enhanced.

### **Impact of changing agricultural markets**

Value chains are undergoing rapid change in the way they connect to local, national, and international markets. In industrialized countries, growing consumer interest in health and a consequent demand for a variety of fresh produce throughout the year have been matched by improvements in postharvest care and international cold chain logistics for the transport of fresh fish, meat, and horticultural products. High-value niche markets, such as markets for certified organic or fair trade products, are expanding. Although retailers in Europe and the United States generally dominate fresh produce chains to the frequent disadvantage of small-scale producers, farmers in developing countries can maximize their advantages in climate and labor costs to supply produce to the Northern Hemisphere seasonally or to supply traditional and exotic vegetables more cost effectively throughout the year (Jaffee 2003).

The structure, organization, and dynamics of domestic food markets are also changing rapidly in developing countries. Supermarkets are moving into middle- and working-class areas in most countries, directly affecting rural zones on the supply and demand side (Reardon and Berdegúe 2002). In many countries urban demand for “traditional crops” such as leafy vegetables and cassava is increasing alongside demand for novel products. Supermarket buyers demand

products of consistently high quality, yet small farmers often cannot marshal sufficient working capital to invest in improving product consistency. Smallholders’ understanding of supermarket standards and of consumers also tends to be weak, unlike their knowledge of local markets and unlike the greater knowledge base of large-scale commercial farmers. Improper harvest and postharvest operations lead to short shelf-life, rejection by consumers, and contamination risks.<sup>7</sup> It can be difficult for small-scale farmers to deliver desired quantities at short notice or to manage the labor instability involved in “just-in-time” procurement practices (Boselie, Henson, and Weatherspoon 2003).

Thus, although agricultural commercialization is continually creating new market opportunities, much of this market is very difficult for smallholders to access because of inability to meet the requirements. Women smallholders and small enterprises face even more constraints, as seen earlier. Unless value chains are developed while keeping disadvantaged populations in mind, advantages of chain development will remain limited to larger farmers and producers, and women farmers may lose the markets, jobs, and enterprises that they currently have. These same trends open up possibilities of niche market specialization for women—in labor-intensive crops, local and traditional crops, organic farming, and fair trade.

*Changing agricultural demand and supply situation.* Several trends have started to emerge that will significantly influence the world food situation and food markets. Dietary patterns and the demand for food are changing rapidly in many countries in response to increased incomes, urbanization, and government policy. Rapid urbanization in low-income developing countries intensifies the pressure on food production, marketing, and processing systems. Rapidly growing demand for meat products has heightened demand for cereals to feed livestock. The increasing opportunity cost of women’s time, changes in food preferences caused by changing lifestyles, and changes in relative prices associated with rural-urban migration are leading to more diversified diets. The preference for some basic staple cereals (maize, millet, and sorghum) is shifting to others (rice and wheat) that require less preparation and to milk and livestock products, fruits, vegetables, and processed food (Pinstrup-Andersen, Pandya-Lorch, and Rosegrant 1997). The growing scarcity and inappropriate allocation of water, along with diminished soil fertility in many regions of the world, are beginning to constrain food production. Climate change and demand for scarce land to use for biofuels will further affect current agricultural uses of land and water and the availability of some food crops.

For smallholders and businesses to be successful in this radically changing demand and supply situation will require considerable market linkage and business capacity—individually or in groups. These trends present important considerations in determining the most appropriate investments in women’s agribusiness enterprises.

*Impact of commercialization.* Understanding how the commercialization of small-scale farming activities affects the gender division of labor and in turn influences resource management, income flows, expenditure patterns, food security, nutritional security, and gender relationships is essential (AGSF 2005). A gender and pro-poor analysis helps to uncover economic, organizational, and asymmetric relationships among actors in a value chain.<sup>8</sup>

The right to access and the ability to control key productive resources (land, labor, information)—already fostering conflict between men and women farmers—will become ever-more important. A study in Ghana to map the consequences of small-scale commercialization found that the introduction of cash crops weakened the traditional gender division of intrahousehold rights and obligations, that the gender-based division of labor broke down, and that farm women increasingly undertook tasks previously done by men (AGSF 2005).

Food security will become a major issue for women and women’s enterprises. If market liberalization occurs when a large section of the population lacks access to enough food to guarantee a minimally sufficient diet, only producers of high-value cash crops may profit. Landless and near-landless people who must purchase food may suffer from its reduced availability and higher prices. If women are relatively more involved in subsistence production and men are more involved with cash crops, or if women lose their title to land as it is converted from traditional to modern cash crops, household food security may decline despite a rise in income (IFAD 2002; see also Module 1).

### **Reduced research focus on local and traditional crops**

Private sector research concentrates on internationally traded crops, but women tend to farm locally important crops such as leafy vegetables, millet, and sorghum. Publicly funded research on these crops and growing practices may be required to improve production and meet local (and increasingly urban) market demand for these crops. Efforts to conserve traditional varieties of these and other crops grown by women will maintain important knowledge and are essential for improving those crops. Policies on traditional varieties

and food security now cover local crops important to women, including flower and handicraft crops in the Pacific.<sup>9</sup>

If women are to benefit from modern agricultural technologies, they need to participate in research and development. Participation will permit them to set their own priorities based on their appraisal of their needs. Key biotechnology research issues include developing a better understanding of the role of women as the guardians of traditional knowledge relevant to biotechnology applications, analyzing which crops are affected by biotechnologies, and appreciating how the introduction of genetically modified crops may affect the local valuation of “women’s” and “men’s” crops.<sup>10</sup> Several market niches are based on these local, traditional, and organic crops that could be developed as specialization areas for women farmers and entrepreneurs.

### **THE GENDERED NATURE OF VALUE CHAINS**

The value chain approach strengthens business linkages between producer groups, service providers, and other actors, such as processors and importers, rather than focusing exclusively on farm interventions. Value chains vary in complexity and in the range of participants they draw in. Export value chains tend to be more complex than local chains in terms of the knowledge and technical facilities required, because special processing and packaging are common.

Frequently the knowledge and other information embodied in the different functions of a value chain are gender specific. In some cases women or men are entirely responsible for a whole value chain or significant aspects of it. In Madagascar, for example, men produce honey and wax, whereas women are largely responsible for silkworm production. Hives are located high in trees and harvested by night (climbing at night is not considered a suitable activity for women). On the other hand, silk production and weaving can be performed at home, enabling women to run these enterprises more easily.

Project support needs to recognize that in such cases women and men hold specific understanding of crops and livestock, their associated ecosystems, and the market. Interventions may erode the responsibilities of one gender unwittingly, and in the process it may also erode important ecological and social knowledge. For instance, in Quechua communities in Peru, the conservation and reproduction of different plant varieties, such as potatoes, are almost exclusively performed by women. Quechua women farmers are key decision makers, deciding which plant varieties meet specific nutritional needs, what crops to sell, and what crops to consume. The growing privatization and enclosure of

land have circumscribed women's ability to plant "low-value," traditional crop varieties, however. Important sources of food and income for the household are being lost, along with knowledge of local plant varieties and their uses accrued by women over millennia (USAID 2006).

Women and men may also perform specific tasks along a value chain. Consequently they will have gender-specific knowledge related to that value chain—for example, knowledge of particular elements of a crop's life cycle and its requirements at that stage. The separation of tasks by gender may mean that neither men nor women possess a complete understanding of the whole value chain and of how the roles and responsibilities of different actors intersect and interact at different stages. In fishing communities in São Tome and Principe, for instance, men catch fish and maintain fishing tackle and boats. Women purchase the catch directly from the fishermen. They transport and market the catch, and in some cases transform it into dried or salted fish (IFAD n.d.).

In some cases the gender division of labor may appear to proceed harmoniously and result in a good product. In other cases, if men or women have little understanding of the requirements of the next stage in the chain, gradual losses in product quality and quantity along the chain will yield a relatively poor product. Interventions aimed at adding value through processing and marketing need to consider how to increase understanding between chain actors, identify which gender may benefit at which stage, and determine whether women can be drawn into those activities that add the most value.

Understanding the rationale behind gendered roles in value chains is useful for planning interventions. A study in Uganda,<sup>11</sup> based on the experience of a group of women fishers, observed that women on open water were associated with misfortune (and, indeed, women fishers were less able than men to challenge people out to steal boat engines and tackle). Based on this information, the study recommended that aquaculture, as opposed to capture fisheries, be promoted to circumvent cultural taboos and enable women to pursue a livelihood in fisheries. Women would need permission from men to build ponds, however, since women rarely own land. The study enumerates several measures that project managers could undertake to help women overcome such obstacles and become fishers themselves (see also Module 13).

Projects and programs seeking to create value chains, as opposed to supply chains, therefore, need to help men and women actors understand their specific roles in relation to those of others'. They will then learn how value is added, fulfill their particular roles more responsibly, and take on new roles.

### Conducting a value chain analysis

Value chain analysis involves all or some of the following steps (adapted from Mayoux 2005): (1) market analysis, (2) chain mapping and stakeholder analysis, (3) identification of constraints and opportunities for the value chain, and (4) strategic and action plan development. These steps are summarized in box 5.1. The analytical steps (1–3) are discussed and illustrated by case studies in the sections that follow.

*Market analysis.* Generally a value chain analysis begins with a market study, which assesses the state of the chain relative to its competitors and explores potential gains that could be captured. In some cases a market study reveals that it is possible to add value to products that are not marketed in some locales. For example, scientists at the International Center for Research in the Dry Areas (ICARDA) and Jordan's National Center for Agricultural Research and Technology Transfer (NCARTT) heard of a tomato paste factory in the Jordan Valley that had trouble disposing of its waste without causing pollution. Scientists designed a machine to dry and grind the tomato by-product into a palatable feed and contacted the nearby Der Alla Rural Women's Cooperative Society, which started to incorporate the tomato by-product into the feed blocks it produced. Farmers were pleased with the product. Research showed that sheep and goats grew 20 percent faster and sheep fertility increased by 20 percent in animals fed with feed blocks (Rihawi 2005).

If a value chain is analyzed with gender-disaggregated understanding as an objective, the market study can be utilized to identify current niches in which women are strong, as well as potential ones in which they could compete. In developing value chains, particularly in the poorest and most marginalized areas, all of the links of a value chain may need to be constructed. Partnerships will need to be forged and considerable capacity development undertaken. Other chains may be vestigial, and the opportunities they present will need to be recognized and captured.

*Chain mapping and stakeholder analysis.* A gender-sensitive chain and stakeholder analysis should understand the relative position of women already in the chain—including nodes at which they are the primary actors and those where they are actors along with men.

- *Preliminary chain mapping.* Many standard research tools for mapping value chains can be made gender sensitive; for instance, a gender-sensitive questionnaire can be added to a socioeconomic survey. In other cases new tools may be needed to capture the roles and needs of women across the value chain or in particular

## Box 5.1 Steps in a Value Chain Analysis

### *Conduct a market analysis*

- Generally a value chain analysis begins with a market study to identify the potential gains that could be captured and the state of the chain relative to its competitors.

### *Map the chain and conduct a stakeholder analysis*

- A preliminary mapping of the chain identifies the main products and their markets, as well as the kinds of activity involved, the productive unit, and the geographical location for each node in the chain. A (participatory) stakeholder analysis is then conducted to identify the different stakeholders (by function, socioeconomic category, and gender) at each node of the chain.
- The relative distribution of economic value between participants at each node is documented. Research investigates barriers to entry, the interests and power

Source: Adapted from Mayoux 2005.

relationships of different stakeholders, and contextual factors that explain inequalities and inefficiencies and blockages in the chain.

### *Identify constraints and opportunities for the value chain*

- “Leverage” points are identified for upgrading the chain and redistributing values in the interests of equity and efficiency.
- The causes of ongoing change are mapped to guide decisions—not only on how to strengthen particular nodes and their associated actors, but also on how to identify any transformative actions that may be required.

### *Develop a strategic and action plan*

- The information assembled in the previous steps forms the basis for a strategic and action plan to achieve the goals identified for the chain.

segments. Box 5.2 describes new tools developed by a project funded by the U.K. Department for International Development (DFID) to understand Ghanaian women’s role in fish processing, storage, and trade and to develop multiple actor strategies to upgrade these activities.

- *Stakeholder analysis.* It is critical that project managers do not bias outcomes by subsuming women’s interests to those of men’s or by conflating the interests of producers with those of other stakeholders in the value chain. Tools that can help identify the interests of various actors in value chains and that minimize trade-offs between these interests are necessary. Taste panels and cooking tests have been conducted with women and men for rice (by the Africa Rice Center) and potatoes (by the International Potato Center). SWOT analysis (an assessment of strengths, weaknesses, opportunities, and threats) can take the process a step further if it is designed to create chain platforms. For example, the Papa Andina program in Latin America has been helping to organize meetings between actors in the potato value chain in Bolivia, Ecuador, and Peru in which participants discuss strengths, weaknesses, opportunities, and threats in relation to other stakeholders.

Once the linkages and stakeholder interests along the whole chain are understood, representatives of each segment come together to discuss how to improve the links and preference criteria of each stakeholder (Farnworth and Jiggins 2006).

- *Capture of the relative distribution of economic value between participants.* Calculating the value added and profit accruing to each segment of the value chain, as well as calculating employment and labor segmentation by gender, will provide the data necessary to devise interventions that increase the absolute profits reaped by women at each node in the chain.

This information can be complemented by an analysis of backward and forward linkages in the chain to determine the potential economic “spillover effects” of expanding the chain and to explore ways for low-income segments to increase participation and capture a greater percentage of value added. For example, a study of distributional gains in Peru’s profitable value chain for thornless artichokes,<sup>12</sup> complemented by insights from a gender analysis (box 5.3), highlighted the need to incorporate producers who are less able to participate in export-oriented production and who

### Box 5.2 Ghana: Tools for Understanding and Improving Women's Postharvest Roles in the Fishing Industry

The fishing industry provides an estimated 10 percent of Ghana's rural and urban population with employment. Men undertake the main fish harvesting activities in the artisanal, semi-industrial, and industrial sectors. Women are the industry's key postharvest players, responsible for fish processing, storage, and trade. Many women engage in the growing frozen fish distribution trade and in marketing fish within and outside Ghana. The "fish mummies," who informally fund many activities in the postharvest fishing industry, are among its most important actors.

These postharvest roles are crucial sources of livelihood for women who are heads of poor households, particularly in areas where many men have left in search of work. The DFID commissioned research to

develop field tools for improving the understanding of poverty in the postharvest fishing industry and to develop strategies to reduce it. One tool, FishPHOM, provides a systematic analysis of the sector, which enables priority areas of activities to be identified and combined to form principles for intervention. The analysis provides a basis for formulating policy, for planning and research, and for institutional collaboration and cooperation. A Post-Harvest Livelihoods Analysis Tool (PHLAT) was also produced to help poor stakeholders clarify their circumstances and problems, examine their potential for change, and identify ways to reduce poverty by linking with macrolevel policy initiatives, such as the Ghana Poverty Reduction Strategy.

Source: [www.innovation.ex.ac.uk/imm/Ghana%20PH%20flyer%202004a.pdf](http://www.innovation.ex.ac.uk/imm/Ghana%20PH%20flyer%202004a.pdf).

### Box 5.3 Peru: Mapping Distributional Gains in the Thornless Artichoke Chain

#### *Mapping distributional gains*

Most of the value added in Peru's artichoke industry is concentrated in the processing and export plants—an estimated 61 percent of the total value added remains in the hands of the agroexporters who process the product. Approximately 10 percent of value added stays with the small- and medium-scale farmers who grow the crop, and around 3 percent goes to those who sell seed. The distribution of costs among these actors is similar. One strategy for small and medium firms to capture a greater proportion of the final price and increase value added would be to diversify the types of processed artichokes they offer (for example, producing salads and individually frozen packets).

#### *Adding a gender analysis*

The value chain for thornless artichokes in Peru reveals consistent gender segmentation by occupation, type of activity, and level of participation in the chain. Men

and women cluster in different occupations, undertake distinct activities in the fields and processing plants, and work different hours with different degrees of security. The intensity of women's labor increases in processing. Approximately 80 percent of the labor used in processing activities, such as peeling, cutting, and deleafing, is done by women, whereas men are more involved in activities related to operating and maintaining machinery. Gender wage gaps are evident throughout the chain, although they are more marked in certain segments. Women working on small and medium-size farms receive about 88 percent of men's wages. In processing plants women workers without defined job tenure make 86 percent of men's wages, and those who hold contracts for a specified period make 93 percent of men's wages. The gender analysis highlights the need to intensify efforts to guarantee labor rights for both men and women, especially in light of commitments for improving labor conditions included in the Peru Trade Promotion Agreement.

Source: USAID 2007.



need support to overcome the deficits that limit their participation. Key strategies to foster the chain's pro-poor development would include supporting value-adding activities for smaller enterprises and intensifying efforts to guarantee labor rights for both men and women.

*Identification of constraints and opportunities for the value chain.*

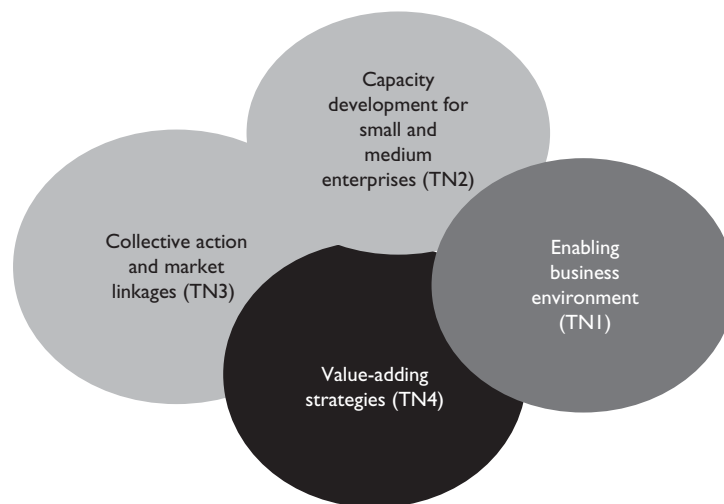
- *Identification of “leverage” points for upgrading the chain and redistributing values in the interests of equity and efficiency:* The Thematic Notes and Innovative Activity Profiles that accompany this Module discuss suitable entry points for investment and provide case studies of good practice. The analysis must also point out women and other disadvantaged groups who may not be in the chain but whose competitive position is affected by the chain—for example, if their position in the market is being eroded. Interventions can be designed to ensure that disadvantaged groups do not suffer or are able to participate in and benefit from the value chain.
- *Mapping the causes of ongoing change:* No value chain is static. Mapping the causes of ongoing change helps to guide decisions, not only on how to strengthen particular nodes in a value chain and their associated actors, but also on which transformative actions are required. For example, dairy chains studied in Syria (Abdelali-Martini, Aw-Hassan, and Salahieh 2005) show a clear gender division of labor in production, processing, and marketing that determines the best type of technological intervention

in this value chain. Although both men and women farmers tend dairy sheep, women are more heavily represented in this activity. Among the Jababans, women and children are mainly responsible for processing milk into cheese, whereas men handle the marketing and usually control the income. Working with this gender division of labor is important when attempting to disseminate newly developed technologies to farmers. Technologies related to milk processing need to be targeted particularly at women, among both farmers and Jababans. Hygiene and basic animal health issues should likewise be addressed primarily to women farmers and Jababans. The interventions suggested by researchers help maintain the feasibility of the chain, assuming an urban market for cheese continues to exist, but they do not address wider issues such as enabling women to take on new roles in the dairy chain.

### ENTRY POINTS FOR SUPPORT

Once the gender dimensions of a value chain are well understood, a thorough market analysis has been performed, and a strategy and action plan have been developed, investment and support can be directed toward developing markets in ways that contribute to gender equity and reduce poverty. Entry points for support are discussed in the Thematic Notes and structured around four main areas (fig. 5.1). Thematic Note 1 explores ways of promoting a business-enabling environment to reduce structural barriers to entry by women

Figure 5.1 Entry Points of Gender Integration in Value Chains



Source: Authors.

entrepreneurs. Thematic Note 2 presents a range of capacity development measures that contribute to gender equity in access to markets, Thematic Note 3 describes ways of strengthening collective action to gain access to key productive assets, and Thematic Note 4 discusses value-adding strategies.

Access to finance is crucial for accessing markets. Although finance is touched upon in this Module, readers are directed to Module 3 for a detailed discussion.

The Innovative Activity Profiles examine innovative and successful approaches to value chain development. The first one discusses the marketing extension process in Bangladesh and shows how poor women required relatively little support to begin conducting their own marketing research, organize into groups, and develop business linkages. The second Profile demonstrates how community-managed procurement centers for small-scale and marginal farmers in India enabled women to gain space in a men-dominated market.

The third Profile explores lessons from the Greater Noakhali Aquaculture Extension Project in Bangladesh, which targeted the poorest segments of the population, including women-headed households, and adopted a holistic approach to market development, from technology to training and business linkages. The approach substantially increased women's participation.

## MEASURING CHANGE: GENDER-SENSITIVE MONITORING AND EVALUATION INDICATORS

Being able to measure the impact that agricultural marketing initiatives have on men and women beneficiaries, their families, and communities is important. Table 5.1 lists ideas for indicators and sources of verification, although clearly modifications are required for each program; further detail is also available from Module 16.

**Table 5.1 Monitoring and Evaluation Indicators for Gender and Agricultural Markets**

Indicator	Sources of Verification and Tools
Satisfaction of women and men entrepreneurs with their access to agricultural inputs, training, credit, and markets, measured annually	<ul style="list-style-type: none"> <li>• Focus groups</li> <li>• Stakeholder interviews</li> </ul>
Number of men and women involved in participatory technology development	<ul style="list-style-type: none"> <li>• Participatory monitoring</li> <li>• Project records</li> <li>• Research organization records</li> </ul>
Active participation of women and men in community-based rural producers' organizations, including holding leadership roles	<ul style="list-style-type: none"> <li>• Bank account signatories</li> <li>• Organization minutes</li> <li>• Stakeholder interviews</li> </ul>
Participation by women and men in small business Incubators	<ul style="list-style-type: none"> <li>• Incubator records</li> <li>• Project records</li> </ul>
Number of women and men small farmers trained in entrepreneurial skills and provided with market information to allow them to enter into, and manage, beneficial contract farming arrangements or businesses	<ul style="list-style-type: none"> <li>• Project records</li> <li>• Training records</li> </ul>
Number of newly registered businesses started per year, disaggregated by gender of owners	<ul style="list-style-type: none"> <li>• Trade registration records</li> </ul>
Gender of farmers holding supply contracts for contract farming	<ul style="list-style-type: none"> <li>• Exporter or supermarket records</li> <li>• Sample surveys</li> </ul>
Percentage of women and men among farmers involved in organic, fair trade, or certified marketing schemes	<ul style="list-style-type: none"> <li>• Fair Trade organization records and norms</li> <li>• Sample surveys</li> <li>• Stakeholder interviews</li> </ul>
Percentage of business owners rating their business as "successful," disaggregated by gender	<ul style="list-style-type: none"> <li>• Sample surveys</li> </ul>
Change in women's perceptions of levels of sexual harassment or violence, or need to exchange sex for products (such as fish), experienced before and after program activities	<ul style="list-style-type: none"> <li>• Focus groups</li> <li>• Stakeholder interviews</li> </ul>

*(Table continues on the following page)*

**Table 5.1 Monitoring and Evaluation Indicators for Gender and Agricultural Markets (continued)**

<b>Indicator</b>	<b>Sources of Verification and Tools</b>
Differences in wage and employment conditions, if any, between women and other disadvantaged groups, and men for positions of comparable content and responsibility	<ul style="list-style-type: none"> <li>• Case studies</li> <li>• Labor audits</li> <li>• Project management information system or administrative records</li> </ul>
Changes in gender of market traders per year	<ul style="list-style-type: none"> <li>• Market stallholders' association records</li> </ul>
Changes in access to food markets, before and after infrastructure development by gender	<ul style="list-style-type: none"> <li>• Household surveys, before and after</li> <li>• Project management information system</li> </ul>
Percentage of women and men extension workers and project staff	<ul style="list-style-type: none"> <li>• Government agricultural extension and business support services records</li> <li>• Project records</li> </ul>
Satisfaction of women entrepreneurs and workers with access to child care, measured before and after project activities	<ul style="list-style-type: none"> <li>• Focus groups</li> <li>• Stakeholder interviews</li> </ul>
Age of school leaving, disaggregated by gender	<ul style="list-style-type: none"> <li>• School records</li> </ul>
Percentage of business women and men in community using computers and Internet, and the frequency of use	<ul style="list-style-type: none"> <li>• Computer center/Internet café records</li> <li>• Stakeholder interviews</li> </ul>
Percentage of businesses owning motorized or electrical equipment, disaggregated by gender of owners	<ul style="list-style-type: none"> <li>• Sample survey</li> </ul>
Changes over x-year period of project activities in household nutrition, health, education, vulnerability to violence, and happiness, disaggregated by gender	<ul style="list-style-type: none"> <li>• Household surveys, before and after</li> <li>• Project management information system</li> <li>• School records</li> </ul>

Source: Authors, with inputs from Pamela White, author of Module 16.

## Strengthening the Business Environment

**A**n enabling business environment provides producers with a clear understanding of foreign and domestic demand, offers economic and political stability, facilitates low transaction costs—for example, with respect to entering into and enforcing contracts—and maintains relatively low levels of risk for business transactions. It allows for efficient business operations that embody investment, innovation, and creativity. However, a business environment that is *equitable* as well as enabling cannot be achieved without paying attention to institutional issues that reinforce gender inequalities.

Women entrepreneurs do not face a level playing field globally, nationally, or locally because they are constrained by an array of culturally specific rights and responsibilities that hamper their freedom to act in the best interests of their enterprise. National legislation in many countries intentionally or unintentionally discriminates against women. Trade liberalization typically reduces the competitive capacity of disadvantaged entrepreneurs. The local business environment depends on local enforcement of national laws and regulations, which often varies considerably from the original legislative intent and from directives provided by national implementing agencies.

The combination of gender-blind legislation and locally valid gendered norms often causes men to benefit more than women from public programs that support agriculture by providing credit, agricultural extension, and marketing services. If gender equality in entrepreneurship is to become a reality, explicit measures are required to tackle sex and gender discrimination and enable women to start and run businesses effectively. Moreover, market infrastructure, including wholesale and assembly markets and postharvest processing and storage facilities, is frequently not tailored to women's needs.

### KEY GENDER ISSUES

The business climate or enabling environment for private sector development, both at global and country levels, is discussed here.

#### Global business environment

At the global level, trade negotiation processes generally lack transparency and mechanisms for key stakeholders to participate. The participation of civil society, including small-scale farmers, women's groups, and representatives of consumer and environmental organizations, is limited. Aside from these special considerations, developing countries often lack the personnel and organizational capacity to deal with trade negotiations and are at a great disadvantage when negotiating on behalf of their agricultural sectors. This deficiency is aggravated by pressure for rapid completion. The resulting hastily written liberalization schedules and exemption lists may not be based on informed and balanced choices between export-oriented and import-competitive products—choices that fundamentally affect the interests of women farmers. One difficulty of formulating precise objectives in support of women lies in the fact that the frameworks in which gender and trade policies are negotiated are artificially separated. Trade policies generally consider macroflows, whereas gender instruments primarily consider local actions.<sup>1</sup>

A growing body of evidence illustrates some of the short- and long-term impacts of regional trade agreements on women's livelihoods. A five-country study based on research conducted in Benin, Cameroon, the Dominican Republic, Ghana, and Jamaica showed that the Common Agricultural Policy in the European Union increased competition for African, Caribbean, and Pacific producers in their national and regional markets.<sup>2</sup> Because women in these countries

have less access than men to land, capital, credit, education, and training, trade liberalization had more of an effect on women. In Benin, for example, most women's enterprises are small because they lack the economic, information, and training resources to increase profitability. In Jamaica 66 percent of poor households are headed by women. Women generally have smaller farms than men and grow a mix of crops for the domestic market rather than export crops. Women farmers and agroprocessors in countries such as these find it difficult to reap the benefits of trade liberalization and export-led growth, essentially because they do not have the resources to be competitive.

Thorough assessments of how trade liberalization may or may not affect food security, nutritional status, and access to agricultural inputs and other productive factors from a gender-differentiated perspective are required if women are to benefit. A starting point is to appreciate that food security and family well-being provide a clear rationale for protecting or enhancing women's access to, and control over, land and other productive resources. Studies show that resources controlled by women are more likely to be used to improve household food consumption and welfare, reduce child malnutrition, and increase the overall well-being of the family (FAO 2006a). Any reduction in government subsidies to social services as a consequence of trade liberalization is likely to have a significant impact on women's lives. In an extension of their "reproductive role," women would have to provide those services no longer provided by the state, and less time would be available for entrepreneurial activities. Global trade negotiations should provide an agenda that outlines welfare guidelines and includes welfare payments to facilitate access to services.<sup>3</sup>

### **National business environment**

At the national level, direct discrimination may be expressed in family laws that require a woman to obtain her husband's consent before starting a business or employment (as in some Mexican states; FAO 2002). Laws in other Latin American countries limit women's ability to be self-employed by vesting family property administration exclusively in the husband. Women in Kuwait and Yemen are not permitted to work at night. In Zimbabwe married women need permission from their husbands to register land. In the Democratic Republic of Congo, where women need their husbands' consent to start a business, women run only 18 percent of small businesses. Women in neighboring Rwanda, which has no such regulations, run more than 41 percent of small

businesses (World Bank 2007b). Legal limitations may be placed on married women's capacity to act independently, as in Chile's Commercial Code (FAO 2002).

Generally, however, formal legislation in most countries rarely discriminates directly against women or mentions them explicitly. Discrimination against women entrepreneurs is largely indirect and unintended. For instance, legislation regarding membership in cooperatives and associations may not overtly exclude women but may contain conditions that many women cannot fulfill. For example, members may be required to control a key asset such as land, which women are much less likely than men to control. Another requirement that may exclude many women is that a business must be a certain minimum size. In Madagascar, where virtually all women agricultural entrepreneurs are poor and operate microenterprises with no or few salaried employees, the law recognizes only cooperatives or associations with at least five salaried employees. Women with smaller businesses are effectively excluded from the benefits of officially recognized collective association.

Research commissioned by the Deregulation Project of the Kenya Institute of Public Policy Research and Analysis suggests that the management time and cost involved in registering a business name and securing trade licenses (two basic forms of registration and licensing applicable to small businesses) together cost about 1 percent of gross domestic product each year (KIPPRA 2000). These and other barriers to entrepreneurship often present greater obstacles for women than for men. An analysis in Uganda demonstrated that women's enterprises are frequently at least as productive and efficient, as measured by value added per worker and productivity, as men's enterprises, but women face higher barriers to entry (Ellis, Manuel, and Blackden 2006). These barriers include their relative lack of time (compared to men), their relative lack of official contacts, and their less equitable access to funds. Furthermore, legal and regulatory constraints in Uganda impose a disproportionate burden on women's enterprises. The *Uganda Regulatory Cost Survey Report 2004*, which covered 241 enterprises in four regions, measured the compliance cost of registration and licensing requirements. It found that over one-quarter of all enterprises reported that government officials had interfered with their business by, for example, threatening to close it or asking for bribes. For women-headed enterprises, the figure rose to 43 percent. Forty percent of microenterprises headed by women felt that the total burden of regulation was "heavy" or "severe" (as compared with 35 percent for

enterprises headed by men). Trade licenses were identified as the most burdensome regulation. Over 40 percent of women, compared to 30 percent of men, reported trade licenses procedures as an obstacle to the growth of their business (Ellis, Manuel, and Blackden 2006). Similar trends have been observed in Kenya (World Bank 2007a).

The cumulative result of structural barriers such as these is the presence of fewer formally recognized women-owned enterprises than men-owned enterprises in many countries, particularly in Africa (fig. 5.2).

Credit represents another barrier to entry for women. To obtain a loan to start and run a business, women generally have less access than men to collateral, given women's poor or nonexistent access to land titles and formal employment. Cultural factors hindering access to credit and other services include women's seclusion, other practices restricting interaction between men and women, and normative perceptions of women's role in the family and society. Indeed, women may internalize discriminatory cultural attitudes and refrain from applying for credit (as documented in Brazil and Fiji; see FAO 2002; see also Modules 3 and 4).

Discriminatory cultural attitudes may prevent women farmers from entering value chains altogether or allow them very limited roles. Contract farming—a forward agreement between farmers and processing or marketing firms to supply agricultural products—is increasingly important to modern value chains, but women in some regions cannot

engage in contract farming because social norms preclude them from signing contracts. In Guatemala, for instance, women hold only 3 percent of snow pea production contracts but contribute more than one-third of total field labor and virtually all processing labor (World Bank 2007c).

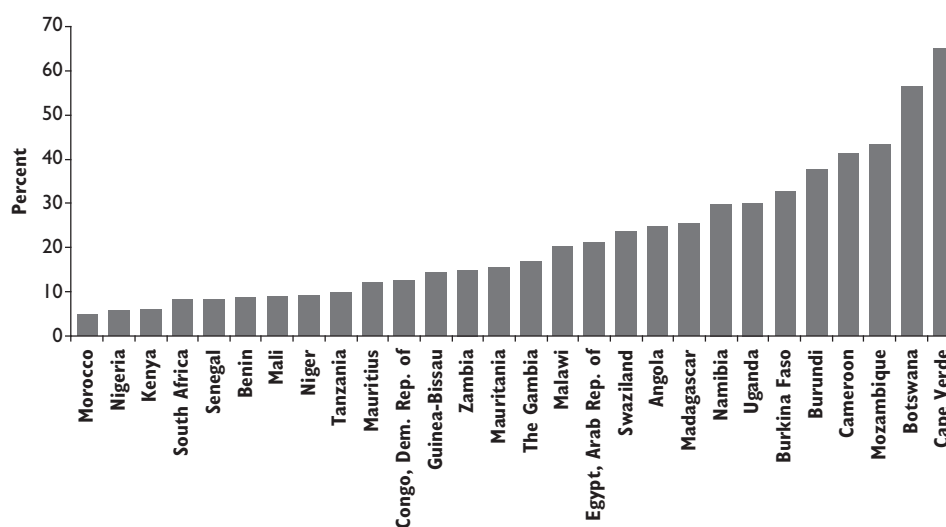
### Market infrastructure

Rural infrastructure is an important element of an enabling business environment. Market infrastructure, including postharvest processing and storage and wholesale and assembly markets, is discussed here, while the other types of rural infrastructure important for market access (for example, transport, energy, information and communication technology [ICT], water and sanitation) are discussed in Module 9.

POSTHARVEST PROCESSING AND STORAGE. Extension in developing countries often concentrates on improving the capacity to produce crops, but more attention must be given to what happens after the harvest—the handling, processing, and storage of agricultural products. All of these activities are essential to increase the effectiveness of marketing and minimize product loss.

Postharvest characteristics, such as hulling and milling quality, can be vital to processors as well as consumers. Sometimes new varieties are evaluated and selected only

Figure 5.2 Percentage of Enterprises Owned by Women in Selected African Countries



Sources: Adapted from Bardasi, Blackden, and Guzman 2007 and based on World Bank Enterprise Surveys 2002–06.

Note: The sample is restricted to individual and family firms and excludes enterprises with fewer than 10 employees and enterprises operating in the service sector.

after the postharvest characteristics can be observed. A study conducted in eastern India found a strong consumer preference for white-grained over red-grained rice because it saves women time in milling (Paris and others 2001, cited in Farnworth and Jiggins 2006). To improve a product's quality and thus add value, often consumers and other stakeholders must be brought into the evaluation process (through participation in tasting panels, for example).

Postharvest losses in developing countries can be considerable for perishables (such as fruits and vegetables) as well as staples (grains, dry beans) owing to poor product handling and processing and attacks by insects, fungi, rodents, and birds. In some areas postharvest losses reach 50 percent (Kitinoja 2002). Although it is generally recommended to harvest early in the morning to reduce the heat load on produce and make precooling faster and less expensive, in West Africa vegetables are often harvested in the late morning and endure the heat of the day while awaiting transport from the field. The women harvesters cannot come earlier because child care, cooking, carrying water, and other family responsibilities take priority (Kitinoja 2002). An integrated development approach designed to alleviate women's "reproductive" workload is necessary to address such conflicts.

Even if farmers can harvest their crops at the optimal time, they may not be able to sell them fast. The lack of a cold chain in many areas, and inadequate storage conditions more generally, lead to spoilage and reduce quality and market value. Assisting farmers and agroprocessors with proper storage not only improves product quality, but also enables produce to be marketed at times other than directly after harvest. The farmer or processor can receive a higher price, the price-depressing effects of a glut can be prevented, and the cash flow delay and costs of storage can be recouped. These benefits are as much for women farmers as for men smallholders.

Finally, transport costs are particularly important for women, who tend to trade locally in vegetables and other perishables. Remoteness increases uncertainty and reduces choice; it results in limited marketing opportunities, reduced farmgate prices, and increased input costs. Women's access to the postharvest services essential for entering the export market can be particularly problematic. Grapes, for example, depend on an elaborate cold chain from packing shed to final destination. The fruit must be refrigerated within a few hours of harvest; if the cold chain is broken afterward, the produce is damaged. A study in Brazil found that small-scale grape farmers were at a disadvantage in negotiating access to refrigerated warehouses at

the point of production and on the docks, as well as to refrigerated trucks for ground transport and the refrigerated tankers that carry the fruit to Rotterdam (Collins 2000).

**WHOLESALE AND ASSEMBLY MARKET.** Although many wholesale and assembly markets are controlled and defined by domestic and international supermarket chains, in developing countries more than 75 percent of fresh fruits and vegetables are still sold in traditional open-air markets and in small, independent stores (Reardon and Berdegue 2002). Livestock assembly markets where producers and buyers interact directly are common. More than simply being a place to buy and sell, wholesale and assembly markets are often integral parts of the community and society.

A number of considerations may reduce women's access to wholesale and assembly markets: whether child care is provided and its cost, whether women are permitted to travel outside their community on their own or if they must travel with a chaperone (which increases their cost considerably), and whether women have access to vehicles. Women may need to pay a driver if they are not permitted to drive. Age can determine whether a woman may go to market. In Afghanistan only elderly widows without sons usually can go to the bazaar (Grace 2004).

Where women are permitted to trade in markets, and especially in cultures in which women's access to markets is limited, activities and resources must often be explicitly earmarked to include a women's section in the wholesale market.

## **GOOD PRACTICES AND LESSONS LEARNED**

The following presents some innovative activities and synthesizes the lessons learned for future project and program design and implementation.

### **Global business environment**

It is essential to ensure that women's defensive and offensive trade interests are part of the formulation of trade positions at the national level. One starting point is to consider the commitments to gender equality that are embedded in instruments such as the Amsterdam Treaty, the Beijing Platform for Action, the Cotonou Partnership Agreement, and the United Nations Convention on the Elimination of All Forms of Discrimination Against Women. The question, then, is to consider how such instruments can be applied in the trade context, and more broadly to consider what is needed for trade agreements to be gender sensitive. Other issues for consideration include the designation of sensitive

products, trade-offs between increased production and labor conditions, and the promotion and protection of food security and the rural economy. Relating trade policy to the design, support, and funding of programs that address gender-specific supply constraints and help to increase women's economic involvement is necessary. To do this, planners may find it useful to prioritize ensuring better access for women to financial services and productive resources.<sup>4</sup> When framing agreements, considering indirect as well as direct effects on women as service users is important.

At the national level, support for gender sensitivity in governments' legislative systems and in the enforcement of international trade agreements is important. Support could be given to assist exporting countries to perform legal and regulatory analyses. These analyses should consider (1) whether the text of a particular trade measure reflects gender bias or could have disparate effects on women or other social groups and (2) whether the particular trade measure would conflict with or undermine the country's international commitments and domestic laws relevant to women and other social groups.<sup>5</sup> Box 5.4 shows that the Pacific

**Box 5.4 Monitoring the Social and Gender Impacts of Trade Agreements in Pacific Island Countries**

Pacific Island countries increasingly participate in regional and international trade agreements, but the potential social and gender impacts of these agreements have not been significantly factored into trade negotiations or closely monitored. Undoubtedly, trade liberalization will have complex and wide-ranging social and gender effects on Pacific societies, particularly among more vulnerable and marginalized groups.

Three regional organizations have developed a training package to provide Pacific Island countries with a framework and guiding methodology to monitor the social and gender impacts of trade agreements that they have signed, beginning with the Pacific Island Countries Trade Agreement. These organizations (the Pacific Islands Forum Secretariat, Pacific Foundation for the Advancement of Women, and United Nations Development Fund for Women [UNIFEM Pacific]) are using the training package to build national capacity in social and gender impact assessment.

Source: [www.siyanda.org/static/Shore\\_picta.htm](http://www.siyanda.org/static/Shore_picta.htm).

island countries are being trained to monitor the gender impacts of the Pacific Island Countries Trade Agreement.

**NATIONAL BUSINESS ENVIRONMENT**

Action has been taken to support and promote women agricultural entrepreneurs in several countries at various levels.

**LEGISLATIVE, PROGRAM, AND INSTITUTIONAL LEVELS.** At the legislative level, explicit prohibition of gender discrimination and statements of gender equality in relation to the exercise of self-employed activities are embodied in legislation, for example, in the European Union, Philippines (with regard to contractual capacity and credit), and South Africa (with regard to accessing credit and other resources). Lesotho passed a law in November 2006 allowing married women to own and transfer property and engage in legal acts without their husband's signature. Before the reform, the law classified women as legal minors (World Bank 2007b).

In a number of countries, affirmative action laws providing fiscal and other incentives for women entrepreneurs have been adopted, as in Italy (FAO 2002).

At the program level, development and gender-related plans have designed activities to promote women entrepreneurs (for instance, by improving women's access to training and credit in India and Tunisia). Public programs targeting women or reserving resources for women to obtain training, credit, and extension services have been adopted in Brazil, India, and the Philippines, for example (FAO 2002). Programs providing services through institutional devices designed to overcome the obstacles faced by women have been set up; perhaps the most well-known instance is the microcredit programs in Bangladesh.

At the institutional level, gender-related measures have been enacted with regard to the composition and activities of sectoral institutions, such as with training institutions in South Africa. Gender-specific institutions have been set up within ministries of agriculture or their departments, particularly those responsible for training and agricultural extension, such as in Burkina Faso, Italy, and Tunisia (FAO 2002).

The problem is often not the legislation and regulations but effective implementation on the ground. Social norms may prevent women from engaging in enterprise activities to which they are given access by the law. Lack of information, lack of capacity to deal with institutions, and institutional biases on the ground may stand against women farmers.

**GENDER ENTREPRENEURSHIP MARKETS.** A promising area of support to women's entrepreneurship has been opened up



through the Gender Entrepreneurship Markets unit of the International Finance Corporation. One of its programs is developing gender and growth assessments (GGAs) to address legal and regulatory obstacles that affect men and women differently; to build the capacity of entrepreneurs, bankers, and other stakeholders; and to put in place financing mechanisms for women entrepreneurs in partnership with commercial banks (box 5.5).

**IMPROVING THE BUSINESS CLIMATE.** Countries with higher scores on the ease of doing business there have larger shares of women in the ranks of both entrepreneurs and workers (World Bank 2007b). A recent pilot project undertaken by

the Regulatory Best Practice Program in Uganda's Ministry of Finance, Planning, and Economic Development suggests that when registration and licensing requirements are simplified, more women come into compliance and formalize their enterprises. A pilot project in Entebbe Municipality reduced the time spent by Uganda businesses in obtaining licenses by 90 percent, reduced compliance costs by 75 percent, and increased revenue collection by 40 percent. When reformers simplified business start-up procedures, business registrations shot up. The increase in first-time business owners was 33 percent higher for women than men (World Bank 2007b). The impact assessment of the first pilot at Entebbe (which recently won

#### Box 5.5 World Bank–International Finance Corporation Partnership Focuses on Women Entrepreneurs

To create an enabling business environment for women entrepreneurs, the Gender Entrepreneurship Markets unit of the International Finance Corporation (IFC), in collaboration with the Foreign Investment Advisory Service and the Africa Region of the World Bank, has developed new advisory and analytical products. At the request of governments (usually finance or trade ministries), gender and growth assessments (GGAs) have been carried out in Kenya, Tanzania, and Uganda and are underway or planned in Ethiopia, Ghana, and Rwanda. Building on the World Bank's *Doing Business* indicators, investment climate assessments, and Foreign Investment Advisory Service (FIAS) assessments, the GGAs address—through a gender lens—the legal and regulatory obstacles that affect businesses and propose concrete measures to overcome them. In Ghana, Kenya, and Tanzania, *Voices of Women Entrepreneurs* reports showcase successful women entrepreneurs as role models. Key results include the following:

- In Uganda and Kenya, GGA recommendations have been fully integrated into national strategies for private sector development.
- In Uganda a Gender Coalition has been created to support the implementation of GGA recommendations. Following lobbying from the coalition, GGA recommendations have been incorporated into four labor reform bills covering employment, occupational safety and health, labor disputes, and labor unions,

Source: Bardasi, Blackden, and Guzman 2007.

which were passed in 2006. The Ministry of Finance, acting on GGA recommendations, commissioned new legal drafts of the Companies Act, the Chattels Transfer Act, and other bills.

- GEM has worked with IFC financial markets to put in place lines of credit for onlending to women entrepreneurs through commercial banks. In Nigeria a \$15 million line of credit was provided to Access Bank to lend to women entrepreneurs, and by January 2007, \$4.5 million had been disbursed to 33 women-owned businesses. In Uganda \$6 million has been provided to the Development Finance Company of Uganda, with \$2 million set aside for women entrepreneurs. In Tanzania a \$5 million line of credit for lending to women entrepreneurs has been provided to ExIm Bank, of which \$1 million has been lent to a woman-owned microleasing company.
- Under a financial products and advisory services package, the IFC is helping to train bank staff in areas such as market positioning and gender sensitivity and is advising banks on new product development, such as insurance services for women. Women clients receive tailored training in how to prepare a bankable business, product development, and access to markets. To date, around 280 stakeholders in Ghana, Kenya, Tanzania, and Uganda—including government staff, lawyers, entrepreneurs, and members of civil society—have been trained in public-private dialogue, advocacy and media issues, and business management skills.

an International Investors award) suggested that the reforms were encouraging women-owned enterprises to obtain licenses for the first time because most of the license applications from women were first-time registrations (Bardasi, Blackden, and Guzman 2007).

### Market infrastructure

*Postharvest processing and storage.* Innovative approaches to postharvest storage and handling can reap dividends in highly marginalized communities. In Niger women and men were able to use warehoused crops as the repayment guarantee to obtain loans (box 5.6).

*Transport.* Men's and women's transportation needs vary; these differences should be reflected in developing large infrastructure projects. Involving women in road maintenance management committees is one way forward. Ensuring women's participation may require modifying classic definitions of management experience and other special efforts. For example, in the Peru Rural Roads Program, the World Bank and Inter-American Development Bank aimed to address the transportation needs of men and women by consulting and

including women in project design and implementation. The participation of women was required in the road committees that oversaw the project's activities, as well as in the community-based microenterprises that helped maintain local roads and tracks. The criteria for membership in the microenterprises were adapted to ensure women's participation. For instance, women's household management was counted as management experience, and women from women-headed households were given priority. As a result, the project improved 3,000 kilometers of nonmotorized tracks that are largely used by women alone and often ignored in transportation projects. The benefits to women included an increased ability to participate in markets and fairs and a reduction in the time spent obtaining fuel and food. Forty-three percent of the women stated that the improved roads and tracks provided greater income opportunities.<sup>6</sup>

*Wholesale and assembly markets.* One way of enabling women to market produce successfully is to provide them with special market areas. The allotment of shops in wholesale markets and membership in market vendors' associations can significantly improve women's participation in markets. Moreover, constructing or improving wholesale markets, especially with basic facilities, will provide an efficient, safe, and hygienic trading environment for women. In India, for instance, improvements in basic facilities such as toilets and drinking water enabled market participation by women traders to increase by 18 percent (World Bank 2006). The recently opened Bagh-E-Zanana Women's Market in Kabul has begun to change the lives of many women. For the first time in decades, women have a place where they can go without men chaperones and where they can run businesses and sell their products and services to other women.<sup>7</sup> It may not be enough to provide market space to women, however; in the early stages, added support in the form of credit may be required if poorer women are to benefit (box 5.7).

#### Box 5.6 Niger: New Credit Approaches for Women

A project in Niger (Project de Promotion de L'Utilization des Intrants Agricoles par les Organisations Paysannes) introduced an innovative inventory credit approach ("warrantage") in 1999 that enables women and men to store their harvest in a warehouse until prices rise. The warehoused crops act as a guarantee, allowing farmers to access financial resources before their annual production is sold, or even without selling it. Evaluation of the warrantage project indicates that overall household well-being improved in terms of the quantity of food consumed. Because women have their own incomes, their ability to make decisions in the household has also improved, as has their standing in the wider community. The project has particularly benefited middle-aged women who are responsible for a large number of people. Social norms prevent younger women from engaging in activities that require movement within or outside the village.

Source: FAO 2006b.

### GUIDELINES AND RECOMMENDATIONS FOR PRACTITIONERS

Legislation, regulations, policies, the business environment, and business infrastructure all need to be analyzed with a gender lens to understand the differentiated impact on women and men and to ensure an equal playing field.

Combined soft and hard investments are crucial for women's economic empowerment. Soft investments include strengthening women's access to and control over productive resources, developing women's capacity to enter markets by improving education and training, and

### Box 5.7 Bangladesh: Women in Growth Center Markets

Growth center markets in Bangladesh are designated local focal points for selling rural produce and distributing agricultural inputs and consumer goods. Most rural markets are congested, muddy, dusty, and unhygienic. The Third Rural Infrastructure Development Project has constructed or improved common public facilities at 196 growth center markets to provide an efficient, safe, and hygienic trading environment.

Growth center market sites are selected through consultation with the women traders, women's union members, the market management committee, and officials. An important component of a growth center market is an exclusive area for women vendors in the open space, with shaded shops hosting a total of 120 women traders. Destitute women initially were given

*Source:* World Bank 2005.

allotments on a lottery basis. Only women can trade; the presence of men working in a shop will lead to cancellation of the allotment. Sixty percent of the women received training before obtaining the opportunity to do business through this project. The monthly income of these traders ranges from 800 to 10,000 taka. Because these shops are located in the growth center markets, which are well connected with other nodal points, the traders can collect their tradable commodities very easily. Credit remains a major constraint, however. About 25 percent of the traders have received loans from nongovernmental organizations, but in small amounts. This experience highlights the need to provide complementary support, particularly financing, to infrastructure improvements and shop allotments.

ensuring that more extension workers are women or capable of conducting gender analyses. Hard investments include ensuring that physical infrastructure (processing and storage facilities, roads, energy, ICT, marketplaces) meets women's needs.

Legislation should explicitly prohibit gender discrimination or contain statements of gender equality in relation to self-employment. When discriminatory cultural attitudes are prevalent, affirmative action laws providing fiscal and other incentives for women entrepreneurs need to be adopted. Programs providing necessary services should be developed; and institutional arrangements leading to a more gender-equal access to these services are needed.

Processes for doing business must be eased. The most important step is to simplify registration and licensing procedures in light of international best practices. Evidence shows that the benefits of this action are sizable for women. For maximum gender impact, reform initiatives should address licensing requirements in those sectors of the economy that predominantly involve women.

Further research is needed on the likely impacts of trade arrangements on women in developing countries. Trade negotiation processes should build on the results. Statistics disaggregated by gender should be collected and gender-specific indicators developed to measure the impacts of trade arrangements on men and women.

## Capacity Development for Small-Scale Women Entrepreneurs

**M**any women entrepreneurs in developing countries face disproportionate difficulties in accessing and competing in local markets, let alone international ones, for a number of reasons. These reasons include women's relative lack of mobility in relation to men and lower levels of use of and access to technologies that could add value to their product. Women are often concentrated in "feminized" occupations, such as handicrafts and basic food processing and sale. In these sectors, markets are often saturated and offer low returns. Furthermore, women are more likely than men to concentrate on backyard or microenterprises.

Occupational segregation by gender can impose significant costs over the long term on regional economies. These costs include rigidities in labor markets, reducing the market's ability to respond to change, the underutilization of women's labor, and lower levels of output and growth arising from suboptimal investments in early and lifelong education and capacity building for girls and women (Deutsch and others 2002). Thematic Note 1 explores the structural barriers that women entrepreneurs face; this Note considers how to improve women's skill base to help them become more competitive in markets. The focus in both Notes is on women owners and managers of small-size enterprises and the challenges they face on expanding to medium-size enterprises. Women employees in farms and agroprocessing firms and the issues they face are discussed in Module 8.

Appropriate interventions for capacity development can be devised only if some initial insight has been gained into the general opportunities and constraints that women producers and entrepreneurs typically face. This insight should be refined through an analysis of gendered constraints and opportunities in the proposed project location. Women need to be properly informed about various business options and the pros and cons of each. Prospective markets and their likely profitability should be considered in skills development and credit programs. Loan conditions and loan products

must be appropriate to the requirements of poorer women if the project hopes to reach them. The promotion of income-generating activities for women generally requires a much more practical approach than is often adopted by development programs. The bottom line is profitability.<sup>1</sup>

Several programs focus on capacity development of entrepreneurs—especially small entrepreneurs. Some of the issues faced by women would be common ones, but a need exists to analyze the local business environment with a specific gender lens and to develop interventions that directly respond to the issues that emerge.

### KEY GENDER ISSUES

The following discussion describes the key gender issues in small enterprise development.

#### Identifying and characterizing women's enterprises

Women are more likely than men to manage microenterprises, often from their own home. Thus, they have the disadvantage of smaller size, higher risk aversion, local orientation, and low capacity to integrate into formal and distant markets. In some cases, they may manage several microenterprises simultaneously to spread risk or conceal the true extent of their earnings from men partners. A Zimbabwean study shows that women dispersed peanut plants throughout their plots rather than bunching them together, thus disguising the extent of their planting. Although harvesting took longer, their husbands did not realize how much money their wives were making by selling peanuts, or the significance of the social capital the women reaped through bartering and giving peanuts (Vijfhuizen 1996). Women thus may be ambivalent about expanding a particular enterprise. Any intervention needs

to be alert to women's real needs and constraints and to work with them to devise a solution.

For project planners, finding the right person for capacity development can be difficult. Women may not know how to locate opportunities that might be available to them, or such opportunities may be hard to find. Poor people often do not belong to farmers' clubs because the requirements and expectations of membership can be too high. The explicit and hidden costs of membership may include fees, the need to provide food if members visit the farm, or the shame of wearing poor clothing. If development organizations choose to work with groups and clubs, or through extension workers' contacts, women who farm alone and without any man's help may be unintentionally excluded. One way of addressing this problem is to include the community in the identification and development of partner organizations and individuals (Farnworth and Jiggins 2006).

### **Identifying and addressing skill gaps**

Women entrepreneurs are producing for increasingly competitive domestic and global markets. New skills and knowledge are required to enter export markets, such as expertise in bureaucratic procedures, national standards and requirements, marketing channels, and consumer preferences. Women wishing to enter export markets may need to acquire new skills to meet requirements that do not apply in domestic markets. Although it is demanding to develop the capacity to enter global value chains, once entry is gained, additional learning may take place through supplier-buyer interactions. Entry into global value chains can thus have a positive impact on technological capability and upgrading skills (Humphrey 2004).

In some places, however, a substantial segment of the economy has no appropriate market structures of any sort. A major challenge in such cases is to promote pro-poor strategies to include those who are truly marginalized in terms of resources and market access. Participation in these markets should aim to provide these poor men and women and their families with significant increases in income and thus contribute to food security and family welfare. However, the very poor, particularly the women, may be the most distant from potential markets and live in uniformly poor communities. A starting point may be to address generalized constraints such as illiteracy, innumeracy, low access to information, and limited levels of awareness of business opportunities. An assessment of the norms and values of the target clients and indigenous service providers might yield

alternative entry points, such as an educational focus or the promotion of awareness campaigns through the use of mass media.<sup>2</sup> In Kenya, for example, impoverished, geographically marginalized women's groups, whose aim is to offer support to families afflicted by HIV and AIDS, were assisted in developing a plan to buy various grains and process them into fortified flour. In so doing, they aimed to provide nutritious food to people affected by HIV and AIDS at a low price and to make a profit by selling the flour at competitive prices locally (KIT, Faida MaLi, and IIRR 2006).

Project interventions should consider how to enable women to manage risk. One method is to link poor women entrepreneurs to insurance markets to hedge against risks; another is to ensure that price information systems are prompt and effective. In some situations special capacity development programs need to be devised. The World Food Programme (WFP) has begun a program in which training focuses on *all* family members so that critical skills are not lost and a business can carry on if a family member should die (WFP, personal communication).

### **Devising suitable capacity development programs**

Thinking through the implications of particular approaches to capacity development is important. Women may lack a clear understanding of the economic skills they require to help them upgrade their business; this may make approaches that prioritize the voice of participants problematic at times. An IFAD project in Syria found that women tended to base their choices on what they knew and liked, rather than on an understanding of markets and profitability. They usually chose what their friends had chosen, a tendency that can result in "a surplus of plastic flower arrangements on the local market and no income." Because the women knew little about nontraditional business opportunities, their choices of skills and businesses were limited.<sup>3</sup> This experience does not mean that participatory approaches do not work in such situations, only that they need to be coupled with other capacity development activities that assist women to develop market analysis skills.

Another issue is recognizing that women *may* have different management styles and thus different capacity development requirements than men. A study conducted in Cambodia, Lao PDR, and Vietnam showed that women typically had a more "caring" management style than men, which resulted in loyalty and high productivity among employees. They also tended to be more risk averse than men, which has implications for the product markets for

which they are willing to be trained. Involvement in family-owned enterprises conferred benefits on the women entrepreneurs surveyed in terms of bargaining power and more equal relationships within the household.<sup>4</sup> Training programs, therefore, need to be sensitive to local management and learning styles.

### **REGIONALLY SPECIFIC FEATURES OF WOMEN ENTREPRENEURS AND THEIR CAPACITY DEVELOPMENT NEEDS**

Capacity development programs need to be regionally and locally appropriate. Local needs assessments should be undertaken and training programs tailor made. The sections that follow summarize recent studies—including agricultural and nonagricultural sectors in all cases—undertaken in the Middle East and North Africa, sub-Saharan Africa, Indochina, and Latin America to provide a preliminary insight into women entrepreneurs and their motivations. A study from a war zone in Sri Lanka provides additional insights.

Women entrepreneurs face different opportunities and constraints according to the region they live in, although some opportunities and constraints are common across regions, such as those related to the need to meet their reproductive responsibilities. Capacity development programs need to be specifically developed to address macro-, meso- and local needs. The areas in which capacity development of women entrepreneurs may be required include basic literacy, awareness and self-confidence, market information, market management capacity, bureaucracy management, capacity to address financial and land constraints, technical capacity, and risk management capacity.

#### **Middle East and North Africa**

Participation of women in enterprise activities is very low in this region—as has been reported in the Introduction. A five-country study of women entrepreneurs across a range of small and medium-size enterprises in Bahrain, Jordan, Lebanon, Tunisia, and the United Arab Emirates found that most entrepreneurs are between 35 and 54 years of age. This finding is consistent with worldwide trends. The majority of women entrepreneurs are married, and most have children. Women identified their most difficult challenge to be achieving an appropriate work-family balance. Other key challenges include acquiring financial management skills, finding and keeping good employees, the high cost of labor, gaining access to capital, and the high cost of public services. The women expressed a strong desire for access to general

business training and support, and they wanted access to new markets for their products or services. At the same time, the women surveyed felt that women have a greater advantage than men when managing women employees. Overall they saw their gender as an asset rather than an impediment to their business.

Women entrepreneurs in all five countries use information and communications technology for their businesses at rates well above the per capita average worldwide. Many use mobile phones, computers, and the Internet (including their own Web sites) for their businesses. With respect to capital, a smaller proportion of women in the region use formal sources of credit for their businesses compared to women in other regions of the world. With very limited access to formal finance, women finance their businesses through personal sources, such as savings, friends, and family, and by reinvesting business earnings. Most entrepreneurs were interested in receiving external training and support services (CAWTAR and IFC 2007).

#### **Sub-Saharan Africa**

A three-country study (Richardson, Howarth, and Finnegan 2004) was conducted in Ethiopia, Tanzania, and Zambia. In all three countries the age range of women entrepreneurs varied from the late teens to over 50. Zambia had the oldest profile, with the largest category of women in the 41–50 age group, whereas in Tanzania the largest category was 31–40 years of age. Nearly all women entrepreneurs interviewed had an above-average level of education, having completed secondary school, compared to their contemporaries. However, some, particularly in Ethiopia, had had no schooling. The majority of entrepreneurs had gained work experience before setting up a business enterprise, either from a family business or from their own smaller business. The majority of women entrepreneurs had household and reproductive responsibilities to fulfill in addition to developing their own business. They thus experienced the typical constraints on their time and mobility associated with these responsibilities. At the same time, many of the women entrepreneurs felt they benefited positively from the support of their families by receiving financial, moral, and practical support.

The women entrepreneurs identified the chief constraints to growth as being access to credit, intense competition, and dealing with corruption among regulatory officials. Their businesses are generally labor intensive and make minimal use of new technology—whether information technology or production and process technology. These women's limited opportunities for networking reduce their ability to develop

personal and business know-how and to access other physical and financial assets. Their enterprises tend to operate out of inappropriate facilities, if the women have a building separate from their home at all. This is particularly the case for food preparation and food-processing businesses, activities in which regulations require business accommodations to meet specific hygiene standards and in which women predominate. However, customary practices in the communities studied often prevent or deter women from owning or leasing premises in their own right.

Women largely confine themselves to local markets where access, mobility, and networks are easier for them to negotiate. This choice frequently results in excessive competition and underpricing. Women's ability to penetrate markets outside their local area is affected by the types of businesses in which they engage. Their locally made products are increasingly in competition with a growing range of imported goods coming into the market at all levels. Issues of quality and delivery are the same for all microenterprises, but women's relative lack of mobility, which is related to their household and community roles, limits the time they have for traveling. In some of the areas studied, women are not allowed to travel outside their communities (Richardson, Howarth, and Finnegan 2004).

### **Latin America and the Caribbean**

A study of women entrepreneurs in Argentina, Brazil, and Mexico (Weeks and Seiler 2001) noted that, for the region as a whole, the rate of women's economic activity lags behind that of other regions. Between 1970 and 1990, however, the share of women employers and self-employed workers in Latin America and the Caribbean more than doubled and continues to grow exponentially. Women business owners are younger than their men counterparts, are relatively new to entrepreneurship, and are most likely to be in wholesale or retail trade. Their companies tend to be smaller than men-owned companies.

Key challenges identified by women entrepreneurs include insufficient access to information, training, technical assistance, technology, capital, markets, networks (women's business associations as well as broader industry or regional business organizations), and validation (in other words, being taken seriously by society at large).

### **Southeast Asia**

A study in Cambodia, Lao PDR, and Vietnam showed that despite significant sociocultural differences between these

countries, deriving partly from their historical trajectories, women in all three countries face similar constraints in the business environment.<sup>5</sup> Two key challenges are accessing credit and accessing markets. An overall lack of information combines with women's limited business experience to produce reactive, production-oriented business strategies—a serious problem, considering that markets in all three countries are small but competitive. The opaque and unstable legislative and regulatory environment is another constraint, particularly with regard to land law and land-use rights. Women entrepreneurs face cumbersome business procedures, ambiguity in the interpretation of legislation, and government intervention in economic activities. Lower educational levels among women, compared to men, constrain their choice of enterprise and limit their ability to take up vocational and technical training. The survey showed that women find balancing work and family responsibilities very difficult. They feel handicapped by family demands and social expectations. For example, women are expected to take the advice of relatives who are men on decisions that need to be made and how the business is run. Women feel they lack the knowledge and expertise to adapt to and master new technologies, or to innovate in developing new products and services.

The macrobusiness environment is important; these countries remain in the early stages of moving from a centrally planned to a market-oriented economy. Businesses need experience in managing quality, delivery times, and pricing before they seek to add customers. The use of outdated technology and equipment is also a problem; in Lao PDR, only 5 percent of women-owned enterprises use electrical or motorized equipment compared with 48 percent of men-owned enterprises. Although businesswomen have a general understanding of local markets and customer preferences, they lack insight into how to go about designing, making, and selling products that could be attractive outside local markets.

### **War Zones: An Example**

A study examined Tamil women in northeastern Sri Lanka who became entrepreneurs as a result of the war (Ayadurai and Sohail 2006). A large percentage of these women are highly entrepreneurial, and their aims are to have a better life, to be self-reliant, and to support their families. Many went into business only after having lost their husbands in the war. They are educated—at a minimum, having a secondary-school education—and are involved in such businesses as livestock farming, office services, and textiles. Such

businesses do not require a high capital outlay or much previous knowledge. A large majority of the women entrepreneurs are in business for the first time, and most rate their businesses as successful. Their measures of success are self-fulfillment and a balance between family and work.

### **GOOD PRACTICES AND LESSONS LEARNED**

The following presents some innovative activities and synthesizes the lessons learned for future project and program design and implementation. Many of the examples and lessons cut across different types of rural enterprises—farm or nonfarm—whereas lessons and principles particular to a type of enterprise are specified below.

#### **Inclusive and effective capacity development packages**

Entrepreneurial training can be highly focused, or it can cover all the different aspects of creating and managing enterprises, including business and management skills. Focusing on the process of planning itself helps women to identify risks, limitations, and capital requirements and assist them in setting specific objectives useful in measuring long-term progress. Specific Modules need to be formulated around the particular needs of different groups of women, according to their background, experience, motivation, and stage in the enterprise development cycle. Training in basic literacy and numeracy may be a prerequisite to enrolling women in entrepreneurial skills programs. Moreover, all training programs should be designed to ensure access. A flexible time schedule—evenings, weekends, part time—and child care are important.

Capacity development needs to be very specific to the situation faced by the women and not general training; it should include practical guidance on how to approach and resolve the issues and needs of the entrepreneurs.

#### **Picking effective trainers and creating partnerships**

In many regions women trainers and extension workers may be more appropriate because of cultural restrictions that limit interactions between women and men who are strangers or not part of the family. Steps may need to be taken to permit women trainers to travel (box 5.8).

In some areas, however, women extension workers may not be respected by women farmers. In Vanuatu, for example, women's role in agriculture is scarcely acknowledged at

### **Box 5.8 Benefits of Ensuring the Participation of Women Trainers**

In India, an Indian Institute of Management (IIM) project supports farmer-led participatory plant breeding and gives considerable priority to establishing links with farmer innovators. Several years into the project, it became clear to project staff that they had identified very few women innovators. It emerged that when men staff asked who was responsible for a particular innovation, women's innovations typically would be claimed by—or assigned to—the husband or another male family member. Bringing women staff on board was problematic. It was difficult to find safe places for the women to stay overnight; they needed chaperones to travel by public transport, and they would have to travel outside their own area to avoid bias. What the project did was to make arrangements for women staff to stay in a village with families known to the IIM team, women were permitted to work in their own farm, and travel was arranged so that they could be accompanied by another family member. The result was that more women innovators were located, raising the proportion of women's to men's innovations to 20:80.

*Source:* Farnworth and Jiggins 2006.

a policy level, although women are responsible for food production and are starting to enter the cash crop sector. Extension officers are mostly men and tend to deal with men farmers, who rarely pass on knowledge to women. Efforts to provide extension services to women through the employment of women extension officers met with resistance from women farmers who could not understand the issues being raised and were unwilling to accept advice from young women (Booth 1999). In cases like these, men extension workers trained in gender analysis may be more appropriate, at least at the outset.

Capacity development initiatives targeted at women can be very successful when they involve partnerships between men and women. For example, a World Food Programme (WFP) project in Zimbabwe involved getting women to take charge of milling in the Kala and Mwange refugee camps. Men were enrolled in training women to run the mills. Another WFP project in Tanzania provided men landowners with incentives to provide women refugees—many living with HIV and AIDS—with space to grow flowers, fruits, and



vegetables.<sup>6</sup> In Bangladesh the Food Security for Vulnerable Group Development Women and Their Dependents (FSVGD) project provides multifaceted assistance to 110,000 women in seven districts of northwestern Bangladesh. Partner nongovernmental organizations (NGOs) deliver a comprehensive training program to FSVGD women, who in turn disseminate their learning to family members. Although women are the direct beneficiaries, men's support groups, comprising community members who are men and FSVGD spouses, have been formed. Their role is to support FSVGD women, increase their own awareness of women's empowerment and human rights issues through their meetings, and disseminate these messages to the wider community.<sup>7</sup>

### **Developing a capacity development service sector for women**

Train-the-trainer approaches help to continue developing capacity over the long term. When skills are acquired and passed on by project beneficiaries themselves, a project gains momentum that endures after the project team has left. For example, community learning centers in three provinces in China provided vocational courses to women in field crops, livestock and poultry, agroprocessing technology, and gardening. Newly trained women were responsible for passing their new knowledge and skills to others; women were also provided with credit by local governments and credit cooperatives. As a consequence of the training interaction, women's social position and role in economic development increased in the communities (UNESCO 2003). Another Asian example comes from Lao PDR, where strategies for offering training in weaving have a built-in multiplying effect, with trainees required to teach others.<sup>8</sup>

In the Middle East and North Africa, the training-of-trainers component of "Women Get the Business Edge" (a training program sponsored by IFC's Gender Entrepreneurship Markets Unit) makes a concerted effort to target women as well as men trainers. The specific aims of the program are to develop a larger cadre of women and men trainers, to encourage businesswomen's associations to become brokers for business management training on an ongoing basis to their members through certified Business Edge partners in their countries, and to conduct focus groups and document lessons learned about women-specific business. The workshops are highly customized. In Afghanistan, for example, training was provided in marketing nontraditional businesses; in Egypt, workshop participants chose training in marketing and pricing; in Jordan, entrepreneurs requested training in pricing strategies and

problem solving; and in Yemen, training was provided in financial management ([www.businessedge-me.com](http://www.businessedge-me.com)).

### **Integrated and multidisciplinary approaches to capacity development**

Training needs to go beyond technology focus to the entire host of skills and capacities required to run a successful enterprise. Capacity development on its own would be insufficient if other constraints faced by the women enterprises—such as credit and risk management—are not addressed in an integrated manner.

A project operated by the United Nations Industrial Development Organization (UNIDO) in Kenya provides women's groups with technical skills, basic computer literacy, business start-up assistance, and improved financial and business management skills, in addition to establishing wider marketing networks. In contrast to other projects, which focus only on improving technical skills, the UNIDO project also emphasizes confidence building to strengthen women's roles in the community. The project provides information on HIV and AIDS and offers literacy programs. By facilitating women's access to the tools and skills they need to improve, monitor, and evaluate their progress as entrepreneurs, the project enables them to set goals for themselves and to achieve their business objectives. The women are also encouraged to organize a business association. Establishing a formal association enables them to get in touch with like-minded women, exchange ideas, and take part in policy preparation processes at a variety of levels to help determine the future of micro- and small-scale enterprises (UNIDO 2003).

Establishing and training multidisciplinary teams of district-level extension and line-level agency staff can improve support to producers, particularly if they are organized into effective groups. For example, Proshika, a Bengali NGO, offers an integrated package of assistance to women's poultry groups by training women as paraveterinarians through group courses. The groups are provided with loans and technical extension services, and a compensation fund has been established to compensate for losses and therefore minimize risk for project participants. The project has caused the average weekly incomes of participating households to rise by 31 percent after becoming members.<sup>9</sup>

The La Carmela program in Ecuador, which instructs unemployed women in artisanal chocolate making, shows that success is possible when small-scale production units can be internationally competitive, high-quality raw materials are available, and a need can be demonstrated to integrate the work of skilled women into the production

system. Crucial factors in the project's success were the interregional transfer of skills (staff training by an established Brazilian chocolate producer), the design and production of first-class marketing materials, and the creation of a fully equipped and staffed production unit for fine handmade chocolate products. The La Carmela program began when UNIDO, the government of Norway, and the nonprofit foundation Ce-Mujer saw an opportunity to increase the value added of Ecuadoran cocoa, enhance the role of women in Ecuador's industrial development, and address the problem of high women's unemployment. Women with no previous skills have now mastered the art of the artisan chocolatier and are now fully qualified to work in transnational companies or operate their own businesses.<sup>10</sup>

### Complementary support

*Preferential financial services.* To kick-start women's enterprises, preferential financial services may need to be offered. For example, in Kenya, through the Growth Oriented Women Enterprise (GOWE) program, IFC and the African Development Bank are piloting an initiative to help women-owned businesses grow by providing partial guarantees that will allow them to secure loans between \$20,000 and \$400,000. The program, which started in 2006, also provides women entrepreneurs with customized business management skills training and mentorship support. The GOWE program plans to help up to 400 women-owned enterprises in Kenya to access credit by 2011.<sup>11</sup>

*Business incubators.* Business incubators help to extend services to small and medium-scale businesses in their critical early stages of development. Their services include assistance in drafting business plans, the introduction of new crop varieties and technologies, and improved management practices to support agricultural and rural entrepreneurship. Other services typically include providing Internet access, financial and legal advice, training, and networking.

Given the unique issues faced by women entrepreneurs, business incubators focusing specifically on women will go far in building capacities and sustainable enterprises. For example, the Village Business Incubator program in the coastal midland areas of Syria provides women in nine villages with an open learning space with a particular focus on business counseling, enterprise management training, and follow-up to monitor business performance. Several businesses have been set up.<sup>12</sup> In Gujarat, India, the International Centre for Entrepreneurship and Career Development (ICECD) has created the ICECD Small Business Incubator for rural women. The program provides infrastructure

(building, electricity, computer facilities, and machinery), training, and counseling to women to enhance their productivity and income opportunities. The package includes engaging assistance in conducting market surveys and drawing up business plans.<sup>13</sup> Business incubators are considered very useful and effective in engaging poor women entrepreneurs in productive markets.

*Market intelligence.* Poor women cannot afford either to undergo training or to take out loans unless a reasonable profit margin is possible. However, women often lack proper market intelligence, hindering their ability to make sound business decisions, and they require training to seek out and analyze relevant production and market information. The marketing extension component of the Livelihoods, Empowerment, and Agroforestry Project in Bangladesh is a good example of how training by extension officers on how to undertake market intelligence helped a women's group to refine their enterprise development plans to better respond to market needs. The women had been nervous and insecure about going to market. However, they used their social cohesion to support one another and—initially supported by local extension officers—were able to match supply and market demand (see Innovative Activity Profile 1 for details). Similar experiences have been documented for women's groups in Bihar (World Bank 2006).

Ensuring gender-equitable access to information and communications technology is critical. Applications relevant to the production and marketing of agricultural produce include telecenters, cellular phones, and personal digital assistants. Extension databases can track commodity prices and inform farmers. Up-to-date information on agricultural production and postharvest and processing technologies can be accessed, as can the contact details of subject matter specialists, information on plant quarantine regulations, climate records, market prices, and weather forecasts. Internet facilities can enable extension advisors and farmers to access agricultural Web sites and Web sites of universities with faculties or departments of agriculture (see also Thematic Note 4 in Module 9).

### GUIDELINES AND RECOMMENDATIONS FOR PRACTITIONERS

Training and capacity development are needed to ensure that women entrepreneurs participate effectively in markets:

- Entrepreneurial skills programs should be adapted to local cultural contexts. Although such programs may provide a broad skills base, they also need to help women develop the skills they require to access specific, identified

value chains. Assisting women to understand how to make a profit is the bottom line. Training can be given in performing market surveys, accessing market intelligence, developing business plans, and other aspects of entrepreneurship.

- In some areas training in basic literacy and numeracy may be required prior to enrolling women in entrepreneurial skills programs. Confidence-building measures may also be necessary.
- The gender of trainers or extension workers must be considered carefully. In some cases women may be more culturally appropriate in these roles. Steps, such as providing a chaperone, may need to be taken to permit women trainers to travel. In other cases men trainers may be suitable, for example, where the gender of the trainer does not matter, or where women farmers have doubts about the competence of women extension workers or trainers. In the latter case it may be possible to introduce women trainers later.
- Awareness should be raised in the target community about the proposed training and its purpose to gain the confidence of men relatives of women selected for training.
- Where possible, training should have a built-in multiplication approach to ensure sustainability, with trainees required to teach others. Also in the interests of sustainability, training programs should incorporate a risk management strategy where necessary. For example, in areas where HIV and AIDS are prevalent, the continuity of business operations of the family would be threatened if the family member with the critical business competence were to die.
- Multidisciplinary approaches to training can be very effective. Some projects have established programs run by multidisciplinary teams of district-level extension and

line-agency staff, who have trained women in a variety of specialized skills.

- Exchange or exposure visits enable entrepreneurs to view directly the successful application of income-generating activities and production techniques introduced to other programs and to share experiences. Training should use a host of practical approaches and not merely in-class instruction.
- Developing a capacity development support sector (independent trainers) and increasing the presence of women in support services (extension, regulatory institutions, business development services) through their capacity development will lead to an increased presence of women in the system that is likely to benefit women's businesses.

Complementary support is needed in addition to training:

- All training programs should be designed to ensure access—for example, by providing child care, considering the location of the training, and working around women's time schedules.
- Ensuring access to, or the provision of, appropriate infrastructure (building, electricity, computer facilities, and machinery) for training may be necessary.
- Women entrepreneurs may require regular counseling beyond business start-up to help them maintain and enhance their productivity.
- Women's enterprises may require preferential financial services. These can be offered at start-up.
- Training should be accompanied by an additional services and support package to ensure the sustainability of activities—for example, business development services, assistance in market intelligence, initial handholding in market management, and risk management interventions.

## Collective Action and Market Linkages

**G**lobalization has increased competition and market-related risks and uncertainties. Whether producers are supplying export markets or domestic markets, the rural organizations to which they belong have become important instruments for them to manage their assets more effectively; gain access to services, inputs, credit, and markets; and contribute more effectively to decisions made with value chain partners. Women have the most to win from collective economic action, as they often have more limited access than men to productive resources. The development of strong economic organizations can enable poor women to overcome high transaction costs, limited scale of production, poor access to a variety of resources, and lack of political and bargaining power as individuals. Quite apart from these advantages, studies show that membership in groups frequently helps members, particularly women, to improve their self-confidence and their status in the community (Dixie 2005; FAO 1995).

This Thematic Note focuses on building the capacity of rural producer organizations (RPOs) to meet the needs of women entrepreneurs. It is important to emphasize that developing capacity per se is not enough: RPOs must also learn to understand and work effectively with specific value chains that have been identified through capacity development. Effective market linkages enable women, through their organizations, to become more active in managing their roles in the value chain itself, as opposed to merely responding to the actions of other actors. The capacity development needs of RPOs include improving their access to, as well as management of, information; their knowledge of the market; their control over contracts; and their cooperation with other actors in the chain (KIT, Faida MaLi, and IIRR 2006).

One should note that the equity objective must not subsume the efficiency objectives: women RPOs must be driven by a profit motive and must be market led.

The history of RPO development is long and tortuous, with various types of groups having been created for social and economic purposes, often at the bidding of an outside agency rather than from need felt by smallholders. It is critical that RPOs developed for commercial purposes are strongly business and market oriented, and capacities developed to work effectively as partners in value chains.

Developing competitive smallholder RPOs is a long and difficult task and requires business and market orientation in the agencies providing support to the RPOs as well. As women smallholders may be even less endowed than men smallholders, this task is of an even higher complexity.

### KEY GENDER ISSUES

The following discussion gives the key gender issues in rural organizations and other forms of collective action and linkages among chain actors.

#### Representation of women in RPOs

Formal RPOs or community-based organizations (CBOs) are membership organizations created by producers to provide themselves with technical and economic services. RPOs are not necessarily inclusive: the poorest of the poor often lack the minimum assets to take advantage of what an RPO can offer. Women, with their generally lower asset base, frequently find it more difficult to join and become active members of RPOs. For example, land ownership is a frequent criterion for membership, yet women are far less likely than men to own land.

When a household is a member of an RPO, it is usually the man who is considered to be the member and takes part in RPO activities, even though women members of the household may be active farmers.

Women who do join RPOs may find it hard to articulate their gender-related needs. Frequently the concept of

*substantive* gender equality, which involves measuring and improving women’s actual influence or control in value chain partnerships, is not well understood. For example, an increasingly favored approach to developing chain partnerships is fair trade. Fundamental to fair trade is the idea that producers and workers in a chain are entitled to their “fair share” of the profits. Fair trade standards include gender-specific indicators, but they do not guarantee that organizations participating in fair trade value chains fully understand, or are committed to, gender equity. Formal norms for gender equality, as expressed in fair trade standards, are generally respected. For instance, separate toilets and washing facilities for women may be provided, and women may be elected to serve on committees. Yet research in countries as disparate as Burkina Faso, Ghana, and Peru shows that women often do not participate actively in such committees (Guijt and van Walsum forthcoming). A study of women members of Coocafé (a Costa Rican Fair Trade cooperative) revealed that many women are members merely on paper to help the family unit access more credit from the cooperative or increase voting rights. Sporadic attempts by Coocafé to empower women have had limited success because they have been unfocused.<sup>1</sup> Because women have little voice in many RPOs, they often focus on the interests of the men’s membership. Particular attention, therefore, needs to be paid to strengthening women’s voice in mixed gender cooperatives.

To combat their lack of effective representation in RPOs, women are more frequently setting up their own RPOs. In the last decade, new, women-only agricultural and rural organizations have grown significantly, along with women’s participation in existing cooperatives. Women’s organizations outside the agricultural sector, such as social or religious groups, have also broadened their mandate to include support for agricultural income-generating activities, mainly through skills training and credit. These efforts have often required financial backing and developing collaborative links with government and private sector agencies. Despite this progress, many women’s groups still lack financial resources and skills in developing and marketing products. To act effectively in value chains, women’s RPOs require a step-by-step process of capacity development, with the RPOs slowly taking on more tasks as their ability to access market opportunities, services, and investments improves (box 5.9).

### **Weak market linkages**

To begin managing value chains as partnerships of chain actors who actively cultivate and codetermine collaboration

### **Box 5.9 Bosnia and Herzegovina: Empowering Women through RPOs**

A women’s producer association, established in 2003 in Tesanj, Bosnia and Herzegovina, provides members with a milk collection network to help them to market surplus milk. The purpose was to secure markets for milk products and increase members’ household incomes. Subsequently the producer association started to assist members in accessing credit and equipment. The women purchased more animals from the Livestock and Rural Finance Development Project credit line to increase their production. The project empowered these traditional milk producers to become more active within their communities, make greater financial contributions to their households, and thus improve their family and community positions. Women’s active membership in the producer association enabled them to improve their knowledge and skills about livestock production and marketing. The marketing of milk created new jobs, increased incomes for rural men and women, and increased livestock production. The vision that the producer association has today is to expand its activities and marketing to vegetable production and processing, thus providing services to a larger number of agricultural producers.

*Source:* IFAD n.d.

with others, RPOs require the ability to cooperate with and understand the requirements of processors, traders, and retailers. Members need to be committed to continuous improvement in farm production, keep farm records, have access to independent information on market prices and trends, and obtain a good understanding of the value chain. It can take about four years or more to build a chain partnership, assuming that the farmers are already crop specialists. It can take a year or more to identify a good partner; a further year to develop trust, a shared vision, and a joint business plan; and another two years to ensure that the partnership is implemented successfully (KIT, Faida MaLi, and IIRR 2006).

Many RPOs lack a business and market orientation and an accounting system to track the progress of an economic endeavor. Many rural organizations originally were formed by governments to build social capital among farmers—for instance, to manage the seed funds of a project or run a

microcredit scheme—but they were not designed to respond to market opportunities. Assisting existing or new women's groups to acquire a business orientation is therefore key to developing value chain partnerships. A business orientation requires chain partners to respond quickly and effectively to early market failures. For instance, an ultimately successful IFAD project in Tamil Nadu introduced microfinance schemes as the principal tool for empowering rural women through income-generating activities. The promotion of dynamic, cohesive women's groups, which were then formed into federations, was a major component of the project. Because the postproduction linkage of marketing was not built into the project initially, participants suffered from the lack of guaranteed marketing opportunities, nonremunerative prices, and exploitation by merchants and middlemen.<sup>2</sup>

Assistance to women RPOs must therefore be based on a strong profit and market orientation. The plan for capacity development must be based on a strong chain analysis with a gender lens. Capacity development efforts must be combined with complementing services essential for developing the RPO's business—be it credit, land access, or technology upgrade.

RPO development must follow from a market and value chain analysis that identifies the specific place of the RPO in the chain and the needs and requirements from it. Capacity development proceeds from this—and may focus on market, production, technology, organization, and other issues as relevant. RPOs develop as they work in tandem with other stakeholders in the chain and learn to adapt efficiently to the system. However, significant and sustained support is needed to build strong RPOs—whether this support comes from higher up the chain or from an outside development organization.

## **GOOD PRACTICES AND LESSONS LEARNED**

The following discussion presents some innovative activities and synthesizes the lessons learned for future project and program design and implementation.

### **Promoting women's representation in RPOs**

Gender equity is a basic founding principle of the Tamil Nadu Empowerment and Poverty Reduction (Puthu Vazhvu) project. Components include ensuring that women are represented in all project-supported village institutions. Approximately 50 percent of subcommittee members are women; in the economic activity groups one of the two leaders has to be a woman, and a quorum can be achieved at meetings only if

50 percent of the attendees are women. To ensure that project activities aimed at securing livelihoods and promoting economic activities are relevant to women, a special focus is given to providing women access to skills, information, resources, and assets. Long-term arrangements for credit, technical inputs, and markets have been set up to support women and their enterprises beyond the end of the project. Women from the poorest households, and those facing special circumstances (widows, the destitute, the deserted, and sex workers), are offered special support (World Bank 2006a).

In Tanzania the Participatory Agricultural Development and Empowerment Project advises that women make up at least 40 percent of the Community Investment Subproject Committee and the Farmer Group Investment Subproject Committee membership in each project location. Women-only subprojects are allowed. At least two signatories for subproject accounts must be women. Either the chair or the secretary of any subproject must be a woman, and village-level microplanning is done so that community members, including women, can participate in planning and prioritizing needs (World Bank 2006b).

In Chad women play a critical role in collecting fruit, fishing, cattle rearing, and processing and marketing farm produce. In response, the Agriculture Services and Producer Organizations Project seeks gender equity by requiring that subproject service providers take the viewpoints and concerns of women into account, that the departmental committees selecting subprojects prioritize women's groups and their plans, that at least 20 percent of the membership in all new committees established to implement or supervise a project must be women, and that at least 40 percent of the subprojects are to be managed by women (World Bank 2003). To date, over 3,000 subprojects have been approved, 40 percent of which have been implemented successfully by women.

### **Developing RPO networks**

RPOs can increase their economies of scale and bargaining power by linking with other groups engaged in similar activities. "The Inter-group Resource Book: A Guide to Building Small Farmer Group Associations and Networks" (FAO 2002) describes how a participatory approach can be used to establish intergroup associations in rural areas. Key points include the following: (1) the RPO should establish a matching fund to ensure group commitment; (2) in some locations the private sector cannot deliver equity and efficiency benefits to poor people, and public support is required for RPOs to help women overcome poor access to resources and markets; and (3) an RPO does not have to offer the same services

everywhere. According to need, an RPO may provide specialized services to its members, for instance, access to inputs, bulk purchase of supplies, and group marketing. In some areas separate group enterprises might be required to ensure that both women and men can be involved, whereas in other areas mixed groups might be more acceptable. Sometimes women and men may work together but on separate tasks.

The opening of community-managed procurement centers, an innovation piloted in the Andhra Pradesh Rural Poverty Reduction Project in India, successfully demonstrated ways to combat the lack of market access among poor women and men. The key innovations of the project, which have contributed to the social and economic empowerment of the rural poor, include (1) promoting of RPOs and federations, which organize the dispersed farmers to aggregate commodities; (2) localizing the value chain, bringing the market to the village level, and providing a “one-stop shop” for buyers, input suppliers, traders, and producers; and (3) promoting business expertise within the village and increasing transparency in transactions (see Innovative Activity Profile 2 for details).

### Supporting women in developing chain partnerships

Box 5.10 provides examples from Nicaragua and Peru to illustrate the added value that an explicit gender focus can bring to women’s associations. Nicaraguan women’s coffee is marketed in the United States under a separate label from other Nicaraguan coffee. Aside from helping the women develop their technical capacity in all aspects of coffee production, the program has helped them acquire land titles, thus ensuring their control over fundamental productive assets. In Peru a dedicated marketing channel is also devoted to women’s coffee. Capacity development aims to strengthen the women’s self-esteem and leadership capacity. Their coffee is supplied free to homeless women in Canada, thus highlighting the brand’s solidarity credentials.

### Combining efficiency and equity objectives

The sheer cost of collecting produce from farmers in isolated areas means that the poorest and the most ethnically marginalized producers may not be reached. A study of Maquita

#### Box 5.10 Nicaragua and Peru: Chain Partnerships with Women’s RPOs

##### *Las Hermanas (“The Sisters”) coffee, Nicaragua*

Located in the Department of Jinotega, where 65 percent of Nicaragua’s coffee is grown, a fair trade and organically certified coffee growers’ cooperative (the Sociedad de Pequeños Productores Exportadoras y Compradores de Café SA [SOPPEXCCA]), has received special recognition for a program called Las Hermanas (“The Sisters”) coffee. This coffee is grown entirely by the cooperative’s 148 women (its total membership numbers 450). In 2006 Peet’s Coffee featured Las Hermanas in retail stores across the United States. SOPPEXCCA is led by a woman, Fátima Ismael, and the organization has been critical to helping its affiliated women farmers gain titles to land and to produce, manage, and market their own coffee. To promote income diversification, SOPPEXCCA introduced its coffee farmers to organic honey production for sale in local markets. It has also facilitated a

primary education campaign and constructed or repaired many local schools.

##### *Café Femenino: A Peruvian Women’s Coffee Production Cooperative*

Café Femenino is a women-owned brand of coffee grown in northern Peru and sold in U.S. and Canadian markets as fair trade. The coffee is also supplied free to local women’s shelters in Canada through Women in Crisis. Café Femenino seeks to foster change in the prevailing socioeconomic order, and its Café Femenino Foundation helps to improve local perceptions of women’s role by supporting programs and projects that generate income that women control. Forums focus on building self-esteem and leadership. With the help of organic and fair trade premiums, much progress has been made to improve conditions in coffee-growing areas, including better nutrition, improved sanitation, new wet-processing mills, and many miles of new roads.

Sources: For Nicaragua, [www.ecologicfinance.org/borrow\\_nic.html](http://www.ecologicfinance.org/borrow_nic.html); for Peru, [www.cafefemeninofoundation.org/story.html](http://www.cafefemeninofoundation.org/story.html); for Women in Crisis, [www.planetbeancoffee.com/CafFem/index.html](http://www.planetbeancoffee.com/CafFem/index.html).

Cuschunchic, a fair trade initiative in Ecuador, shows that it focused very narrowly on areas of high cocoa production and on the specific ethnic groups that grew cocoa (Nelson and Galvez 2000). Isolated communities may be uniformly poor, be largely subsistence oriented, and use migration and wage labor as primary coping strategies. Can chain partnerships be developed if “economic potential” is a criterion for geographic targeting, and is “economic potential” a criterion of overriding importance when attempting to bring poor people into value chains? Equity and efficiency criteria may clash—and threaten the long-term commercial viability of a project.

The question of who pays for organizational development, and for how long, needs to be examined carefully, particularly when equity objectives are to be achieved. The case of fair trade is instructive, because it makes a deliberate choice to foster equity as well as efficiency. This commitment can mean that buyers and other intermediaries may find themselves working with poorly organized RPOs to achieve equity objectives. The question then arises as to which partner in the value chain should arrange and pay for organizational development to enable the RPO to become economically effective. In Peru, for example, Biorganika, a subsidiary banana company owned by Solidaridad (the fair trade company behind the Max Havelaar brand), works with 200 marginalized small-holder families to certify and export bananas as “fair” and “organic.” Few NGOs are active in the region, so Biorganika itself—a commercial company—spends much time and money on developing capacity in RPOs. Tensions have developed among project partners because of the costs involved and the lack of clarity over which partners are actually responsible for developing capacity in the RPOs (Guijt and van Walsum forthcoming).

One way to address these issues is to combine efficiency and equity objectives by forming partnerships among a range of commercial and development actors. In Rwanda poor widows were successfully targeted by an essential oil project that enables them to sell quality produce into the international organic chain (box 5.11). The equity agenda supported the project’s economic efficiency objectives by organizing women into cooperatives, providing them with good training, and providing quality technology—good plant genetic material was the key to commercial success. Several social enterprise initiatives are currently ongoing, including several funded by Care International in Africa, where a collaboration is formed between producer groups, a private marketing (and/or processing) firm, and a development organization—with the development organization supporting the unsustainable costs of initial capacity building of smallholders.

In Afghanistan a project found that it could involve women as farmers by working with, rather than challenging, existing gender roles and responsibilities. The project helped women to upgrade their poultry farming practices, and to market their products through specially designed marketing networks (box 5.12).

## GUIDELINES AND RECOMMENDATIONS FOR PRACTITIONERS

- Supporting women’s RPOs to become effective chain partners is often a slow process, in part because of the social welfare origins of many RPOs and women’s organizations. A step-by-step process of capacity development may be required, with the RPO taking on more tasks as its ability to access market opportunities, services, and investments improves. Although gender equity may be one of the project objectives, for success any RPO must be designed and function on completely commercial viability terms.
- A gendered understanding of existing market linkages and the roles men and women play in specific value chains is needed before plans are developed between chain partners to upgrade or internationalize the selected value chain. Without such an analysis, women may lose out—in terms of access to and control over land and other productive assets, as managers of gene flows, and as market women in local markets.
- Postproduction market linkages need to be strongly built into all projects. Profit is the bottom line.
- Strengthening women’s voice requires more than ensuring that women are represented on mixed-gender RPO committees, which tells us little about their levels of participation. The means of achieving substantive gender empowerment need to be discussed.
- Project partners must clarify their respective responsibilities for organizational development of RPOs (who will do what, and when will the assistance end). This clarity is particularly important when trying to shift an RPO selected for equity reasons into an economically effective organization. Commercial RPO development is a very complex task that requires a total commercial orientation among project or program staff while keeping the social objectives intact. There is a long and sad history of unsuccessful RPOs around the world due to inadequate, non-commercial based, or misguided institutional support.
- It is necessary to promote a conducive legal environment with laws and regulatory systems that promote growth and recognition of economic RPOs.



### Box 5.11 Rwanda: Organizing Women to Enter Chain Partnerships

Agribusiness in Sustainable Natural African Plant Products (ASNAPP), a continent-wide agrienterprise, focuses on the cultivation and use of high-value natural plant products to enable African agribusinesses to compete in local, regional, and international markets. Products include herbal teas, culinary herbs and spices, and essential and pressed oils, as well as medicinal plants.

The Ikirezi Natural Products Project was initiated in 2002, when ASNAPP performed product and market assessments for agricultural products in Rwanda. ASNAPP recommended essential oils, particularly geranium and eucalyptus, as attractive agribusiness opportunities. A joint project between ASNAPP and World Relief Rwanda was established to study the viability of commercializing geranium oil. Initial funding for the pilot project was provided by the United States Agency for International Development. Following successful piloting, Ikirezi Natural Products was founded as a community-interest company in August 2005. Ikirezi's objective is to produce high-quality essential

Source: [www.ikirezi.com](http://www.ikirezi.com).

oil for local and international markets. It works with three cooperatives with 150 members, 94 percent of whom are widows and orphans—groups that the project specifically wished to include. The cooperative farming structure was identified as a valuable social arrangement for fostering reconciliation, unity, and relationships among farmers, in addition to being an appropriate business mechanism. Ikirezi provides cooperative members with training in agribusiness management and HIV and AIDS prevention and care. Key features include the following:

- Mobilizing farmers into associations and providing technical assistance
- Constructing two 200-kilogram-capacity distillation units to produce international-quality oil in situ, thus reducing costs
- Acquiring ECOCERT organic certification
- Establishing a network of domestic and international partners with technical expertise in essential oils, and winning Rwandan government support.

### Box 5.12 Afghanistan: Upgrading Women's Poultry Farming

Income generation and food security are critical concerns in Afghanistan, where women have experienced discrimination and exclusion from access to public resources for many years. Village poultry production is a culturally acceptable practice for women that addresses both the food insecurity and income generation needs of the household. Poultry provide scarce animal protein and can be sold or bartered to generate income. The Rebuilding Agricultural Markets Program and Food and Agriculture Organization sponsored a project that developed an innovative organizational structure enabling village women to receive training in poultry production, obtain production inputs, and access markets on a sustainable basis. A network of

women links village producers, through district Poultry Producer Groups, to the provincial center, where there is a technical resource base that supplies inputs and market opportunities. By November 2005 the three-year project had trained 21,364 women in poultry management and organized 850 producer groups. The training and organizational development have helped women to increase their household income; about 2,545,281 eggs are produced each month, valued at an estimated \$311,032 (which comes to \$20 per producer per month). Project results demonstrate that village women can be organized into an effective marketing network that links women poultry producers to urban markets.

Source: Thomas R. Fattori, "Organizing Afghan Women to Generate Income from Poultry," [www.globalfoodchainpartner.org/cairo/papers/TomFattoriAfghanistan.pdf](http://www.globalfoodchainpartner.org/cairo/papers/TomFattoriAfghanistan.pdf).

## Supporting Agricultural Value-Adding Strategies

Strategies to add value that are close to the producer or district level help to ensure that more rents are captured for poverty reduction, provided that attention is paid to producers' ability to bear risk. A major challenge in market development is to ensure the equitable distribution of gains. Women historically have been excluded from gaining higher shares in value chains. Careful planning and management of interventions is required. This Thematic Note explores how the promotion of strategies to add value can help meet equity and efficiency objectives.

One approach for adding value to products and capturing higher financial benefits involves assisting women to become crop specialists while maintaining a clear market orientation. Women may need to improve their production skills, and they may need training in a set of farm management skills, such as crop and livestock production, planning, record keeping, and financial management. The time it takes to become a specialized farmer depends on the existing assets and capacities of the farmer, the type of product, and the type of market. To produce for export markets is far more demanding than to produce for local markets; it may take many years to develop the necessary skills (KIT, Faida MaLi, and IIRR 2006).

Another value-adding strategy involves helping farmers move into processing and marketing to add value to the product. This strategy also provides opportunities for landless women to enter the value chain by offering processing and marketing services to local farmers. Intervention needs to focus on marketing and market management capacity development; investments in facilities for processing, marketing, and distribution (infrastructure and professional staff); developing market outlets; designing and implementing management systems (operational procedures); and developing organizational discipline. RPOs help save costs through joint input procurement, processing, marketing, and other activities. Their key competencies should include quality grading, market outlet development, and logistics

management. Thematic Note 3 discusses ways to develop the organizational capacity of RPOs to meet the needs of women members.

### FINDING OPPORTUNITIES IN VALUE CHAINS

Opportunities for value adding for women may exist through an upgrade of their current role in a value chain, moving up to additional roles in value chains (for example, into processing), finding new products and becoming dominant members of a new value chain, and increasing efficiency in current interaction in the value chain. All are based on concrete analysis of the markets and value chains with a gender lens. At the minimum such an analysis should ensure that women and other disadvantaged members of chains, or women in sectors impacted by the chain, are not negatively affected by the way the chain is organized and functioning.

Chain partnerships are often highly gendered: men speak to other men when brokering agreements between producers and buyers. If this dialogue does not take into account actual and potential gender issues, women may lose out. For example, women often stand to lose when export markets are developed for local commodities. A gendered understanding of the costs and benefits to women when value chains are internationalized will not be captured if women farmers, processors, and marketers are not consulted. A gendered analysis of existing market linkages is also needed. An examination of Fair Trade mango production and marketing in Burkina Faso showed that some women gained from the new employment opportunities provided by the packing station, but other women suffered from reduced marketing opportunities. Mangoes that women used to sell locally are now marketed internationally, and women's role in the international marketing chain appears to be much smaller than it was in the local market (Guijt and van Walsum forthcoming). Not only may women lose their role as marketers in the local

market, but they may also lose access to land, access to other productive assets, and their roles in managing gene flows.

## GOOD PRACTICES AND LESSONS LEARNED

The following discussion presents some innovative activities and synthesizes the lessons learned for future project and program design and implementation.

### Adding value to existing products

Dairy farmers, many of them women, in the Thika district of Kenya added substantial value to their products in a short time. The key to success (and project sustainability) was to involve farmers from the very beginning. They participated in the baseline survey, worked on the problem analysis, and were involved in the planning and implementation of the project. They realized that they had land and labor; they just needed to organize themselves. This knowledge gave them the capacity to take on new roles and develop their management skills. The farmers have added milk collection, transport, processing, and sale; cattle breeding; feed formulation; and feed processing to their activities. Women dairy farmers in particular capitalized on their existing skills. By baking snacks to accompany the main product they accessed a whole new market—customers who wanted a bite to eat and a drink on the spot. Women were also strongly represented

on decision-making boards. The groups elected their own management committees (40 percent of the committee members are women) to take them through their plan.

A District Poverty Initiatives Project in Andhra Pradesh, India, brought landless women laborers together. They bought produce from farmers who are men, transported the produce in bulk to the market, and negotiated good prices with buyers in town. Farmers who are men were relieved of the onerous task of bringing their crop to market, and their wives were fully informed of the price that their husbands were paid, providing them with the basic information they needed to negotiate household and personal consumption budgets.<sup>1</sup>

A UNIDO project centering on the olive oil chain in Morocco was able to ensure that although men were trained, women were able to maintain control over the entire chain, from picking olives to selling to the final consumer. The women already knew how to make and market olive oil; upgrading and professionalizing this knowledge were critical to project success. The women were trained in improved production techniques, resulting in much-improved, more healthful, and better-tasting oil with minimum postharvest losses. As a consequence of their training in marketing skills, they went to the consumer rather than waiting to be approached. The women could risk undertaking such a steep learning curve because their efforts were backed by a strong network of local training and commercial institutions that offered complementary support (box 5.13).

### Box 5.13 Morocco: Improving Olive Oil Production and Direct Marketing to Consumers

Women entrepreneurs in Chefchaouen, Morocco, used to produce olive oil using highly labor-intensive, unsafe methods that resulted in substantial losses of oil. Once the oil was bottled, the women waited for customers who came to their door. The olive oil was very acidic and posed potential long-term health risks to consumers. UNIDO introduced a mechanical olive oil production unit using locally available technology. Women producers learned to harvest the olives, produce healthful oil, and control its quality and acidity. Training sessions helped them improve their marketing skills.

The women are now building facilities where they will install new equipment. They have been assisted in purchasing packaging materials, registering trademarks,

*Source:* [www.unido.org/doc/27778](http://www.unido.org/doc/27778).

and preparing labels and promotional materials, and they are selling their oil from kiosks in town instead of from their homes. A strong network of local support institutions has been built up with the backing of the Ministry of Industry, Commerce, and Communications, as well as a network of trainers in production technology and in business management and marketing. In total, UNIDO taught over 300 women and 50 men to produce better, safer olive oil that could command a higher price. Productivity increased by up to 40 percent. Five other groups joined the first association, resulting in a federation and the natural development of a cluster. Selling through kiosks in town has helped sales increase by at least 85 percent. Overall earnings have as much as doubled.

### Developing new products

Innovative products can be developed through pro-poor, gendered value chain analyses that meet the requirements of producers and consumers. Box 5.14 provides an example from the Philippines.

### Financing value-addition strategies

Involving women in technology development is important, but poor women with weak access to markets may still struggle with financing even low-cost processing technologies designed to add value to their produce. Box 5.15 shows how this problem was addressed in South Africa.

### Organizational and marketing capacity

In strongly gender-segregated, lengthier chains, it is important that women and men perform their tasks well, to

ensure that maximum profits and minimum spoilage are achieved at each stage. On the northern Caribbean coast of Honduras, an initial training course (provided by the FAO Livelihoods Diversification and Enterprise Development Project) helped women understand that they would need to organize into groups. Moreover, the project helped appraise livelihood options and trained women and men in marketing skills to improve their incomes (box 5.16).

Even the poorest of women, without key productive assets like land and machinery, can enter value chains by engaging in product development, processing, and marketing services. In India a livelihood chain analysis identified commercially viable products in the informal economy. These included tissue-paper bags used by the hotel industry, shoe covers used by visitors to monuments, and incense sticks. Participatory Livelihood Plans were developed with organized groups of

#### Box 5.14 Philippines: Developing New Products

In the Philippines, rice was laborious and time-consuming for women to process by hand. The raw material was limited, because the glutinous rice varieties that women grew produced poor yields and little land was devoted to glutinous rice cultivation. Indeed, sales of glutinous rice contributed only marginally to household income, and so glutinous rice was not a high priority for plant breeders. After talking with women farmers, the Women in Rice Farming Systems project developed a study that included both formal surveys and household- and market-based action learning with women and men farmers. The results demonstrated the importance of glutinous rice sold in its processed form as a specialty product. It provided a high percentage of women's incomes, enabling them to fulfill their responsibilities for key household inputs and food management. A new, early maturing, and higher-yielding variety was developed that compared favorably in taste and eating quality with local varieties, and dehulling machinery was developed in collaboration with the women processors. This equipment improved labor efficiency and reduced the drudgery involved in hand pounding. The value-added gross returns were 70 percent.

*Source:* Paris 1989, cited in Farnworth and Jiggins 2006.

#### Box 5.15 South Africa: Financing Value Addition

In the early 1990s women's groups in South Africa's Limpopo and Gauteng Provinces started small-scale peanut butter processing and marketing to earn additional cash. Traditional processing methods were used, including labor-intensive roasting and manual stone grinding. Under these circumstances only small volumes could be processed, resulting in limited profit margins and low cash earnings. Following requests by the women's groups, a low-cost mechanized processing technology was developed jointly by the South African Agricultural Research Council and Wageningen University and Research Centre. The equipment was supplied to the groups on a loan basis, which was to be repaid from the profits of the operation. Intensive training in the use and maintenance of the equipment was provided, and the results were monitored closely. Various technical adaptations to the equipment were made, based on the groups' experiences. The technology was easily mastered by all pilot groups, and total sales and the profits of peanut processing increased. Because of better marketing opportunities, results in the periurban and urban groups were spectacular: the urban group repaid the cost of the equipment after only one year. For the rural groups, the major obstacles remain the initial investment costs and the development of marketing channels.

*Source:* Wanders 2003.

## Box 5.16 Honduras: Improving Women's and Men's Organizational and Marketing Abilities

A majority of both women and men in the project area depend on artisanal fishing. The Livelihoods Diversification and Enterprise Development Project in Honduras offered a 30-day course to men fishers and women traders that covered theoretical and practical issues, including quality control, manufacturing best practices, basic accounting, and processing techniques. Mixing the genders led to improved understanding of each other's needs. Thanks to the training, women increased profits by 20 percent. Both women traders and men fishers now want access to technologies such as ice makers and small freezing cabinets. Men are already organized into a fishing cooperative, which

*Source:* FAO 2006.

makes it feasible to purchase the technology; women are now planning to form an association, recognizing that it will help them access equipment that will reduce their everyday vulnerability, improve fish storage, and thus improve market prices. Furthermore, the project leadership expects that any increase in profits from fish sales would impact positively on household nutrition and food security, given that women would control the profits. The option currently under consideration is to provide one ice production facility to the men-owned cooperative, and a second to the municipality, with open access to registered fishermen and women traders.

women residents followed by sample development and establishment of marketing linkages, negotiations with the target customers, and design improvements. The Center for Urban and Regional Excellence supported the initiative through mechanisms that enabled residents to engage with the concerned agencies (USAID 2006). Box 5.17 describes how landless women were able to offer critical services to men farmers, which benefited all concerned. There are two key lessons here: (1) a step-by-step approach was taken to build the women's skills base and expand their enterprises and (2) women were already organized into a group, so training focused on developing their skills as a group.

### **GUIDELINES AND RECOMMENDATIONS FOR PRACTITIONERS**

- Women and men need a clear understanding of their roles and responsibilities in relation to other actors in the value chain to develop vertical integration strategies aimed at providing a good quality product, minimizing postharvest losses, and meeting consumer demands. To achieve this goal, value chain analyses should be conducted (see the Overview).
- Gender analyses should be coupled with market research to obtain information on the most suitable crops or activities along the value chain, which should be prioritized for equity and efficiency gains. Women need direct

access to market information, rather than obtaining this information through their husbands.

- A step-by-step approach should be adopted to build women's skills base and expand their enterprises.
- Project strategy should be based on this strong analysis—and should be very market and profit oriented if women are to compete in competitive value chains. Besides capacity development, other necessary essential elements may include technology adaptation, credit supply, and land reform. Project design must be integrative and include all of these.
- Upgrading existing activities is a relatively simple way of capitalizing on, and improving, women's current capabilities. The market already exists; the key is to supply it with an improved product and to develop a targeted marketing strategy to win customers. To do this, investments can be made in processing technology and in improving women's marketing skills.
- Other potential businesses could be niche crops or markets identified by the market assessment, in which women may have a particular advantage.
- Women may be able to increase their income by capturing additional activities within the chain—for example, by forward integrating into processing.
- Innovative approaches to product development and marketing can help poor women without key productive assets, such as land, to enter value chains.

### Box 5.17 India: Women without Key Productive Assets Enter Value Chains

The District Poverty Initiatives Project (DPIP) in Andhra Pradesh uses women's self-help groups as a starting point to empower the "poorest of the poor"—a group it identifies using several criteria. One of the project's activities is helping women in self-help groups to form affinity groups consisting of very poor women in a village who engage in similar economic activities. The project then helps these groups of producers move up the value chain by moving closer to consumers. Critical to this effort is an emphasis on collective (rather than individual) economic activity. Typically the first step is to help the group practice their current method of production more efficiently. For example, split-bamboo basket makers may start buying bamboo poles collectively, which lowers the price they pay.

Once an economic affinity group has developed ways of conducting their current method of production more efficiently, the project works with them to create new forms of economic activity. For example, one group began as landless agricultural laborers.

*Source:* [www.rd.ap.gov.in/velugu/velugureportskaren.htm](http://www.rd.ap.gov.in/velugu/velugureportskaren.htm).

With the help of a woman agricultural specialist provided by the project, these women devised a scheme to buy from village farmers and sell it in the nearby town. The group realized that most village farmers had little to sell, paid a great deal to get their crop to town, and received poor prices because they lacked the leverage to demand a higher price. The women took out a sizable loan from the DPIP and then offered the village farmers the going price for their crop. Because the total crop that the group was brokering was quite large, they could arrange transportation at a lower price per kilo, and—with the help of the technical advisor provided by the project—they drove a good bargain with buyers in town and realized a significant profit. The profit was sufficient to repay the loan and put money into a bank account to fund a new set of activities, which first focused on learning how to grade the crop. The women then diversified into new crops. Each cycle brought further collective profits, which were put into the group's bank account to capitalize their next venture.

## Bangladesh: The Six-Step Marketing Extension Tool

### PROJECT OBJECTIVES AND DESCRIPTION

**M**arketing involves finding out what customers want and supplying it to them at a profit. The marketing extension (ME) process is about raising incomes through marketing education courses and subsequent complimentary services.

ME interventions include (1) *marketing education* (creating a better understanding of the process, the market and its demand, and terms of products and services), (2) *coordinating* (mobilizing groups, organizing events, and getting things started), and (3) *forming business linkages* (making introductions between buyers and sellers and facilitating the start of new trading relationships).

The ME process works with CBOs (community-based organizations). The six steps in the process are designed to empower community members to identify market opportunities and plan how to exploit them:

1. *Resource audit*: The analysis of resources, including embedded skills, resources and equipment, existing marketing arrangements, and knowledge.
2. *Selection of target products*: This step involves detailed cost studies, analysis of alternative markets, and the selection of location(s) for market research.
3. *Market research*: A task force holds discussions with traders on potential products in terms of prices, quantities, quality, and market opportunities.

**What's innovative?** Marketing extension requires relatively little development support and resources but has proven to have huge payoffs, especially where poor women have been socially and culturally constrained from exploring their opportunities in the market.

4. *Analysis of findings*: The market research findings and potential profitability of alternative products are analyzed.
5. *Product choice*: A strategic choice of products is made for marketing development.
6. *Planning*: An action plan clearly delineates activities, responsibilities, and timing for the selected products, setting out what will be done, when, and by whom.

### PROJECT OBJECTIVES AND DESCRIPTION

The Village and Farm Forestry Project (VFFP) was implemented by Intercooperation (a Swiss international NGO) with financing from the Swiss Agency for Development and Cooperation (SDC). The project—part of SDC's larger Sustainable Land Use program—sought to support agroforestry in greater Rajshahi, in northwestern Bangladesh, by promoting quality planting material, introducing new varieties, and improving agroforestry techniques, notably in fruits, timber trees, and vegetables (mainly for homestead gardening). During the project's sixth phase, economic and market dimensions were introduced. It was obvious that poor farmers' lack of marketing knowledge was a major constraint. FAO had developed a "market education" approach, which was tailored to the project's needs in northwestern Bangladesh with assistance from missions from the United Kingdom (Accord Associates; Dixie 2005) and Switzerland (Intercooperation). The adapted approach became known as "The 6-Step Marketing Extension (ME) Tool," and in 2003 trials of the Marketing Extension Course began.

The experience had many positive outcomes. After the VFFP concluded, the course was continued and the market approach reinforced under the aegis of the Livelihood Empowerment and Agroforestry (LEAF) Project, initiated in 2004 with guidance from Intercooperation and financing from SDC. The ME tool, which is one of the components of

LEAF's market approach, is the entry point for teaching basic skills that enable community members to choose and develop the most appropriate economic activities.<sup>1</sup> After further development, the pilot ME process was tested with 12 CBOs. Based on this field experience and feedback from the CBOs, the methodology and tools were adapted and then implemented in 80 CBOs in 2004.

## BENEFITS AND IMPACTS

*Profitability at a glance.* During the monitoring period (from 2004 to June 2006), 11,000 producers from 455 CBOs were active in 15 sectors, including vegetables, milk, handicrafts, minigardens, poultry, fish, and sand. At least 60 percent of the CBOs formed marketing groups to sell their products in bulk and negotiate higher prices. These groups also sought ways of improving or diversifying their output. As a result, the estimated average monthly profit increased to \$55 (\$2 per day per producer).

The CBOs have successfully integrated vulnerable members of the community. For example, women remain highly represented (up to 65 percent), with some even leading their CBO. Also, 25 percent of the extreme poor (landless, Adivashi-tribal communities, and women-headed households) are now running small businesses within groups in LEAF areas. The various income-generating activities developed in the CBOs have helped diversify livelihood prospects and limit income insecurity among these vulnerable groups. The field facilitators from LEAF's partner organizations have transferred their competencies to newly recruited "local service providers" to ensure that the intervention is sustained even after the project ends.

*Community-based organizations develop new capabilities.* Conventionally, CBO members select income-generating activities based on three criteria: known skills, proven success, and existing local markets. Rarely would their market investigations extend beyond the calculation of income (price  $\times$  volume). For this reason the notion of product development, with the accompanying consideration of production costs and profits, was new and challenging for the CBOs. Selecting potential income-generating activities and then undertaking market surveys reinforced the groups' confidence and abilities to analyze market conditions.

The new skills increased the capacity of CBOs to select relevant economic opportunities and encouraged them to expand beyond traditional practices and identify diverse products and niche markets. To their benefit, they have adopted the practice of calculating production cost/profit margin to assess financial risks. Most CBOs had very limited

and unreliable information about markets. Often local traders were their only source of information. These buyers could take advantage of the villagers' limited information, knowing that they were unlikely to travel more than five kilometers beyond their homes.

Traditionally local traders have developed relationships with CBOs and villagers, sometimes even providing private loans. Such relationships can create a climate of dependency that prevents CBOs from seeking other buyers. (In their defense, it should be pointed out that the traders themselves have limited market awareness.) Through market surveys CBOs discovered how diverse and dynamic the larger market is. They became aware of the different players (middlemen, wholesalers, retailers, and others) and learned how to collaborate with them. They gained knowledge, understanding, and confidence through these interactions to communicate better and more directly with other actors in the market. Being able to compare their products to what was available in the market was a valuable experience as well. Seeing the quality, quantity, and diversity of products allowed them to make realistic assessments regarding their own production potential. After considering the limitations of their own CBOs, they could design a suitable marketing strategy without being too ambitious. The positive results of these market surveying trips persuaded many CBOs (27 percent) to make surveys a regular tactic in planning their marketing strategies. These visits also reinforce links between CBOs and traders.

*Inspiring new initiatives.* The lack of financial and physical assets generally has prevented the poor from expanding their production. They could sell their small surplus only to local traders. As a result of the ME process, the CBOs quickly moved to overcome this problem. They organized groups to negotiate with and sell to distant traders. By June 2006, 58 percent of 455 CBOs had done this for their existing products. Another 21 percent had established community-level collection centers to attract new traders from farther away. The results are encouraging, with 35 large traders collaborating with various CBOs.

*Benefits for the extreme poor.* As mentioned earlier, the extreme poor represent 25 percent of CBO members involved in marketing. At least 2,775 people (landless, Adivashi-tribal communities, and women who head households) have benefited by way of increased income and access to markets. Experience also suggests that the extreme poor have been able to raise their status in relation to traders. Half of the CBOs' action plans incorporated at least one income-generating activity specifically designed to help the extreme poor. Another innovative action taken by some CBOs was to



use part of the working capital earned from savings to assist the extreme poor in starting up their own businesses.

*Using professional service providers.* To fulfill the targets agreed upon after the market survey, CBOs needed the help of various “experts.” Notably, in the handicraft sector, skilled traders could help teach design techniques, providing training services while linking the CBOs’ products to markets. LEAF helped 42 percent of CBOs find service providers to assist with quality improvement and marketing. This assistance includes identifying service providers, providing linkages with them, and even supplying financial support when necessary.

## LESSONS LEARNED

- Facilitation anchors the ME process and is therefore crucial for success. The person who assumes this role is known as the “service provider ME” and must have skills in capacity development and marketing. To ensure that the service provider transfers these skills to CBO members, formal training and field training are delivered throughout the program. LEAF assists with the coaching of participants.
- A strong task force is needed to develop marketing activities in a sustainable way. The selection of the task force by members of the CBO was risky, in the sense that task force members might adopt an elite identity separate from the interests of the greater community. In fact, this has not been the case. Generally the selection of trustworthy people has reinforced social links within the CBO. Having this small committee accelerates the investigation and analysis, reducing the number of meetings. People make a point of attending decision-making sessions, especially the extreme poor, if they feel they will not be wasting time. Since the task force is made up of local people, information can be shared informally on a daily basis. LEAF has tried to ensure that the task force does not create a powerful knowledge gap, which would sabotage the community empowerment process.
- A joint approach to marketing quickly gained acceptance because of the advantages of acting as a large group. In the past, suspicion of others stealing valuable contact or product information led people to be quite secretive and solitary when selling their goods. However, after the first exercise in which people shared their marketing problems, they discovered better solutions when acting as a group. Groups with strong social bonds (from shared cultural values, land, and location, for example) were quick to select a suitable product to produce cooperatively. Interestingly, women’s groups were even more efficient than other groups in starting practical economic activities. Trust was a precondition for enacting joint strategies and establishing reliable networks with traders.
- Participants claimed that the market survey was the most powerful step in the ME process, because immediate benefits were often derived from contact with business-people and service providers. They valued the skills they learned, which gave them confidence that they were making informed decisions when pursuing suitable income-generating activities. Because the financial incentives are clearly linked to the market survey results, however, it is critical to involve all members at this stage, and not task force members alone.
- The ME process can be considered a formal introduction to people who need skills to become active rather than passive players in commodity transactions. The process can be expanded to select and explore one segment of the market in detail (market actors, price, designs, and other aspects). In this way the ME approach becomes a market assessment tool.
- By learning about markets and gaining initial experience at the microlevel, it has been possible to integrate the extreme poor and vulnerable groups, including women, who might otherwise have been excluded from the ME process. Shared interests and backgrounds have created a favorable environment of trust among the different categories of poor people, and these small groups have gradually raised their voices and assumed responsible roles, notably in group marketing.
- It is interesting to observe that exclusively women’s groups built up their confidence to perform all of the lead roles, retaining ownership of the group even when men were invited to join for practical reasons (such as taking products to markets). The additional family income generated by the women has also earned respect and support for their endeavors from their men counterparts. Conversely, mixed groups quickly allowed men to take charge, leaving women on the fringe.

## ISSUES FOR WIDER APPLICABILITY

- The quality of instruction given by the field facilitator or service provider is commensurate with the degree of success attained through ME. Because there has been a huge demand to extend ME services to CBOs, reinforcing the numbers of process “experts” has become a priority. Training resource farmers to become service providers and field facilitators has had encouraging

results. The lack of proficient personnel is exacerbated in isolated communities, where the local or district network of professional services is not available to meet their business development demands. LEAF must ensure that there are enough people to give quality instruction to maintain high standards and should not expand programs prematurely.

- The extreme poor still risk exclusion from the marketing processes owing to their lack of skills. Being illiterate, with few assets and minimal spare time, means that they cannot contribute to the same degree as their counterparts. The objective is not simply to use this group as labor but to ensure that they develop the skills that enable them to participate. Smart subsidies or vocational training has been proposed as a means of supporting participation by the extreme poor in business activities. LEAF needs to explore these approaches while monitoring CBOs to see if they can maintain inclusive policies throughout ME.
- The current ME is very conservative in its targets, both for profitability and for the duration of marketing activities. The additional income generated (ranging from 20–80

taka per day) should not be overlooked, but these tiny margins will not break the cycle of poverty in a sustainable way. The economic gains from participating in weak local markets cannot compare with the substantial, sustainable gains that can be made from entering the mass markets. Although diversity has been heralded as a mark of success, managing a great number of small and medium enterprises can be a significant drain on resources. For these reasons, a more profitable strategy for advanced CBOs to pursue may be to focus on fewer promising products. Few of the groups currently have the financial clout to scale up their marketing activities, and collaboration with banks then becomes a key limiting factor. Such collaboration is not easily developed, and external support to build the capacity to attract assistance from financial institutions is essential. Given these challenges, LEAF is implementing a value chain approach based on understanding of the functioning commodity chain, enabling identifying potential leverages and constraints. Ideally, this approach will promote links between CBOs, market actors, and service providers while improving the business environment for the poor.

## Andhra Pradesh, India: Making the Market Work for the Poor—Community-Managed Procurement Centers for Small and Marginal Farmers

**S**mall and marginal farmers in rural Andhra Pradesh have been subject to intensive exploitation by moneylenders, traders, and middlemen. Lack of access to the market, lack of power to negotiate prices because of extreme poverty levels, and the daily challenge of meeting minimum subsistence needs had made them vulnerable to unfair terms of trade. Procurement was done from distant markets or through village-level traders and aggregators.

The opening of community-managed procurement centers, an innovation piloted under the Andhra Pradesh Rural Poverty Reduction Project,<sup>1</sup> successfully demonstrates ways to combat this inefficiency. The procurement centers are specifically defined as community-managed, decentralized units for storing, assessing, and trading agricultural commodities. Some of the unique features include management by women self-help group members and their institutions.

### PROJECT OBJECTIVES AND DESCRIPTION

The Andhra Pradesh Rural Poverty Reduction Project seeks to enable the rural poor and their organizations to improve livelihoods and quality of life. The project helps to develop and empower self-managed, grassroots institutions of poor rural women, including self-help groups and their federations.

The project has mobilized 8 million women into about 630,000 self-help groups,<sup>2</sup> covering 90 percent of the poor. These groups have been federated into 28,282 village organizations, 910 subdistrict organizations, and 26 district

**What's innovative?** Community-managed, decentralized units for storing, assessing, and trading agricultural commodities have generated significant economic, gender equality, and other benefits, while integrating the poorest producers with the market.

organizations. The poor and their organizations have cumulative savings exceeding \$340 million and have leveraged more than \$1.2 billion of credit from commercial banks since 2000. Diversification of livelihoods and asset building has increased incomes sevenfold in six years.

### PROBLEM ANALYSIS

Landholders find it difficult to transact with markets. The public and private market players also find the transaction costs of procuring from dispersed farmers prohibitive. As a result, these agencies are unable to provide low-cost and adequate extension support services to these landholders.

Therefore, state policy is to provide minimum support price operations at agricultural market yards. However, farmers from far-off villages, especially poor farmers, did not receive remunerative prices because of the long distance to the market yards, nontransparent transactions at the yards, and the increase in transaction costs for smallholders who could not aggregate their produce.

Because small-scale farmers could not access formal sources of credit, they remained indebted to traders for inputs, and even if their land produced well, nearly half of their income was devoted to the interest payments on loans and the revenue lost from accepting low unit prices for their produce from traders. In most cases, farmers ended up making distress sales of their output to traders.

Formal, large agribusinesses could not interact with smallholders because they were uninformed about quality specifications and had no local institutional arrangements for technical assistance to meet agribusiness standards.

### INNOVATIVE FEATURES

To eliminate the unfair practices of local traders and enhance smallholders' bargaining power, village procurement centers, owned and operated by women's self-help

group members, were opened in 2003. The village procurement center addresses the lack of credit, quality control, aggregation, and market linkage under a single umbrella. The key innovations that have helped to empower the rural poor both socially and economically are the following:

1. *Creating an institutional mechanism for aggregation:* Each procurement center, on average, aggregates produce from about 500 small-scale, dispersed producers and supplies it directly to the market yard or buyer. For private as well as public buyers, it is cost-efficient to procure directly from farmers (see box 5.18 on how to set up a community-based procurement center).
2. *Localizing the value chain, bringing the market to the village level, and providing a “one-stop shop”:* Suppliers (commercial banks, input suppliers, companies trying to source raw materials) do not have to deal with a multitude of smallholders, and users (small-scale and marginal farmers) do not have to deal with different organizations for credit, inputs, and sales of their produce. A procurement center typically covers villages within a 20-mile radius, so farmers need not travel long distances to sell their produce. The centers have also adopted transparent quality control measures that enable private and cooperative agribusinesses to obtain produce of good quality and reduce the transaction costs for members.
3. *Promoting business expertise within the village and increasing transparency in transactions:* The network of grassroots functionaries in the form of trained quality controllers, bookkeepers, and storage specialists from within the community ensures transparency and efficiency in the operation of procurement centers. Market information on price and quality, displayed in the centers, is available to farmers. Now even farmers in the remote and tribal villages can access market-based information in real time by mobile phone. Quality testing and weighing are conducted by community members in a transparent manner, as opposed to profit-seeking middlemen. Farmers receive cash payment on the spot, which makes the process more efficient and favorable to the poor.

#### Box 5.18 How to Set Up a Community-Managed Procurement Center

A community-managed procurement center is a physical warehouse or depot at the village level, which is owned and operated by the members of the formal village organization. A typical procurement center contains weighing machines and other instruments, packing materials (gunny bags, a stitching machine, and markers, for example), tarpaulins, and moisture meters. The key design elements are the following:

- Conducting a value chain analysis and market survey of various commodities to identify gaps and the potential for scaling up opportunities and to identify potential procurement centers at the village level.
- Building human resource capacity at the local level. Potential community resource persons are identified and trained in bookkeeping, quality control mechanisms, and business development. Every procurement center is assisted by an organizational structure in the form of various committees, such as a purchase and sales committee, quality control committee, and village social audit committee, each of

which has a clearly defined role. A committee has between three and five members, depending upon the volume of trading. Mandatory training is provided for committee members on various aspects of commodity trading and handling.

- Developing a marketing activity calendar. Given the seasonal nature of various commodities, it is essential to prepare an activity calendar for every procurement center to plan resource needs (both human and financial, such as working capital).
- Estimating working capital requirements in line with the marketing activity calendar prepared by the village organization. In deciding how much working capital is required, consider the seasonality of the different commodities, the estimated quantity that will be procured, and the approximate storage time needed.
- Finalizing quality and grading parameters, including a protocol for the random inspection of stocks for various commodities before the start of procurement. Parameters used to assess the quality of produce are usually related to size, color, moisture, refraction, and free fatty acids.

Source: Authors.

4. *Innovating supply chain management enhancements:* A first innovation is *building a cadre of low-cost technical specialists drawn from the local community*—that is, members of the women’s self-help group or their families. Over 100,000 grassroots functionaries participate in supply chain management by operating these centers, including bookkeepers, quality controllers, business managers, and botanists. Training this cadre of resource persons has served to demystify technical assistance and make it available at the grassroots level. “Technical sustainability”—in other words, a continuous supply of “low-cost” trained staff—is thus assured. Village botanists also engage in research and development for forest products.

A second innovation is the use of “low-cost” technology to improve efficiency and transparency. Community resource persons use mobile phones to ascertain the latest market price before entering into contracts to purchase farmers’ produce.<sup>3</sup> Similarly, women quality controllers use digital technology to measure moisture and fat content and weigh produce.

5. *Using procurement centers to outsource or franchise services:* In the franchising partnership model, procurement centers are used by public and private agencies as forward procurement and marketing agents for community organizations. The project provides community members with working capital, which is used for small-scale infrastructure. It also trains the community resource persons in value addition, quality control, bookkeeping, and business skills. The value proposition for partners lies in the following features:

- Companies achieve scale across the state in multiple commodities. Outreach in remote areas is facilitated.
- It is a cost-effective channel, because the cost of value addition, quality control, and operation is extremely low.
- Transparency and quality assurance are provided by the women, who (being the final users) are efficient controllers. The institutions provide a strong support structure for operations.
- A responsible and traceable channel is available for products for emerging global markets, such as non-pesticide, organic, and fair trade products.

## BENEFITS AND IMPACTS

Since 2003 the procurement centers have handled more than 100 commodities with a cumulative turnover in excess of \$120 million and 450,000 tons. In 2007 center turnover

was projected to exceed \$80 million; by 2010 the procurement centers are projected to achieve an annual turnover in excess of \$200 million. Apart from procuring crops, the marketing concept has been extended to milk procurement. The project has formed more than 1,200 milk procurement centers at the village level and 60 bulk milk-chilling units at the subdistrict level. The current turnover from dairying surpasses \$34 million, benefiting more than 100,000 milk producers. More than 2 million self-help group members transact with the procurement centers every year, and this number is estimated to reach 5 million by 2010. Quality control and upstream value addition opportunities are now available on the ground.

### Economic benefits and impact

*Increase in income.* The close proximity of procurement centers to farmers raised farmers’ incomes by helping them to obtain better prices and reduce their marketing costs. The income gain on some commodities such as neem and lac has exceeded 200 percent. A recent impact evaluation of the partnership with APMARKFED (Andhra Pradesh State Cooperative Marketing Federation Limited) for maize procurement showed that the additional gain of decentralized marketing is highest for marginal farmers, who gained an increase of \$58 in one agricultural season. Through the partnership with APMARKFED to collect maize, the cumulative additional income generated for farmers across the state in 2005–06 was \$22 million.

*Increase in the general market price.* An evaluation conducted on the impact of maize procurement conducted by APMARKFED in 2005–06 stated that the activity increased the market price by 10 percent. For milk marketing during the same period, local market prices increased by 15 percent.<sup>4</sup> The procurement center’s price has become a type of benchmark for the village, and local traders are compelled to offer the same rates, if not more, when they purchase in that village. The market intermediation effect has influenced other trading practices, such as proper weighing and testing for moisture, which has been favorable for small-scale producers.

*Employment generation at the local level.* The procurement centers, milk collection centers, and chilling units create employment for the rural poor. Dairying generated more than 5,000 new jobs at the village and subdistrict levels. The partnership with APMARKFED created 6,000 new jobs, even during a lean economic period. An impact study on maize procurement concluded that each procurement center generated an additional wage income of \$400 over a three-month period for its employees.

*Cash payment.* Unlike traders and middlemen, who make partial payments in cash and offer the balance in the form of inputs and other supplies, the procurement center pays producers in cash at the time of purchase. This payment method gives farmers, particularly small-scale and marginal farmers, the freedom to source inputs more cheaply, and in the process it eliminates the “regressive” tied sales that were rampant in the villages. Putting cash in the hands of small-scale and marginal farmers eliminates the need to resort to informal credit to finance consumption needs.

### **Gender relations**

*Increase in participation, leadership, and technical skills of women in the rural market.* Women are managing village enterprises, an activity that requires them to take on duties that were previously in the men’s domain. Women are becoming active players in the rural market—negotiating with traders and representatives of the private and public sectors. They also handle such roles as quality controllers and logistics managers, and they engage in research and development for new products. They supervise *hamalis* (workers are laborers who are involved in transporting agricultural produce), organize transport, and work with district administration officials, thus proving their capacity as leaders and technical service providers.

*Increase in respect from the larger community.* The procurement centers benefit not only members of self-help groups but also members of the village as a whole. Owing to the benefits of their services, the women have garnered support from village elders and leaders, who in many places collaborate to provide infrastructure and logistics support to the centers.

*Intrahousehold support.* The maize procurement study indicates that because women work in the centers for over 10 hours, often until late at night, their families provide support. Their domestic workload is shared by other women in the family and husbands. This finding demonstrates women’s increased mobility and enhanced decision-making space within the household.

### **Making community institutions sustainable**

Collective marketing by procurement centers has strengthened village organizations in many ways. First, by generating income and adding to the institutional corpus of funds, the procurement centers serve as a business model for village organizations. In the paddy procurement season of May–June 2007, 300 centers received a commission of over \$850,000 for six weeks of work from the Civil Supplies

Corporation. Second, members’ participation in the activities of self-help groups and village organizations has risen because of the benefits yielded by the centers. Finally, the successful operation of procurement centers as franchises for public and private partners has changed the perception of the centers’ viability and potential. They are now considered profitable partners rather than mere recipients of grants. Mr. Sinha, managing director of the Andhra Pradesh Civil Supplies Corporation, observed, “At first we used to procure from agrimarket yards directly. We did not have the capacity to spread into the villages. However, this program has given us a platform by which we can bridge the gap between the government and the small/poor farmers.”

### **LESSONS LEARNED AND ISSUES FOR WIDER APPLICABILITY**

- Tremendous social capital exists in various community organizations managed by women, such as the self-help groups and other user groups. Systematic initiatives to build human capital through training in business development, quality control, and market research can enable local institutions to generate significant economic capital and other benefits, while enabling small-scale producers to integrate with the market. This kind of economic empowerment requires significant investments in market-based and management skills for women.
- Investments in community institutions, human capital, and credit should be integrated to produce a maximum impact on economic returns.
- Physical infrastructure like procurement centers can be run more efficiently by women’s organizations because they are able to cultivate financial discipline and transparency, which is more difficult with traditional men’s organizations.

Future directions and scaling up include the following:

- *Integrate the procurement centers operating across the state within a common trading platform, either at the district or the state level.* Integration will involve building an information technology (IT) structure to link the procurement centers, which will provide multiple benefits. Linked centers will service an “internal market”; in other words, they will be able to meet the demand and supply gaps of village organization and self-help group members across districts, will link them to the market directly, and will offer all of their products and commodities in an aggregate manner.

- *Link with commodity exchanges and ICT-enabled procurement centers:* These centers can be linked with ICT-enabled models such as “e-choupal” ([www.echoupal.com](http://www.echoupal.com)) and commodity exchanges, enabling the community-based procurement centers to engage in real-time transactions. E-choupal was initiated by a leading multinational company in India, ITC Ltd., to procure commodities directly from farmers, offering them services such as real-time information to make their choices.
- *Integrate farmer field schools with the procurement centers:* The integration of farmer field schools and procurement centers will help to organize agricultural extension services and lead to improved production and productivity. It will help to scale up innovations such as nonpesticide technology and organically grown bioproducts, which have resulted in increased incomes for farmers in some districts.

## Bangladesh: Linking Poor Women to the International Prawn Market—The Greater Noakhali Aquaculture Extension Project

### PROJECT OBJECTIVES AND DESCRIPTION

**T**he Greater Noakhali Aquaculture Extension Project (GNAEP) is one component of Danida's Agricultural Sector Programme Support in Bangladesh.<sup>1</sup> It was initiated in 1998 to promote improved carp polyculture in ponds through a conventional approach to technology transfer. Groups of farmers were trained in the improved technology under the "household approach" (which included men and women in the household) by young extension trainers hired through partner NGOs specifically for the project. Fifty-two percent of the pond operators were women. This program trained some 36,000 households between 2000 and 2005, and average yields in target ponds more than doubled.

Despite these positive results, GNAEP management became increasingly concerned about the project's real impact on poverty and the sustainability of that impact. Pond polyculture itself offered limited returns, and the NGOs tended to target the more creditworthy households. Moreover, the fish farmer groups tended to dissolve after training and credit were withdrawn. Thus, beginning in 2002 GNAEP began to experiment with a different approach, shifting from a technology-driven to a people-driven mode. The poorer groups in the Noakhali region were identified, and the project analyzed how it could help them out of poverty through aquaculture. The prospect of substantially improving income by introducing a low-input

**What's innovative?** A holistic approach to market development, extending from technology to training to business linkages, targets the poorest segments of the population, including women-headed households, to participate in the international prawn market.

system for freshwater prawn culture seemed particularly promising, and local private entrepreneurs were encouraged to invest in two medium- to large-scale prawn hatcheries in the region. In the initial intervention, which introduced prawn farming in rice systems, GNAEP also moved toward a participatory learning approach, based on the Farmer Field School concept, believing that it offered greater scope for sustainability.

Some of the poorest groups targeted under GNAEP's explicitly pro-poor approach were women. The southern part of Noakhali is a charland region, an area of land subject to steady accretion over the last 50 years, and thus a focus for settlement, both planned and informal, by poor households often displaced from other areas by river erosion and other natural hazards. Up to 20 percent of such households are headed by women whose husbands died at sea or following civil strife, or who were abandoned when their husbands left in search of employment. Most attempt to make a living through agricultural labor and homestead gardening, while some resort to begging. All are subject to sociopolitical abuse from local influential people, and many have been forced to mortgage their original land holding.

### BENEFITS AND IMPACTS

One of the key resources available to such households was a small backyard pond, dug when the house platform was created. Although they hold water for only six months, these ponds are suitable for nursing prawns from the post-larvae to juvenile stage for stocking in the grow-out ponds of farmers who are better off. GNAEP persuaded the prawn hatcheries to offer the women interest-free credit in kind to enable them to stock post-larvae (PL). In a typical pond, women may stock 4,000 PL at an investment of 5,000 taka (Tk). With costs of modest feed inputs and pumping for



harvest, the total investment may be Tk 6,000. In less than two months, the women may expect to sell around 3,000 juveniles for a total return of Tk 12,000, or a profit of Tk 6,000. If the rains are favorable, the women can expect to take two crops a year. This represents a major improvement in income for the women, sufficient to reclaim mortgaged land or purchase large livestock (goats and cattle). Other investments are typical household improvements or children's education. The nursing technology is fundamentally simple, and the women feel confident to continue after the first year.

Another typical intervention is in community ponds in resettlement villages, typically consisting of 30–50 poor households. Here, too, the men of the community may have left in search of work, and women often dominate the pond management committee. In this case, the ponds are stocked with a prawn-carp polyculture for grow-out. Once again the hatcheries offered interest-free credit in kind, and another private sector partner provided feed from a mill promoted by the project. A typical pond may stock 5,000 PL, which may yield around 250 kilograms of good-size prawns, because such ponds have water throughout the year. Returns from the prawns alone are Tk 75,000, and total income, including the carps, may be as high as Tk 150–200,000 (or Tk 5,000–6,000 per household). In this case the project's intention is to develop a contract farming system, linking the settlement communities to a new processing plant established in Noakhali through DANIDA's Private Sector Development Programme.<sup>2</sup> In such a system, the hatchery and feed mill loans will be repaid through direct transfer from the processor.

Many inputs are supplied through community-based organizations, which GNAEP promoted among prawn farmers who have had positive experiences with the project, to ensure sustainability. The 87 CBOs in the area now have around 4,000 members and serve up to 11,000 households. They receive a commission on PL sales and a profit from feed sales. For the woman-headed households, CBOs are a conduit for sales of juveniles to other farmers. Channeling inputs (and in due course cultured prawns) through CBOs has created a base for the kind of traceability system that is increasingly demanded by the international market. All farmers receiving prawn seed from the hatcheries through the CBOs receive a registration card, which can also be used to record other inputs such as feed. It is hoped that the registration card will then be taken to a local processing plant when prawns are sold, thus completing the chain and allowing registered farmers to obtain a premium on the normal selling price.

In some CBOs the majority of members are women; in others, as a result of their economic empowerment, women play an important role in the executive committees that run the organizations. The CBOs give members and clients a voice with local government institutions for raising social development issues, and they are a focus for government and NGO services in various sectors. As a result, the incidence of social abuse of their women clients has dropped substantially.

## **LESSONS LEARNED AND CHALLENGES FOR WIDER APPLICABILITY**

The following discussion synthesizes the lessons learned, the challenges, and prospects for future project and program design and implementation.

### **Lessons learned**

The GNAEP experience indicates that the promotion of small-scale commercial aquaculture can offer a basis for alleviation of poverty, even among the poorest households. By adopting a whole-system approach, based on careful analysis of livelihood potentials, GNAEP has identified niches in which poor households headed by women can be integrated into the international economy through links with local agribusiness. In this system CBOs (both rural producer and marketing organizations) act as key intermediaries, enabling farmers to access quality inputs at a reasonable cost.

### **The future**

GNAEP is moving toward a new phase in which it plans to target a wider range of poor households—for example, women fish driers on the offshore island of Hatiya, landless women previously engaged in road construction in another DANIDA project, and women engaged in the illegal catching of wild shrimp and prawn PLs. In each case, the intervention is carefully targeted and may include income-generating activities outside aquaculture, such as making nets and handicrafts and rearing small livestock. The basic approach described here, in which the poor are linked to improved input supply and marketing opportunities, will be extended to these other sectors.

### **Issues for scaling up**

A donor-supported project with considerable resources at its disposal, including the many highly talented individuals

in the local technical assistance team, GNAEP may be seen as a special case. Although the project is nominally implemented through the Bangladesh Department of Fisheries, since 2002 the technical assistance team has largely had a free hand to experiment with the described approach. It has also had the advantage in the Noakhali region of writing on a blank page, in the sense that prawn-based aquaculture was a new enterprise there, in contrast to southwestern Bangladesh, where it had been introduced 10 years earlier. However, the approach of linking small-scale farmers with the private sector through farmers' organizations has offered real prospects of creating a sustainable farmer-to-farmer extension system in the absence of an effective government extension presence. Nevertheless, recognition exists that it will be more difficult to create the same system in areas or sectors where the supply and marketing chain are more established and competitive and that the approach will need to be adapted if it is scaled up to other areas of Bangladesh.

## NOTES

### Overview

This Overview was prepared by Cathy Rozel Farnworth (Consultant) and Catherine Ragasa (Consultants) and reviewed by Chitra Deshpande (Consultant); Zoraida Garcia, Siobhan Kelly, and Andrew Shepherd (FAO); René Fréchet and Maria Hartl (IFAD); and Rekha Mehra and Kees van der Meer (World Bank).

1. [www.usaid.gov/our\\_work/cross-cutting\\_programs/wid/eg/gate\\_valuechain.html](http://www.usaid.gov/our_work/cross-cutting_programs/wid/eg/gate_valuechain.html).
2. Kennedy M. Shiundu and Ruth K. Oniang'o, "Marketing African Leafy Vegetables: Challenges and Opportunities in the Kenyan Context," *African Journal of Food Agriculture Nutrition and Development* 7 (4), [www.ajfand.net/Issue15/PDFs/8%20Shiundu-IPGR2\\_8.pdf](http://www.ajfand.net/Issue15/PDFs/8%20Shiundu-IPGR2_8.pdf).
3. The Euro-Retailer Produce Working Group's Good Agricultural Practices: [www.globalgap.org/cms/front\\_content.php?idcat=2](http://www.globalgap.org/cms/front_content.php?idcat=2).
4. USAID, "Global Horticulture Assessment," [www.treesforchange.org/treesandmarkets/hvc07\\_meet/other\\_materials/Global%20Hort%20Assessment.pdf](http://www.treesforchange.org/treesandmarkets/hvc07_meet/other_materials/Global%20Hort%20Assessment.pdf).
5. See note 3 above.
6. United Nations Economic and Social Commission for the Pacific (UNESCAP), "Women in Small Business in Indochina: Issues and Key Approaches," Women in Development Discussion Paper 4, <http://unescap.org/esid/GAD/Publication/DiscussionPapers/04/series4.pdf>.
7. See note 3 above.

8. USAID, "Gender and Economic Value Chains: Two Case Studies from the GATE Project," [www.usaid.gov/our\\_work/cross-cutting\\_programs/wid/eg/gate\\_valuechain.html](http://www.usaid.gov/our_work/cross-cutting_programs/wid/eg/gate_valuechain.html).

9. <http://gstgateway.wigsat.org/ta/gdrbiotechfinal.pdf>.

10. Ibid.

11. A. Yawe, "Unleashing the Potential of Women Entrepreneurs in Export Growth: The Case of Women Fishing and Development Associations in Uganda," [www.intracen.org/wedf/ef2006/Gender-Issues/Paper\\_Yawe.pdf](http://www.intracen.org/wedf/ef2006/Gender-Issues/Paper_Yawe.pdf).

12. G. Rebosio, S. Gammage, and C. Manfre, "A Pro-Poor Analysis of the Artichoke Value Chain in Peru," [www.microlinks.org/file\\_download.php/Artichoke\\_Peru\\_Research\\_Brief.pdf?URL\\_ID=18386&filename=11861594421Artichoke\\_Peru\\_Research\\_Brief.pdf&filetype=application%2Fpdf&filesize=299504&name=Artichoke\\_Peru\\_Research\\_Brief.pdf&location=user-S](http://www.microlinks.org/file_download.php/Artichoke_Peru_Research_Brief.pdf?URL_ID=18386&filename=11861594421Artichoke_Peru_Research_Brief.pdf&filetype=application%2Fpdf&filesize=299504&name=Artichoke_Peru_Research_Brief.pdf&location=user-S).

### Thematic Note I

This Thematic Note was prepared by Cathy Rozel Farnworth (Consultant) and Catherine Ragasa (Consultant) and reviewed by Chitra Deshpande (Consultant); Zoraida Garcia, Siobhan Kelly, and Andrew Shepherd (FAO); René Fréchet and Maria Hartl (IFAD); and Kees van der Meer and Rekha Mehra (World Bank).

1. APRODEV, "Process Report: A Gender Review of the Economic Partnership Agreements (EPAs)," paper given at the Civil Society Dialogue Meeting on Gender and the Economic Partnership Agreements, Brussels, December 6, 2006, [www.aprodev.net](http://www.aprodev.net).
2. GAWU, DHS, CIECA, ADEID, GRAPAD, and EUROSTEP, "New ACP-EU Trade Arrangements: New Barriers to Eradicating Poverty?" Brussels: European Solidarity towards Equal Participation of People, [www.itssd.org/References/Think%20Tank/200406091217487864.pdf](http://www.itssd.org/References/Think%20Tank/200406091217487864.pdf).
3. Glenys Kinnock, "Gender Review of the Economic Partnership Agreements," paper presented at the Civil Society Dialogue Meeting on Gender and the Economic Partnership Agreements, Brussels, December 6, 2006, [www.aprodev.net](http://www.aprodev.net).
4. See note 1 above.
5. Ibid.
6. United States Agency for International Development (USAID), "The New Generation of Private-Sector Development Programming: The Emerging Path to Economic Growth and Poverty Reduction," MicroREPORT No. 44, [www.microlinks.org/ev\\_en.php?ID=10319\\_201&ID2=DO\\_TOPIC](http://www.microlinks.org/ev_en.php?ID=10319_201&ID2=DO_TOPIC).
7. [www.mercycorps.org.uk/countries/afghanistan/88](http://www.mercycorps.org.uk/countries/afghanistan/88).

## Thematic Note 2

This Thematic Note was prepared by Cathy Rozel Farnworth (Consultant) and Catherine Ragasa (Consultant) and reviewed by Chitra Deshpande (Consultant); Zoraida Garcia, Siobhan Kelly, and Andrew Shepherd (FAO); René Fréchet and Maria Hartl (IFAD); and Kees van der Meer and Rekha Mehra (World Bank).

1. IFAD, “Syria: Profitability of Women’s Income-Generating Activities (Syria Southern Agricultural Development Project, Phase I),” [www.ifad.org/gender/learning/sector/finance/32.htm](http://www.ifad.org/gender/learning/sector/finance/32.htm).
2. David G. Kahan, “Business Services in Support of Farm Enterprise Development: A Review of Relevant Experiences,” draft for review, Agricultural Management, Marketing and Finance Service Agricultural Support Systems Division, FAO, Rome, [www.fao.org/AG/ags/subjects/en/farmMgmt/pdf/business\\_development\\_services/dbs\\_a\\_reviewofCasestudies.pdf](http://www.fao.org/AG/ags/subjects/en/farmMgmt/pdf/business_development_services/dbs_a_reviewofCasestudies.pdf).
3. See note 1 above.
4. See note 6 on Overview Section.
5. Ibid.
6. [www.wfp.org](http://www.wfp.org).
7. [www.femconsult.org/news.php](http://www.femconsult.org/news.php).
8. International Fund for Agricultural Development, “Lao PDR: Making Women’s Weaving Activities Profitable,” [www.ifad.org/gender/learning/sector/finance/19.htm](http://www.ifad.org/gender/learning/sector/finance/19.htm).
9. [www.fao.org/DOCREP/004/AC154E/AC154E04.htm](http://www.fao.org/DOCREP/004/AC154E/AC154E04.htm).
10. UNIDO, “Trade Capacity Building: Case Studies: Ecuador,” [www.unido.org/doc/27693](http://www.unido.org/doc/27693).
11. International Finance Corporation, “IFC Supports Women Entrepreneurs,” [www.ifc.org/ifcext/africa.nsf/Content/MainStory\\_GOWE\\_August2007](http://www.ifc.org/ifcext/africa.nsf/Content/MainStory_GOWE_August2007). See also Thematic Note 1.
12. [www.vbi-lattakia.org/english/about\\_us.html](http://www.vbi-lattakia.org/english/about_us.html).
13. [www.icecd.org/community-development\\_vsc.html](http://www.icecd.org/community-development_vsc.html).

## Thematic Note 3

This Thematic Note was prepared by Cathy Rozel Farnworth (Consultant) and Catherine Ragasa (Consultant) and reviewed by Chitra Deshpande (Consultant); Zoraida Garcia, Siobhan Kelly, and Andrew Shepherd (FAO); René Fréchet and Maria Hartl (IFAD); and Kees van der Meer and Rekha Mehra (World Bank).

1. Lorraine Ronchi, “The Impact of Fair Trade on Producers and Their Organisations: A Case Study with Coocafé in Costa Rica,” Poverty Research Unit at Sussex Working Paper No. 11, University of Sussex, Brighton, [www.sussex.ac.uk/Units/PRU/wps/wp11.pdf](http://www.sussex.ac.uk/Units/PRU/wps/wp11.pdf).

2. IFAD, “INDIA-Tamil Nadu Women’s Development: The Story of Sarasu,” completion evaluation, April, [www.ifad.org/evaluation/public\\_html/eksyst/doc/prj/region/pi/india/r240ince.htm](http://www.ifad.org/evaluation/public_html/eksyst/doc/prj/region/pi/india/r240ince.htm).

## Thematic Note 4

This Thematic Note was prepared by Cathy Rozel Farnworth (Consultant) and reviewed by Chitra Deshpande (Consultant) and Catherine Ragasa (Consultant); Zoraida Garcia, Siobhan Kelly, and Andrew Shepherd (FAO); René Fréchet and Maria Hartl (IFAD); and Rekha Mehra and Kees van der Meer (World Bank).

1. [www.rd.ap.gov.in/velugu/velugureportskaren.htm](http://www.rd.ap.gov.in/velugu/velugureportskaren.htm).

## Innovative Activity Profile 1

This Innovative Activity Profile was written by Catherine Ragasa (Consultant), with input from Grahame Dixie (World Bank), and reviewed by Siobhan Kelly and Andrew Shepherd (FAO); and Rekha Mehra (World Bank).

1. LEAF uses a value chain approach to scale up support to CBOs who are ready to engage in larger markets.

## Innovative Activity Profile 2

This Innovative Activity Profile was prepared by Shweta Banerjee (World Bank), Vijaysekar Kalavakonda (World Bank), K. P. Rao (Society for Elimination of Rural Poverty, Hyderabad), and Parmesh Shah (World Bank). Comments and support were provided by Vijay Kumar (Society for Elimination of Rural Poverty, Hyderabad). This document was reviewed by Rekha Mehra and Riikka Rajalahti (World Bank).

1. The Andhra Pradesh District Poverty Initiatives Project and the Rural Poverty Reduction Project (total IDA lending: \$260 million) are two statewide, community-driven rural poverty reduction projects implemented since 2000. Key investments include building institutions of the poor and developing social capital; developing financial services for the poor; promoting and expanding livelihoods through private sector partnerships; reducing vulnerability; promoting social action; and improving local governance.
2. A typical self-help group comprises 10–15 women from the poorest of the poor and the poor. The members meet once a week, collect savings, and maintain books of accounts. The groups are then federated into village organizations.
3. Community resource persons or community professionals are project participants from within the community

who have undergone training in either one or multiple facets of project implementation such as institution building, community procurement and marketing, and health services, becoming a key resource for the community and the project. Creating a cadre of such grassroots professionals has been instrumental in scaling up project activities at a low cost and will contribute to sustainability in the future. There are currently over 100,000 such resource persons.

4. S. Subrahmanyam, C. P. Nagi Reddy, and R. Nalini, "Maize Procurement by Village Organizations: An Impact Analysis," Society for Elimination of Rural Poverty (SERP), Hyderabad, [www.rd.ap.gov.in/IKP/maizestudy.htm](http://www.rd.ap.gov.in/IKP/maizestudy.htm).

### Innovative Activity Profile 3

This Innovative Activity Profile was written by Reshad Alam (Extension Programme Manager) and Harvey Demaine (Senior Advisor) in the Regional Fisheries and Livestock Development Component (DANIDA), the successor project to GNAEP in Phase II of ASPs, with input and review by Mona Sur (World Bank), and reviewed by Chitra Deshpande and Catherine Ragasa (Consultants); Zoraida Garcia, Siobhan Kelly, Rekha Mehra, and Andrew Shepherd (FAO); and René Fréchet and Maria Hartl (IFAD).

1. As such it is also called the Greater Noakhali Aquaculture Extension Component (GNAEC). For more details, see the project Web site: [www.gnaec.org](http://www.gnaec.org).
2. Now called B2B or "Business to Business."

## REFERENCES

### Overview

- Abdelali-Martini, Malika, Aden Aw-Hassan, and Hisham Salahieh. 2005. "The Potential of Partnership with the Jabbans of Syria." *ICARDA Caravan* 22: 39–42.
- Agricultural Management, Marketing, and Finance Service (AGSF). 2005. "Gender Impacts of Small-Farm Commercialization on Household Resource Management and Livelihoods." AGSF Working Document, Food and Agriculture Organization, Rome. Also available at [www.fao.org](http://www.fao.org).
- Bardasi, Elena, C. Mark Blackden, and Juan Carlos Guzman. 2007. "Gender, Entrepreneurship, and Competitiveness in Africa." Chapter 1.4 of *Africa Competitiveness Report 2007*. Washington, DC: World Economic Forum, World Bank, and African Development Bank. Also available at [www.weforum.org/en/initiatives/gcp/Africa%20Competitiveness%20Report/2007/index.htm](http://www.weforum.org/en/initiatives/gcp/Africa%20Competitiveness%20Report/2007/index.htm).
- Booth, H. 1999. "Gender Database for Agriculture and Resource Management Policies in Pacific Island Countries." RAP Publication 1999/7, FAO Regional Office for Asia and the Pacific, Bangkok.
- Boselie, David, Spencer Henson, and Dave Weatherspoon. 2003. "Supermarket Procurement Practices in Developing Countries: Redefining the Roles of the Public and Private Sectors." *American Journal of Agricultural Economics* 85: 1155–61.
- Ellis, Amanda, Claire Manuel, and C. Mark Blackden. 2006. *Gender and Economic Growth in Uganda: Unleashing the Power of Women*. Directions in Development. Washington, DC: World Bank.
- Farnworth, Cathy Rozel, and Janice Jiggins. 2006. *Participatory Plant Breeding and Gender Analysis*. PPB Monograph 4, Systemwide Program on Participatory Research and Gender Analysis. Cali: Consultative Group on International Agricultural Research.
- Food and Agriculture Organization (FAO). 2006. *Agriculture, Trade Negotiations, and Gender*. Prepared by Zoraida Garcia, with contributions from Jennifer Nyberg and Shayama Owaise Saadat. Rome: FAO. Also available at [ftp://ftp.fao.org/docrep/fao/009/a0493e/a0493e.pdf](http://ftp.fao.org/docrep/fao/009/a0493e/a0493e.pdf).
- Gurung, C. 2006. *The Role of Women in the Fruit and Vegetable Supply Chain in Maharashtra and Tamil Nadu India: The New and Expanded Social and Economic Opportunities for Vulnerable Groups Task Order under the Women in Development IQC*. Washington, DC: U.S. Agency for International Development.
- International Fund for Agricultural Development (IFAD). n.d. "São Tome and Principe: Participatory Smallholder Agriculture and Artisanal Fisheries Development Program: Women Fish Traders." Internal document, IFAD, Rome.
- . 2002. "IFAD Strategy for Rural Poverty Reduction: Latin America and the Caribbean." IFAD, Rome. Also available at [www.ifad.org/operations/regional/2002/pl/pl.htm](http://www.ifad.org/operations/regional/2002/pl/pl.htm).
- Jaffee, Steven. 2003. "From Challenge to Opportunity: Transforming Kenya's Fresh Vegetable Trade in the Context of Emerging Food Safety and Other Standards in Europe." Agriculture Rural Development Discussion Paper, World Bank, Washington, DC.
- Kaplinsky, Rafael, and Mike Morris. 2002. *A Handbook for Value Chain Research*. Brighton: Institute of Development Studies, University of Sussex.
- Mayoux, Linda. 2005. "Gender Lens' in Value Chains Analysis for Decent Work: A Practical Guide." First unpublished draft, International Labour Organisation, Geneva, November.
- Pinstrup-Andersen, Per, Rajul Pandya-Lorch, and Mark Rosegrant. 1997. "The World Food Situation: Recent Developments, Emerging Issues, and Long-Term

- Prospects.” 2020 Vision Food Policy Report, International Food Policy Research Institute, Washington, DC. Also available at [www.ifpri.org/pubs/fpr/fpr24.pdf](http://www.ifpri.org/pubs/fpr/fpr24.pdf).
- Reardon, Thomas, and Julio Berdegue. 2002. “The Rapid Rise of Supermarkets in Latin America: Challenges and Opportunities for Development.” *Development Policy Review* 20 (4): 371–88.
- Rihawi, Safouh. 2005. “Expanding the Menu: Transforming By-products into Nutritious Feed.” *ICARDA Caravan* 22: 28–30.
- United Nations Development Programme (UNDP). 1995. *Human Development Report*. New York: UNDP.
- United States Agency for International Development (USAID). 2006. “Pro-Poor Growth, Gender, and Markets: Creating Opportunities and Measuring Results.” Greater Access to Trade Expansion (GATE) Project, Development and Training Services, Arlington, VA.
- . 2007. “A Pro-Poor Analysis of the Artichoke Value Chain in Peru.” Greater Access to Trade Expansion (GATE) Project, Development and Training Services, Arlington, Virginia. [www.microlinks.org/file\\_download.php/Artichoke\\_Peru\\_Research\\_Brief.pdf?URL\\_ID=18386&filename=11861594421Artichoke\\_Peru\\_Research\\_Brief.pdf&filetype=application%2Fpdf&filesize=299504&name=Artichoke\\_Peru\\_Research\\_Brief.pdf&location=user-S](http://www.microlinks.org/file_download.php/Artichoke_Peru_Research_Brief.pdf?URL_ID=18386&filename=11861594421Artichoke_Peru_Research_Brief.pdf&filetype=application%2Fpdf&filesize=299504&name=Artichoke_Peru_Research_Brief.pdf&location=user-S).
- World Bank. 2005. “Gender and ‘Shared Growth’ in Sub-Saharan Africa.” Briefing Notes on Critical Gender Issues in Sub-Saharan Africa 2005-1, World Bank, Washington, DC. Also available at <http://siteresources.worldbank.org/EXTABOUTUS/Resources/GenderGrowth.pdf>.
- . 2007a. “Cultivating Knowledge and Skills to Grow African Agriculture: A Synthesis of an Institutional, Regional, and International Review.” World Bank, Washington, DC. Also available at [http://siteresources.worldbank.org/INTARD/Resources/AET\\_Final\\_web.pdf](http://siteresources.worldbank.org/INTARD/Resources/AET_Final_web.pdf).
- . 2007b. “Gender and Economic Growth in Kenya: Unleashing the Power of Women. Directions in Development.” World Bank, Washington, DC. Also available at [www.ifc.org/ifcext/enviro.nsf/AttachmentsByTitle/p\\_GEM\\_GenderandEconomicGrowthinKenya/\\$FILE/Gender+and+Economic+Growth+in+Kenya.pdf](http://www.ifc.org/ifcext/enviro.nsf/AttachmentsByTitle/p_GEM_GenderandEconomicGrowthinKenya/$FILE/Gender+and+Economic+Growth+in+Kenya.pdf).
- www.weforum.org/en/initiatives/gcp/Africa%20Competitiveness%20Report/2007/index.htm.
- Collins, Jane. 2000. “Tracing Social Relations through Commodity Chains: The Case of Brazilian Grapes.” In *Commodities and Globalization: Anthropological Perspective*, ed. A. Haugerud, M. P. Stone, and P. D. Little, 97–112. Lanham, MD: Rowman and Littlefield.
- Ellis, Amanda, Claire Manuel, and C. Mark Blackden. 2006. *Gender and Economic Growth in Uganda: Unleashing the Power of Women*. Directions in Development. Washington, DC: World Bank.
- Farnworth, Cathy Rozel, and Janice Jiggins. 2006. *Participatory Plant Breeding and Gender Analysis*. PPB Monograph 4, Systemwide Program on Participatory Research and Gender Analysis. Cali: Consultative Group on International Agricultural Research.
- Food and Agriculture Organization (FAO). 2002. *Gender and Law: Women’s Rights in Agriculture*. FAO Legislative Study 76. Rome: FAO.
- . 2006a. *Agriculture, Trade Negotiations, and Gender*. Rome: FAO.
- . 2006b. “Niger’ Projet de promotion de l’utilization des intrants agricoles par les organisations paysannes.” In *Gender, Markets, and Financial Services: Experiences from FAO-Supported Projects*. Rome: FAO.
- Grace, Jo. 2004. “Gender Roles in Agriculture: Case Studies of Five Villages in Northern Afghanistan.” Afghanistan Research and Evaluation Unit (AREU), Kabul.
- Kenya Institute for Public Policy Research and Analysis (KIPPRA). 2000. *Improving the Legal and Regulatory Environment for Business through Deregulation—Trade Licensing Reform*. Nairobi: Ministry of Planning and National Development.
- Kitinoja, Lisa. 2002. “Identifying Scale-Appropriate Postharvest Technology.” In *Postharvest Technology of Horticultural Crops*, 3rd ed., ed. Adel A. Kader, 481–90. Oakland, CA: Division of Agriculture and Natural Resources and University of California.
- Reardon, Thomas, and Julio Berdegue. 2002. “The Rapid Rise of Supermarkets in Latin America: Challenges and Opportunities for Development.” *Development Policy Review* 20 (4): 371–88.
- World Bank. 2005. “Bangladesh Third Rural Infrastructure Development Project.” Project document, World Bank, Washington, DC.
- . 2006. “India: Taking Agriculture to the Markets.” World Bank, Washington, DC.
- . 2007a. *Gender and Economic Growth in Kenya: Unleashing the Power of Women*. Directions in Development. Washington, DC: World Bank. Also available at

## Thematic Note I

Bardasi, Elena, C. Mark Blackden, and Juan Carlos Guzman. 2007. “Gender, Entrepreneurship, and Competitiveness in Africa.” Chapter 1.4 of *Africa Competitiveness Report 2007*. Washington, DC: World Economic Forum, World Bank, and African Development Bank. Also available at

www.ifc.org/ifcext/enviro.nsf/AttachmentsByTitle/p\_GEM\_GenderandEconomicGrowthinKenya/\$FILE/Gender+and+Economic+Growth+in+Kenya.pdf.

———. 2007b. *Doing Business 2008*. Washington, DC: World Bank.

———. 2007c. “Horticultural Exports from Developing Countries.” In *Agriculture Investment Sourcebook*, 275–79. Washington, DC: World Bank. Also available at <http://go.worldbank.org/LWEH6R38H0>.

## Thematic Note 2

Ayadurai, Selvamalar, and M. Sadiq Sohail. 2006. “Profile of Women Entrepreneurs in a War-Torn Area: Case Study of Northeast Sri Lanka.” *Journal of Developmental Entrepreneurship* 11 (1): 1–15.

Booth, Heather. 1999. “Gender Database for Agriculture and Resource Management Policies in Pacific Island Countries.” RAP Publication 1999/7, FAO Regional Office for Asia and the Pacific, Bangkok.

Center of Arab Women for Training and Research and the International Finance Corporation Gender Entrepreneurship Markets (CAWTAR and IFC). 2007. *Women Entrepreneurs in the Middle East and North Africa: Characteristics, Contributions, and Challenges*. Washington, DC, and Tunis: CAWTAR and IFC. Also available at [www.ifc.org/ifcext/home.nsf/AttachmentsByTitle/MENA\\_Women\\_Entrepreneurs\\_Jun07/\\$FILE/MENA\\_Women\\_Entrepreneurs\\_Jun07.pdf](http://www.ifc.org/ifcext/home.nsf/AttachmentsByTitle/MENA_Women_Entrepreneurs_Jun07/$FILE/MENA_Women_Entrepreneurs_Jun07.pdf).

Deutsch, Ruthanne, Andrew Morrison, Claudia Piras, and Hugo Ñopo. 2002. “Working within Confines: Occupational Segregation by Gender in Three Latin American Countries.” Technical Paper, Inter-American Development Bank, Washington, DC. Also available at [www.iadb.org/sds/wid/publication/publication\\_7325\\_3544\\_e.htm](http://www.iadb.org/sds/wid/publication/publication_7325_3544_e.htm).

Farnworth, Cathy Rozel, and Janice Jiggins. 2006. *Participatory Plant Breeding and Gender Analysis*. PPB Monograph 4, Systemwide Program on Participatory Research and Gender Analysis. Cali: Consultative Group on International Agricultural Research.

Humphrey, John. 2004. “Upgrading in Global Value Chains.” Working Paper No. 28, Policy Integration Department, World Commission on the Social Dimension of Globalization, International Labour Office, Geneva.

Richardson, Pat, Rhona Howarth, and Gerry Finnegan. 2004. *The Challenges of Growing Small Businesses: Insights from Women Entrepreneurs in Africa*. Series on Women’s Entrepreneurship Development and Gender Equality. Geneva: International Labour Organisation.

Royal Tropical Institute, Faida Market Link, and International Institute of Rural Reconstruction (KIT, Faida MaLi, and IIRR). 2006. *Chain Empowerment: Supporting African Farmers to Develop Markets*. Amsterdam: KIT, Faida MaLi, and IIRR. Also available at [www.kit.nl/smartsite.shtml?id=SINGLEPUBLICATION&ch=FAB&ItemID=1952](http://www.kit.nl/smartsite.shtml?id=SINGLEPUBLICATION&ch=FAB&ItemID=1952).

United Nations Educational, Scientific and Cultural Organization (UNESCO). 2003. “Good Practices: Gender Equality in Basic Education and Lifelong Learning through CLCS: Experiences from 15 Countries.” Report, UNESCO Asia and the Pacific Regional Bureau for Education, Bangkok.

United Nations Industrial Development Organization (UNIDO). 2003. “A Path Out of Poverty: Developing Rural and Women Entrepreneurship.” Brochure, UNIDO, New York.

Vijfhuizen, Carin. 1996. “Who Feeds the Children? Gender Ideology and the Practice of Plot Allocation in an Irrigation Scheme.” In *The Practice of Smallholder Irrigation: Case Studies from Zimbabwe*, ed. Emmanuel Manzungu and Pieter van der Zaag, 126–50. Harare: University of Zimbabwe.

Weeks, Julie, and Danielle Seiler. 2001. “Women’s Entrepreneurship in Latin America: An Exploration of Current Knowledge.” Sustainable Development Department Technical Papers Series, Inter-American Development Bank, Washington, DC.

World Bank. 2006. “India: Taking Agriculture to the Markets.” World Bank, Washington, DC.

## Thematic Note 3

Dixie, Grahame. 2005. *Horticultural Marketing. Marketing Extension Guide*, vol. 5. Rome: Food and Agriculture Organization.

Food and Agriculture Organization (FAO). 1995. *The Group Enterprise Book: A Practical Guide for Group Promoters to Assist Groups in Setting Up and Running Successful Small Enterprises*. Rome: FAO.

———. 2002. “The Inter-Group Resource Book: A Guide to Building Small Farmer Group Associations and Networks.” FAO, Rome. Also available at [www.fao.org/sd/2001/pe0701\\_en.htm](http://www.fao.org/sd/2001/pe0701_en.htm).

Guijt, Irene, and Edith van Walsum. Forthcoming. In *Fair Trade and the Food Chain*, ed. Cathy Farnworth, Janice Jiggins, and E. Thomas. London: Gower.

International Fund for Agricultural Development (IFAD). n.d. “Bosnia and Herzegovina: Women Milk Collection Network.” Internal document, IFAD, Rome.

Nelson, Valerie, and Modesto Galvez. 2000. *Social Impacts of Ethical and Conventional Cocoa Trading on Forest-Dependent People in Ecuador*. Chatham: Natural Resources Institute.

Royal Tropical Institute, Faida Market Link, and International Institute of Rural Reconstruction (KIT, Faida MaLi, and IIRR). 2006. *Chain Empowerment: Supporting African Farmers to Develop Markets*. Amsterdam: KIT, Faida MaLi, and IIRR. Also available at [www.kit.nl/smartsite.shtml?id=SINGLEPUBLICATION&ch=FAB&ItemID=1952](http://www.kit.nl/smartsite.shtml?id=SINGLEPUBLICATION&ch=FAB&ItemID=1952).

World Bank. 2003. "Republic of Chad—Agriculture Services and Producer Organizations Project." Project Appraisal Document, World Bank, Washington, DC.

———. 2006a. "Tamil Nadu Empowerment and Poverty Reduction 'Puthu Vazhvu' Project." Project Appraisal Document (PAD), World Bank, Washington, DC.

———. 2006b. "Tanzania Participatory Agricultural Development and Empowerment Project." Project Appraisal Document (PAD), World Bank, Washington, DC.

#### Thematic Note 4

Farnworth, Cathy R., and Janice Jiggins. 2006. *Participatory Plant Breeding and Gender Analysis*. PPB Monograph 4, Systemwide Program on Participatory Research and Gender Analysis. Cali: Consultative Group on International Agricultural Research.

Food and Agriculture Organization (FAO). 2006. "Honduras—Training in Marketing Skills for Women Fish Processors—Livelihoods Diversification and Enterprise Development (LDED) Project." In *Gender, Markets, and Financial Services: Experiences from FAO-Supported Projects*. Rome: FAO.

Guijt, Irene, and Edith van Walsum. Forthcoming. In *Fair Trade and the Food Chain*, ed. Cathy Farnworth, Janice Jiggins, and E. Thomas. London: Gower.

Royal Tropical Institute, Faida Market Link, and International Institute of Rural Reconstruction (KIT, Faida MaLi, and IIRR). 2006. *Chain Empowerment: Supporting African Farmers to Develop Markets*. Amsterdam: KIT, Faida MaLi, and IIRR. Also available at [www.kit.nl/smartsite.shtml?id=SINGLEPUBLICATION&ch=FAB&ItemID=1952](http://www.kit.nl/smartsite.shtml?id=SINGLEPUBLICATION&ch=FAB&ItemID=1952).

United States Agency for International Development (USAID). 2006. *Cross-Cutting Agra Program—Center for Urban and Regional Excellence*. New Delhi: USAID–India.

Wanders, Ab. 2003. "Small-Scale Peanut Butter Processing: Case Studies in Rural, Peri-Urban and Urban Settings in South Africa." In *Interdisciplinary Research for Sustainable Development in the South*. Annual Report, DLO Research Programme, International Cooperation.

#### Innovative Activity Profile 1

Dixie, Grahame. 2005. *Horticultural Marketing. Marketing Extension Guide*, vol. 5. Rome: Food and Agriculture Organization. Also available at [www.fao.org/ag/ags/subjects/en/agmarket/docs/horticultural\\_EN.pdf](http://www.fao.org/ag/ags/subjects/en/agmarket/docs/horticultural_EN.pdf).

#### FURTHER READING

##### Overview

International Fund for Agricultural Development (IFAD). 2008. "Food Security, Poverty, and Women: Lessons from Rural Asia." Available at [www.ifad.org/gender/thematic/rural/rural\\_1.htm](http://www.ifad.org/gender/thematic/rural/rural_1.htm).

Kasnakoglu, Zehra. n.d. "Women and Agricultural Development in the Near East." Middle East Technical University, Department of Economics and Gender and Women's Studies, Ankara. Available at [www.skk.uit.no/WW99/papers/Kasnakoglu\\_Zehra.pdf](http://www.skk.uit.no/WW99/papers/Kasnakoglu_Zehra.pdf).

Lastarria-Cornhiel, Susan. 2006. "Feminization of Agriculture: Trends and Driving Forces." Contribution by RIMISP (the Latin American Center for Rural Development; [www.rimisp.org](http://www.rimisp.org)) to the preparation of the *World Development Report 2008, Agriculture for Development* (Washington, DC: World Bank 2007). Available at [http://asiadhrra.org/word\\_press/wp-content/uploads/2007/11/feminization-of-agriculture-trends-and-driving-forces.pdf](http://asiadhrra.org/word_press/wp-content/uploads/2007/11/feminization-of-agriculture-trends-and-driving-forces.pdf).

Royal Tropical Institute, Faida Market Link, and International Institute of Rural Reconstruction (KIT, Faida MaLi, and IIRR). 2006. *Chain Empowerment: Supporting African Farmers to Develop Markets*. Amsterdam: KIT, Faida MaLi, and IIRR. Available at [www.kit.nl/smartsite.shtml?id=SINGLEPUBLICATION&ch=FAB&ItemID=1952](http://www.kit.nl/smartsite.shtml?id=SINGLEPUBLICATION&ch=FAB&ItemID=1952).

#### Thematic Note 1

Humphrey, John, and Hubert Schmitz. 2002. "Governance in Global Value Chains." *IDS Bulletin* 32 (3): 19–29.

Kader, Adel A., ed. 2002. *Postharvest Technology for Horticultural Crops*. 3rd ed. Oakland, CA: Division of Agriculture and Natural Resources and University of California.

Lodge, Junior. 2007. "Perspectives from ACP Negotiator." Paper presented at the Civil Society Dialogue Meeting on Gender and the Economic Partnership Agreements, Brussels, December 6, 2006. Available at [www.aprodev.net](http://www.aprodev.net).

Mrema, Geoffrey C., and Rosa S. Rolle. 2002. "Status of the Post-Harvest Sector and Its Contribution to Agricultural Development and Economic Growth." In *Value-Addition to Agricultural Products: Towards Increase of Farmers' Income and Vitalization of Rural Economy*, Proceedings of

the 9th JIRCAS International Symposium, ed. Yutaka Mori, Toru Hayashi, and Ed Highley. Tsukuba: Japan International Research Center for Agricultural Sciences (JIRCAS), 13–20. Available at [www.jircas.affrc.go.jp/english/publication/symposium/11](http://www.jircas.affrc.go.jp/english/publication/symposium/11).

United States Agency for International Development (USAID). 2005. *Global Horticulture Assessment*. Davis, CA: University of California. Available at [www.treesforchange.org](http://www.treesforchange.org).

### Thematic Note 2

InfoDev. 2006. “Incubators As Change Agents: Impacts and Lessons Learned from infoDev’s Global Network of Incubators.” Highlights, November 2. Available at <http://idisc.infodev.org/en/Article.38385.html>.

United Nations Economic and Social Commission for the Pacific (UNESCAP). 2000. “Utilizing Business Opportunities for Women Entrepreneurs in Asia and the Pacific, 2000.” Women in Development Discussion Paper 6, UNESCAP, Bangkok. Available at <http://unescap.org/esid/gad2/04widresources/05pubreport/series6.pdf>.

United States Agency for International Development (USAID). 2006. “The New Generation of Private-Sector Development Programming: The Emerging Path to Economic Growth and Poverty Reduction.” MicroREPORT no. 44, USAID, Washington, DC. Available at [www.microlinks.org/ev\\_en.php?ID=10319\\_201&ID2=DO\\_TOPIC](http://www.microlinks.org/ev_en.php?ID=10319_201&ID2=DO_TOPIC).

### Thematic Note 3

Food and Agriculture Organization (FAO). 1994. *The Group Promoter’s Resource Book: A Practical Guide to Building Rural Self-Help Groups*. Rome: FAO.

———. 1995. *The Group Enterprise Book: A Practical Guide for Group Promoters to Assist Groups in Setting Up and Running Successful Small Enterprises*. Rome: FAO.

### Thematic Note 4

Charlier, Sophie, Isabel Yépez del Castillo, and Elisabeth Andin. 2000. “Payer un prix juste aux cultivatrices de

quinoa: un éclairage ‘genre et développement’ sur les défis du commerce équitable dans les Andes boliviennes.” GRAIL-IED, Tournesol Conseils, Brussels.

Kader, Adel A., ed. 2002. *Postharvest Technology for Horticultural Crops*. 3rd ed. Oakland, CA: Division of Agriculture and Natural Resources and University of California.

Mrema, Goeffrey C., and Rosa S. Rolle. 2002. “Status of the Post-Harvest Sector and Its Contribution to Agricultural Development and Economic Growth.” In *Value-Addition to Agricultural Products: Towards Increase of Farmers’ Income and Vitalization of Rural Economy*, Proceedings of the 9th JIRCAS International Symposium, ed. Yutaka Mori, Toru Hayashi, and Ed Highley. Tsukuba: Japan International Research Center for Agricultural Sciences (JIRCAS), 13–20. Available at [www.jircas.affrc.go.jp/english/publication/symposium/11](http://www.jircas.affrc.go.jp/english/publication/symposium/11).

Royal Tropical Institute, Faida Market Link, and International Institute of Rural Reconstruction (KIT, Faida MaLi, and IIRR). 2006. *Chain Empowerment: Supporting African Farmers to Develop Markets*. Amsterdam: KIT, Faida MaLi, and IIRR. Available at [www.kit.nl/smartsite.shtml?id=SINGLEPUBLICATION&ch=FAB&ItemID=1952](http://www.kit.nl/smartsite.shtml?id=SINGLEPUBLICATION&ch=FAB&ItemID=1952).

Sen, Amartya K. 1990. “Gender and Cooperative Conflicts.” In *Persistent Inequalities*, ed. Irene Tinker, 123–50. Oxford: Oxford University Press.

United States Agency for International Development (USAID). 2005. *Global Horticulture Assessment*. Davis, CA: University of California. Available at [www.treesforchange.org/treesandmarkets/hvc07\\_meet/other\\_materials/Global%20Hort%20Assessment.pdf](http://www.treesforchange.org/treesandmarkets/hvc07_meet/other_materials/Global%20Hort%20Assessment.pdf).

### Innovative Activity Profile I

Poitevin, Bruno, and Shamim Hossain. 2006. “Marketing Extension: A Powerful Process in 6 Steps—Empowering the Poor to Exploit Market Opportunities.” Report for the Livelihoods, Empowerment and Agroforestry Project (LEAF), Intercooperation in Bangladesh, Dhaka, and Swiss Agency for Development and Cooperation (SDC), Berne.





## MODULE 6

# Gender Mainstreaming in Agricultural Water Management

## Overview

**A**griculture water management (AWM) includes irrigation and drainage, water management in rain-fed agriculture, recycled water reuse, water and land conservation, and watershed management (World Bank 2006). The approaches and technologies employed by water management projects and programs have been evolving, and change has accelerated during recent decades. The overwhelming emphasis on technical and engineering matters that was characteristic of AWM in the 1960s and 1970s has expanded outward to encompass a broader purview that incorporates social and environmental concerns. AWM is essential to food security, but it also plays a fundamental role in building human capital in rural areas. Policy and decision making regarding land and water management have traditionally been the domain of men. As a result, policies and programs do not always consider women's unique knowledge, needs, or unequal ownership rights. Women farmers need to be actively involved in the planning and implementation of land and water management programs and must be able to participate in developing the policies that affect their access and control of these resources.<sup>1</sup>

This overview first analyzes the principal gender issues that tend to arise in AWM projects and that need to be addressed or resolved. It then presents a number of good practices based on the experience and lessons of gender-equitable AWM projects and policies. Two Thematic Notes and two Innovative Activity Profiles examine the interface between AWM and gender issues in greater detail.<sup>2</sup>

### KEY GENDER ISSUES

Since the Dublin Conference in 1992, policy makers have made renewed attempts to incorporate gender issues in water development projects. However, these policies have not been adequately translated into practice, and attempts in some projects to involve women in water management initiatives have met with only modest success. These disappointing results are attributable to several reasons. Policy makers and project staff often lack understanding of gender issues or of their importance. A lack of commitment and capacity to undertake gender analysis among project staff at times is evident in project design and implementation. Gender-disaggregated data are often lacking, and prevailing cultural norms can lead to serious resistance from within the affected beneficiary communities (IFAD 2007).

*Women and land and water ownership and tenure.* In most countries land and water rights are closely related, although water is often a public good, and therefore its use is associated with permits, concessions, and other tenure systems. Irrigated and rain-fed land is the main source of livelihood for many rural populations. Women have much less access to this essential asset than men. The distribution of this water and land is a major determinant of poverty. Even in industrial countries it is rare to have figures above 30 percent of land ownership belonging to women, and this figure tends to be much lower in developing countries. Inheritance laws that deprive women of access are often the cause. In some North African countries, women receive only half of the land or no land at all. This has been widely

documented by a survey carried out by the Centre on Housing Rights and Evictions (COHRE 2006). In some societies in sub-Saharan Africa, a woman acquires land tenure rights for life. However, this right is transferred to the men members of the family after she dies. In some cases a woman may lose access to land after the death of her husband or father. Without secure land tenure, women cannot obtain access to credit (IFAD 2007).

Although proportionately fewer women own land, they may exercise many other types of tenure, such as tenant, sharecropper, or caretaker. These forms of tenure have grown more prominent with the outmigration of men. As a result there are an increasing number of women who manage farms but who do not have either *de jure* (that is, legal) or even *de facto* (that is, actual, here meaning “use”) rights to natural resources (including water) or services (for example, credit or agricultural extension) that owners have. To enable more effective participation by men and women with precarious forms of tenure, it is necessary to recognize greater relevance for these types of tenure. Project design should support the actual farm managers rather than absentees or men kin who have little interest in farm affairs. Involving the “real users” will bring efficiency gains to the project because they will be the actual persons involved in project-related activities.

*Labor contribution to irrigated farms.* Women made up 48 percent of the global agricultural workforce in 2000 by the Food and Agriculture Organization’s (FAO’s) estimate.<sup>3</sup> In some African countries this proportion approaches 90 percent. It is evident that women’s labor plays a fundamental role in agriculture and in particular in irrigated agriculture. However, a number of serious problems are associated with it:

- Although an important share of farm work is informal and undertaken by family members, access to farm income and other resources depends on how the authority to make decisions is distributed among members of the household.
- Research has shown that rural women work longer hours than men but enjoy fewer benefits.
- The access of women to wage labor is often restricted. The salaries of women who do access wage work are often lower than those of men and the working hours are longer.
- Women are generally not able to irrigate at night owing to security concerns and during the day may face other time limitations. Water distribution systems rarely provide the flexibility necessary to satisfy such needs.

- When women are owners of the farm and have adequate resources to manage it, their productivity tends to be higher than or at least equal to that of men.

*Decision making at the farm level.* Managing an irrigated farm means making effective decisions at the right time. How decisions are made relates to a number of factors, but principally to who within the household is responsible for what decisions. Understanding how authority and responsibilities are distributed between men and women is therefore very important in interventions that seek to target specific members of the household with services such as training and technologies such as drip irrigation. Without such understanding, some of the targeted beneficiaries may not be able to participate in the planned activity because of social restrictions imposed by family members.

*Participation in water user organizations.* Institution capacity is an essential element of any AWM project. Irrigation management transfer (IMT) has become an integral part of many irrigation projects and requires strong institutions (see Investment Note 10.1, World Bank forthcoming). The predominant type of organization normally established is a water user association (WUA). The participation of water users in WUAs is normally linked to the ownership of the land. Because few women formally own land, their participation and representation in WUAs are normally low. Considering the substantial proportion of women who manage but do not own irrigated farms, their exclusion from associations in which they could communicate their needs and views can result in poor technical outcomes in water management, particularly for multiple uses of water.

*Access of poor women and men to irrigation benefits.* In addition to small farmers in irrigated areas who may improve their living standards by using local irrigation facilities, vulnerable groups exist who are deprived of land ownership and who have low educational levels. It is widely recognized that such groups are predominantly made up of women, mostly illiterate, who rarely find work to sustain themselves. Reaching them with any AWM program is a major challenge. It is feasible, however, by involving them in the consultation process and by addressing them through specific project objectives. Expansion of irrigated agriculture enhances demand for paid agricultural labor, often predominantly women.

*Domestic and other uses of water.* AWM projects center on the delivery of irrigation water to farms, whereas water supply projects plan only for domestic use. However, in rural life all uses tend to concentrate around the only resource available, no matter if they were planned for irrigation or

domestic use. Rural communities have diverse uses for water besides irrigated agriculture, such as fishing, livestock watering, small businesses, home gardening, and domestic tasks. Water management projects take into consideration the provision of water for different uses. The associated costs are not high if the quality of water meets the required standards, and the benefits may be significant. For instance, pipes can reduce the time required for unproductive activities such as fetching water from far distances. For instance, UNFPA (2002) estimated that women in many developing countries walk an average of 6 kilometers a day to collect water. The availability of clean water close to home saves women's and girls' time, which can be spent on other productive and human development activities, such as crop production and education (IFAD 2007).

Water quality also requires particular attention in this context. In many irrigation systems water for domestic use is taken from canals. The situation is even more difficult in areas in which nontreated wastewater is used for irrigation and the health risks are high. Understanding water quality is important not only for women but also for the whole household because family health depends upon it. Planning projects for multipurpose uses requires a thorough investigation of the nonagricultural uses and in particular of women's needs.

## LESSONS LEARNED

This section discusses the lessons learned at both the project and the policy levels.

### Project level

Four main issues should be considered in project planning and implementation of gender-sensitive approaches to agricultural water management:

- Genuine gender-sensitive participatory project planning and implementation will prevent elites from capturing most project benefits. The benefits will therefore extend to a much larger population base. The experience of Nepal shows that this approach is feasible and renders positive returns of women's participation (see Investment Note 10.4, World Bank forthcoming).
- Water projects should be designed to address women's and men's domestic and productive water needs. To date, many single-sector projects have been planned, for either irrigation or domestic water supply, and multiple-use needs had requirements that have been overlooked, causing particular difficulties in rural areas.

- Planners should include among project objectives specific reference to increasing women's capacity to participate in irrigation projects and plan for ways to increase their access to productive resources.
- Project planners need to have a better understanding of the social, economic, and institutional reality of the project area. In practical terms, this means that some modest incremental resources should be allocated for assessment of such realities, particularly during the planning stage.

As the points above suggest, intersectoral linkages are key in seeking gender-positive outcomes. The following specific suggestions may assist concerned planners and implementing staff:

*Land tenure.* Irrigation development projects often include land titling components. Opportunity exists here for expansion of women's asset base provided that new land titles are granted to women or to husbands and wives jointly, depending on the prevailing socioagricultural context. Understanding the social organization of agricultural production and the specific gender division of labor in the project area requires a thorough investigation into the gender aspects of land tenure, including the use of participatory investigations and gender-disaggregated land surveys. Land reclamation projects in particular can do much to increase women's access to and control over land. The approach used in the LADEP project (see Innovative Activity Profile 2) and the LACOSEREP project (see Innovative Activity Profile 1) provides good examples of how to overcome gender issues in land projects.

*Gender division of labor.* Awareness of women's sizable contributions to farm and household production is lacking among project planners. Farm models used in project design should carefully evaluate the availability of women's and men's work in the family and expected impacts of intervention on women's and men's income, time use, and social power. Labor contribution by project beneficiaries to the construction component in small projects can be very significant and reduce costs (see Investment Note 10.1, World Bank forthcoming). Few types of construction cannot be carried out by women if they are provided with suitable tools and guidance. Here again, this requires good knowledge of the available labor force (men and women) and of local traditions.

*Water user organizations and other institutional arrangements.* Because women are poorly represented in WUAs, careful attention is required to devise innovative ways of ensuring women's and poor men's meaningful participation in such forums. Sometimes the by-laws of an association

may provide equal opportunities for all members, but then discriminatory practices are applied, leading to low participation. More often, however, the criteria for WUA membership themselves are exclusionary and primarily focused on land-holding status, meaning that women and tenants are often left out. Overcoming this difficulty represents a challenge that has been successfully addressed by some projects. Approaches for tackling this issue have included the following:

*Quota systems wherein a minimum number of board seats are reserved for women.* This positive discrimination can increase women's participation, though quotas have also backfired in other places or been "captured" by women put up to the position by dominant men. This has also led to a focus on increasing women's participation among membership ranks as well as leadership, so that a "critical mass" of women develops. Stalker (2004) examined data from 45 villages in two World Bank–assisted projects in India and came to interesting conclusions regarding women's participation in water user committees in the domestic water supply sector. Although, in some cases, women committee members were nominal, or token, participants, evidence showed that being on a local water committee helps women develop skills and confidence.

*Gender-inclusive WUAs developed by removing exclusionary membership criteria regarding land ownership.* This took place in the IFAD-supported LACOSEREP project in Ghana (see Innovative Activity Profile 1) in which membership to WUAs was not limited to farmers associated with irrigation and, by doing so, opened up the opportunity to get women involved. Much depends here on how "farmer" is defined, for example, not just "irrigators" applying water to the field, which may be a man's task in many places, but also other farmers, such as those doing weeding, transplanting, harvesting, and other tasks, who are often women, and beyond crop production, those farmers using water for livestock production and other uses (often women).

Where WUAs are strictly associated with formal (often large-scale) surface irrigation systems, scope also exists to establish other water user groups at the community level that represent women's needs and interests, provided they link up formally to the WUAs so that multiple use needs are discussed. Examples of such associations are cooperatives in which membership is not limited just to owners of land but to any type of tenure. Such associations may take the place of a traditional WUA or work in parallel with them.

Recognizing organizational pluralism with various groups set up to respond to different needs is important. Turkey's Irrigation Management Transfer Programme illustrates very clearly that the management responsibility of

irrigation systems can be performed by several types of organizations besides the traditional WUA model such as water cooperatives, village organizations, and municipal organizations. The important principle, again, is that larger institutional analyses and strategic forms of formal collaboration take place so that subvillage/water-point level groups, for example, are not marginalized in local planning processes for water management. The IFAD-supported LACOSEREP Project (see Innovative Activity Profile 1) illustrates a nontraditional WUA model that integrates three groups of predominant stakeholders: gardeners, livestock owners, and fishermen. The main WUA was defined as a combination of these subgroups, with an executive body comprising members from each of the three subassociations. Another interesting feature of this association was that members were put in charge and the modalities of this procedure were left to members to decide, the only condition being that plot sizes should be equal, not smaller, for women, and 40 percent should be reserved for women. The small number of women extension officers is often cited as a weak link to channeling information and knowledge to women. To change this situation, training courses for mainstreaming gender dimensions in the daily work of extension staff can be done and are effective. Many training manuals (GWA and Both ENDS 2006; Sagardoy and Hamdy 2005) and related material undertake such training courses.<sup>4</sup>

*Designing and implementing multiple use water services.* The water requirements necessary to satisfy domestic needs are a small fraction of those applied to agriculture production—usually less than 6 percent. Such small requirements rarely create conflict in terms of quantity with irrigation needs. The problems are generally posed by the quality, but proper water treatment and filtering plants provide satisfactory solutions in most cases. Thus, the question of implementing a system that satisfies the domestic water needs is essentially associated with the related costs of the system (treatment plant and water delivery) and the ability of the farmers to pay for this service. In rural areas, where houses may be erratically distributed over the land, it may not be feasible to provide them with tap water, and communal watering points may be the best solution. As women will be the main users of those watering points, planners must understand their water needs and associate them with the management of such watering point sites. A strong consultation process should take place during the planning and implementation stages, but training programs addressed to women to help them manage and maintain the points of supply will also be necessary. Implementing multiple water use projects can introduce an additional cost factor and

institutional complexity in the management of the nonagricultural uses. However, the efficiency gains at the national level are much greater than if the provision of these services is done separately or not done at all (see Thematic Note 1 for details).

*Reaching the poorest and most vulnerable groups.* The importance of including vulnerable and often-overlooked groups such as landless workers and poor women farmers is increasingly understood but is not always included in project design. Including them in the projects means that the greatest unexploited potential to influence land and water use management will be tapped positively.

The first questions to answer are as follows: Who are the poor? How do they secure their livelihoods? Often the rural poor are women, men, and children owning little or no land and without other significant nonagricultural income. Poverty impacts of irrigation projects can include increases in demand for both agricultural labor and direct project construction, as well as the possibility of land transfers through watershed development and land reclamation efforts.

*Monitoring and evaluation.* Monitoring the progress made in applying gender approaches in irrigation projects is seldom undertaken. The development of gender indicators in the context of project implementation is an area that lags behind (Sagardoy and others 2007). Progress is evident, however, and a variety of gender indicators related to water are being developed by FAO and other organizations. Investment Note 10.4 (World Bank forthcoming) provides further guidance on this issue.

### **Policy level**

The effectiveness of AWM programs is heavily affected by government policies for the sector and related sectors. Understanding government policies, the institutional environment from whence they are generated, and the priorities they reflect is an important element in designing projects that are more likely to receive support from the government.

The development community at times can have considerable leverage in promoting changes in policy. Gender issues that require active policy support include the following:

- Ensure that women enjoy de jure and de facto equality in access to land and other property, including inheritance and purchase.
- Support pro-poor development actions. Investment Note 10.3 (World Bank forthcoming) provides more detailed orientations in the interrelation between poverty-gender issues and AWM policies. The example of South Africa illustrates a relevant policy in this respect.
- Promote the participation of women in WUAs and other organizations by supporting appropriate institutional measures, such as minimum quotas, or allowing that other forms of tenure besides ownership be eligible for being a member in the association.
- Provide an equal opportunity legal framework for agricultural laborers (and others) and ensure its application, including support for gender-equitable wages.
- Provide improved coordination among concerned WUAs to facilitate the implementation of multiple-use water projects.
- Support equal employment opportunities in WUAs.
- Provide and support capacity building around gender issues in WUAs with particular attention to extension staff. The establishment of dedicated government offices to monitor gender progress and provide specialized training, technical assistance, and sometimes modest financial incentives can be most effective in providing more opportunities for women.

Some indicators to monitor the gender impact of activities in agricultural water management are provided in table 6.1.

Depending on the country or region, it may be relevant to also consider ethnicity and caste alongside gender (both as comparative indicators and when collecting data), as women of lower castes or ethnic minorities are usually in the worst situation.

**Table 6.1 Monitoring and Evaluation Indicators for Gender in Agricultural Water Management**

<b>Indicator</b>	<b>Sources of verification and tools</b>
Number and frequency of women, men, and other disadvantaged persons consulted during detailed design and implementation	<ul style="list-style-type: none"> <li>• Community meeting minutes and records of prioritization and votes</li> </ul>
Percentage of women and men actively participating in planning sessions for water allocation program for drinking water and agricultural irrigation	<ul style="list-style-type: none"> <li>• Meeting minutes</li> <li>• Technical plans indicating water uses and timetable</li> </ul>
Percentage of women and men actively participating in water user groups	<ul style="list-style-type: none"> <li>• Case studies</li> <li>• Meeting minutes or administrative records</li> </ul>
By year <i>x</i> of project operation, operational costs are covered with user fees and maintenance fees collected to agreed level	<ul style="list-style-type: none"> <li>• Bank account records</li> <li>• Women's user group records</li> </ul>
Percentage of women and men members of operations and management committees of irrigation projects	<ul style="list-style-type: none"> <li>• Meeting minutes</li> </ul>
Women, men, and ethnic minorities in positions of management or leadership in water user groups	<ul style="list-style-type: none"> <li>• Meeting minutes</li> <li>• Women's user group committee records</li> </ul>
Community satisfaction (disaggregated by gender) regarding water distribution schedules and access	<ul style="list-style-type: none"> <li>• Focus groups</li> <li>• Interviews, before and after</li> </ul>
<i>x</i> percent of women and men among total trainees receiving training in the appropriate use of irrigation for high-value crop production	<ul style="list-style-type: none"> <li>• Training records</li> </ul>
Access of women and men to support services, such as credit and extension (such as percentage of women in agricultural training and of women clients of credit institutions)	<ul style="list-style-type: none"> <li>• Extension department records</li> <li>• Interviews with women in target groups</li> </ul>
Access of landless women and men to water from irrigation schemes	<ul style="list-style-type: none"> <li>• Community meeting minutes</li> </ul>
Among surveyed women in target group, <i>x</i> percent rate their access to water for agricultural and domestic use as having improved during the period covered by the program or project	<ul style="list-style-type: none"> <li>• Interviews with women in target groups (for instance, a sample of women in the defined area); ideally the interviews should be conducted before and after any project or program activities</li> </ul>
Changes in relevant dimensions of well-being, disaggregated by gender and wealth group: food and other products, household income, labor and other costs for water conveyance, water quality for drinking, and water quantity for hygiene	<ul style="list-style-type: none"> <li>• Household surveys</li> <li>• Water quality testing by project or local environment department</li> </ul>

Source: Inputs from Pamela White, author of Module 16.

## Gender and Multiple-Use Water Services

**M**ultiple-use water services in poor rural and peri-urban areas are a highly effective way to use water to reduce poverty and enhance gender equity. By taking women's and men's multiple water needs as the starting point and accessing multiple sources of water in an integrated way, multiple-use water services meet a broad range of dimensions of well-being, enhance project sustainability and willingness and ability to pay, and foster more equitable water management.

It is well acknowledged that water resources are interconnected within one hydrological cycle, encompassing naturally available water resources: rainfall, groundwater, surface lakes and streams, ponds, springs, wetlands, and water and human-made storage, reservoirs, conveyance canals, pumps, reticulation networks, abstractions, and take-off points for end uses, drains, return flows, and groundwater recharge. Water from multiple and conjunctive sources is used and reused to meet multiple needs. In the past the focus has largely been at the higher aggregate basin and sub-basin levels. However, multiple-use water services approaches recognize that integrated water resources management starts within the household, especially in poor rural and periurban areas where livelihoods are highly water dependent and diversified.

Women and men tap, convey, and use water for drinking, other domestic purposes, livestock, gardening, irrigation, tree growing, fisheries, food processing and other small businesses, and cultural purposes. Multiple water sources are used simultaneously, depending on their comparative suitability for certain uses (easy accessibility, year-round availability, site, quality, or predictability). For example, more reliable, year-round, and higher-quality sources are prioritized for domestic uses; roof water and runoff are used during the rainy season; slightly organically polluted water is used for irrigation.

Multiple-use water services approaches overcome the barriers created by the way in which the water sector has

structured itself. Organization was typically based around single-use sectors: a domestic sector, an irrigation sector, a fisheries sector, a livestock sector, and others. These organizations fail to fit the nature of water resources and people's multiple water needs. Conventionally, the irrigation sector, for example, prioritized productive water uses by adopting that as its mandate, even if domestic, livestock, and other more urgent water needs of their clients were not satisfied. In reality, however, users anywhere in the world made the match: they transformed single-use planned systems into de facto multiple-use systems. In response to that observation, the irrigation sector developed an "irrigation-plus" approach, for example, by adding washing steps, entry points for cattle, or special abstractions and reservoirs for domestic and livestock water supplies, especially in the dry season (box 6.1).

Usually these adaptations were seen as "add-ons" and less important than the primary mandate of water for crops. Taking people's priority water needs as the starting point instead of beginning with a bureaucratic mandate matches realities on the ground even better.

### INVESTMENT AREA

Multiple-use water services bring gender to the center stage of water development, use, and management. In the past women's needs, either as providers for domestic water or as producers in their own right, were often ignored in agricultural water management projects. Yet their de facto uses of "irrigation water" for nonirrigation purposes were in reality often the most important benefit for women (Hussain 2005). Women are nowadays better recognized as producers on an equal footing with men, but irrigation and rural livelihood-oriented development investments still tend to ignore women's domestic and other water needs.

Men's responsibilities for domestic water provision, a crucial aspect of household welfare, are even more ignored.

**Box 6.1 Pakistan: Socioeconomic Differences in Access to Water for Livestock Watering**

An International Water Management Institute study in Pakistan found that socioeconomic level affected households' access to water for livestock watering. Better-off households living on larger properties were able to keep their animals in stalls on their home compound and bathed and watered the animals with the same domestic water the family used (that is, groundwater from hand pumps, motor pumps, and wells).

Ninety-five percent of respondents from such households found water sources sufficient for their animals. In contrast, poorer households (and those few households who lived near their fields farther from the village) had to drive their animals to canal watercourses and distributaries for watering and bathing. Only 71 percent of such respondents found such water access arrangements satisfactory.

Further, livestock use of canal water is illegal and pollutes the distributory water for downstream domestic users. The traditional livestock pond held in common in each village is now being degraded by release of wastewater and sewage from those households with private sources of water.

*Source:* Kuriakose, Jehangir, and ul-Hassan forthcoming.

Although the daily drudgery of fetching water is the typical gendered burden for women and girls, and to a lesser extent for boys, in many societies men do take part. Men can take the responsibility for the construction and maintenance of wells or ponds or for transport if aided by donkeys, bicycles, or cars. Domestic water provision by both women and men should be further recognized as a critical factor for household welfare from rural households and communities to national and international policy discourse. This reflects the notion of equality of men and women both in carrying out the unpaid tasks for household welfare and in generating income for the family's benefit.

Multiple-use water services also allow for pro-poor water allocation, based on a quantitative understanding of the distribution of water uses across various levels. If poverty is understood as a state of multidimensional deprivation in which basic needs are by definition broadly defined, it is an anomaly to confine "basic" water needs to one purpose only: drinking and personal hygiene. Food and income are

as critical for poor households to mitigate malnutrition and income poverty as domestic water is for drinking, hygiene, and cooking. Providing for both domestic and small-scale productive uses is estimated to require water quantities in the range of 50–200 liters per person per day (Butterworth and others 2003). Thus, in poor rural and periurban areas, such water uses all directly contribute to poverty alleviation. These quantities are minimal from the overall resource perspective from the local to the basin level and fall within the errors of hydrological models. The irrigation sector also has viewed the quantities needed for domestic uses as negligible.

**BENEFITS FROM GENDER-RESPONSIVE ACTIONS**

In productive-plus designs, domestic water provision is a matter of year-round provision as near as possible to the place of consumption, as is water quality for the even smaller quantities of two to four liters per person per day, depending on climate (Howard and Bartram 2003). Integrating livestock needs in irrigation design is not a quantity issue either, but a matter of protection against cattle destroying canals, soils, and crops and polluting resources. Therefore, quantities of water for such vital livelihoods hardly ever encounter environmental constraints, except perhaps in the dry seasons in areas where storage and other infrastructure development levels and natural endowments are low. The key problem is the distribution of water use among people, which can be highly skewed. This is illustrated by the Gini coefficient for water use distribution in South Africa, which was found to indicate near total inequality of 0.96 (see box 6.2).

In the domestic sector, the recognition of multiple water needs has gone along remarkably similar lines. Starting from the single-use mandate to provide water for domestic uses only and observing the reality that all "domestic" schemes are de facto used for multiple purposes, some organizations started adopting a "domestic-plus" approach. For example, they augmented the discharge of the water supply systems to allow for watering livestock and gardens also and for home-based enterprises, or they connected cattle troughs to drinking water supplies.

Some technologies, such as rainwater harvesting and wells for single or small household groups, allow for multiple uses in design. Instead of addressing drinking water quality through centralized water treatment facilities, point-of-use treatment (filtration, chemicals) has expanded significantly. This not only mitigates the inevitable pollution of domestic water projects during conveyance and



**Box 6.2 South Africa: Inequitable Water Distribution in the Olifants Basin—Options for Redress**

The colonial history of South Africa left a legacy of a highly skewed distribution of water resources. In the Olifants basin, the Gini coefficient for (blue) rural water uses (which constitutes 91 percent of all water uses) is 0.96. In other words, 0.5 percent of the rural population controls the access to 95 percent of the blue water resources. If the majority of the population were to double their current water use, the few large users would have to share only 6 percent of what they use now. Underlying this so-called environmental crisis in this basin, where by now most physical water resources have already been committed, is the highly inequitable socioeconomic and political distribution of water resources, which requires a redistributive water allocation reform, such as that recently launched by the government of South Africa.

*Sources:* Cullis and van Koppen 2005; RSA 2005.

household storage but can also solve water quality problems in “productive-plus” water services. Moreover, point-of-use treatment also applies to the millions of households that are not served by any public project. A clear example of the growing recognition of the importance of multiple-use services is the World Bank’s Water and Sanitation Program. The program’s vision to integrate multiple-use services fully in their approaches can be compared with the way in which sanitation has been integrated in “domestic” supplies since the 1980s.<sup>1</sup>

The growing dialogue between the productive and domestic water sectors to develop jointly “multiple water use services by design” integrates water services where it matters for poverty alleviation and gender equity. “It is Integrated Water Resources Management that directly advances the Millennium Development Goals. . . . As the water professionals created the barriers between them, it is the water professionals who have to break them down.”<sup>2</sup>

### **Health impacts of a multiple-use approach**

Health is also improved from multiple-use water services. In spite of strong concerns by the health and domestic water sector departments about the quality of drinking water in

“productive” schemes, many planners have realized that in areas without any domestic water supplies, the use of irrigation water for drinking purposes was an improvement over the status quo. Moreover, in the many situations in which groundwater and even surface streams are used, water quality is acceptable for domestic uses other than drinking, and in specific cases, also for drinking. Later studies confirmed that regardless of its sometimes questionable quality, the availability of any additional *quantities* of water has a beneficial impact on people’s health (Esrey and others 1991; Howard and Bartram 2003; Jensen and others 2001; Van der Hoek and others 2001), especially when combined with improved hygiene behavior. Hence, within reason, water quantity is more important than water quality, and other alternatives such as various point-of-use treatments exist for the small quantities needed for actual drinking. (It should be noted, however, that for small children poor quality water remains a major risk for diarrhea; see Clasen and Cairncross 2004; Hebert 1985.)

Point-of-use treatment is increasingly seen as a more appropriate option in the domestic sector (Mahfouz and others 1995; Mintz, Reiff, and Tauxe 1995; Quick and others 1999, 2002; Reller and others 2003; Roberts 2003), particularly in dispersed or difficult-to-reach areas. Such treatment also solves the water quality concern for productive-plus schemes and, moreover, for the millions who have no access to public supplies, such as those using groundwater wells that may be contaminated with arsenic or fluoride.

### **KEY GENDER ISSUES**

Past evidence of domestic-plus, productive-plus, and multiple-use by design approaches highlights three sets of benefits of water services that take poor women’s and men’s multiple water needs as the starting point.

#### **Improving more dimensions of women’s and men’s well-being**

Various simultaneous water uses provide a broad range of benefits: food production (crops, livestock, fish), income (from the sale of primary products and water-dependent artisanal businesses), reduced drudgery of water fetching, and enhanced health. These different benefits tend to reinforce each other into a virtuous circle out of poverty.

Women benefit in particular from dissolving the dichotomy between the domestic and productive spheres and approaches that take women’s and men’s water needs as equally important by design. In this way, the “productive”

sectors also better recognize the priority need to alleviate the unpaid chores of women and girls for domestic water fetching, as well as the burdens of men and especially boys to take care of cattle watering at distant sources. Second, the starting point at which women are producers in need of water on an equal footing with men is effectively operationalized by stimulating productive activities around the household. In societies in which women's mobility is limited or in which women lack access to fields of their own, a situation similar to the situation of land-poor and landless households in general, homestead production offers unique opportunities for income generation. A study in Nepal confirmed how women in particular benefited from the newly installed domestic-cum-gardening water supplies and drip irrigation kits around the households (Upadhyah Samad, and Giordano 2005).

### **Enhancing project sustainability**

Multiple-use water services enhance project sustainability in various ways. First, anticipating future “unplanned” uses prevents the problems of de facto multiple-use programs, such as damage to infrastructure, the distortion of allocations because of upstream overuse of domestic programs designed for minimum uses only, or “illegal” connections. Second, new local water management institutions for investing in and operating and maintaining new infrastructure can be grafted onto communities' existing water arrangements. The latter are invariably integrated for multiple uses and holistically govern the same water resources used by the same people. The smooth continuum between existing arrangements and new institutional elements strengthens community ownership. They also avoid the turf wars between newly imposed “domestic” WUAs and “irrigation” committees. Third, the willingness to contribute to managing new projects sustainably is higher if the programs better meet users' needs. The ability to pay for the project is enhanced by better water delivery for productive activities.

### **Using water more equitably**

From local to basin level, the simultaneous consideration of all water uses and everybody's needs gives a human face to water development and regulation. Formal water resource allocations tend to be based on sectors, with the domestic water sector as a first priority, and agriculture, environmental needs, industrial needs, and others as the next priorities. However, this ignores the huge differences in water use

*within* sectors. Pro-poor and people-based allocation prioritizes all uses of water for domestic and productive needs that allow every citizen to reach at least minimum standards of well-being. Only after expanding and protecting those uses are remaining water and other resources allocated.

### **Keeping incremental technology costs low or none**

The above-mentioned benefits come at limited incremental technology costs and even come at no incremental cost in the case of de facto multiple-use schemes. Technologies that allow for multiple uses by design reassemble the conventional technology components into a more user-friendly package. This is a matter of basic rural engineering skills, not of hardware costs per se. However, the costs that tend to increase most are the transaction costs in the early planning and design stage. A process in which women and men articulate their priority needs, which then are translated into an optimal technical and institutional design, takes time and facilitation.

## **POLICY AND IMPLEMENTATION ISSUES**

The key actors in shifting from single-use water services to multiple-use services are national and international governmental and nongovernmental agencies. They shape the internal structuring and financing of water sector policy making, implementation, and vocational training and tertiary education. Policies and legal frameworks tend to define overall policy goals in terms of single-use water development and to set standards and quality norms, for example, for drinking water, assuming that single use is the priority use, if not the only use, of the beneficiaries of a particular program. Financing streams are also typically earmarked for one single use. Organizationally, departments are structured according to single-use mandates. In a top-down manner those mandates trickle down to lower-tier branches through job descriptions, performance evaluations, monitoring systems, technical expertise, and other ways.

These policies and legal constraints need to be transformed. In each sector sectoral mandates that are too narrow are to be expanded into multiple-use mandates. Constraining norms and standards must follow. For example, imposing unrealistically high water quality standards is now recognized to be of little use in a search for incremental improvements to deal with health hazards. The World Health Organization recently also changed its focus from fixed water quality standards to more flexible guidelines (WHO 2004).

Besides formulating and promulgating enabling policy and legal frameworks, national-level stakeholders also need to establish meaningful coordination across sectors and actors. This implies, in essence, devolution of decision-making regarding water services to the lowest appropriate level, up to clients' multiple water needs in their integrated diversified livelihoods. Bottom-up needs-based design requires poor water users to decide on the services they need. It is true that national or regional agencies will keep a role in large-scale dams and other large- or perhaps medium-scale water works and basin-level regulation. However, beyond that, national governments have a main role to play in supporting intermediate-level water services providers (local government, local nongovernmental organizations [NGOs], private water service providers, and others), so that they are enabled, in their turn, to coordinate the support for communities according to integrated needs emerging from transparent and participatory design procedures for multiple-use water services.

Long-term support by national and intermediate-level stakeholders to communities is also required for multiple-use services at any significant scale. This support is financial, institutional, and technical. Considerable financial support earmarked for multiple uses is critical for any taking multiple-use water services to scale and reaching the Millennium Development Goals. Subsidization will remain necessary for reaching the poor for decades to come. Yet cost recovery by those who can pay and earn an income from multiple-use systems should be tied into programs. National support is also needed for institution building and expanding the choice of affordable and appropriate technologies for multiple uses.

For the factual implementation of multiple-use water services, intermediate development agencies, in particular local government and other administrative structures, are pivotal, irrespective of any basin boundary. Yet Integrated Water and Resources Management institutional structures at basin or aquifer levels can strengthen cross-sectoral coordination. In fully committed basins, basin institutional arrangements would enforce water allocation that prioritizes basic domestic and productive water needs.

## **GOOD PRACTICES AND LESSONS LEARNED**

The concept of multiple-use water services emerged in the domestic and productive water sectors alike, in response to the major lesson learned: planning and design of water services for one single use do not fit clients' needs in poor rural and periurban areas. Even productive-plus and domestic-plus

approaches reproduce an implicit prioritization of water uses according to top-down defined mandates. Clients have always expressed these needs by simply transforming single-use planned systems into de facto multiple-use systems. Not surprisingly, multiple-use services tend to resonate immediately with communities and with any water professional with field experience.

In the past decade, NGOs (for example, AWARD, Catholic Relief Services, Mvuramanzi Trust Zimbabwe, Plan International, South Africa) and small-scale private sector projects (for example, Agua Tuya in Bolivia, rope pump development in Nicaragua) with a client-oriented poverty and livelihood focus swiftly started applying multiple-use water services approaches. Their mandates and internal structuring allowed them to just do it.

International research programs, in particular the Challenge Program on Water and Food of the Consultative Group of International Agricultural Research, is conducting global- and basin-level research projects on multiple water uses. International financing agencies, such as the World Bank, are also adopting multiple-use water services approaches. Wherever the political will exists, national governments have also started recognizing multiple-use services approaches. For example, the South African Department of Water Affairs and Forestry recently embarked on this road. In Colombia rural development agencies coordinate with the national government, among others, on the need for augmenting the quantity norms for rural water supplies.<sup>3</sup>

Early experiences also highlighted that the most challenging level is the intermediate level of service providers and WUAs. Stakeholders at this level together and in a coordinated way are to provide sustained support to investments and construction of multiple-use projects in their zone of intervention, as well as to "after care" by supporting operation and maintenance. Today, however, agencies such as local government or district irrigation agencies are typically under-sourced, lack capacities, are "trapped" in ad hoc planning and trouble shooting, and divert their attention to a few "islands of success in oceans of misery." Although accountable in name to their constituencies, local officials formally report upwards to a range of typically uncoordinated bureaucracies.

Multiple-use water services are a particular form of decentralization, and their successful implementation depends upon the success of decentralization in general. Yet the main lesson of irrigation management transfer and other forms of decentralization until now is that a mere devolvement of responsibilities without the corresponding resources required to fulfill these responsibilities is bound to lead to the collapse of even the small support

that previously existed (Shah and others 2002). Therefore, the most needed lessons will come from recent initiatives like the World Bank’s Community Driven Development approach (Binswanger and Tuu-Van Nguyen 2005) or pilot experiments to integrate multiple-use water services into local government planning, for example, in South Africa’s Integrated Development Plans (Maluleke and others 2005).

## GUIDELINES AND RECOMMENDATIONS FOR PRACTITIONERS

The following recommendations apply to practitioners at the three levels (Van Koppen, Moriarty, and Boelee 2006).

At the national level:

- *Enabling policy and legislative framework.* Remove the obstacles for multiple-use water services, such as a narrow focus on one single water use only in mandates, financing streams, or standards and norms, and, instead, prioritize water development and water allocation for poor women’s and men’s concurrent basic domestic and productive needs.
- *Financing.* Allocate subsidies and loans to communities and to intermediate-level stakeholders for upscaling of multiple-use water services.
- *Coordination across sectors and actors.* Decentralize decision making for development to the lowest appropriate levels and shape national support according to those integrated needs.
- *Long-term institutional and technical support.* Facilitate inclusive institutional design for community-based integrated water resources management and capacity building and development and disseminate appropriate and affordable technologies and skills for multiple uses.

At the intermediate level:

- *Adaptive management.* Stimulate adaptive learning-by-doing by intermediate-level stakeholders to gradually move toward water services provision for multiple uses across increasing numbers of villages.
- *Strategic and participatory planning.* Develop transparent methodologies across a region that allow for water services planning and design based on communities’ articulated multiple water needs.
- *Coordination across sectors and actors.* Organize holistic support to communities based on integrated water and livelihood needs.

- *Financing.* Establish sustainable investments and revenue collection mechanisms both for community-based schemes and water user associations and for intermediate-level support structures.
- *Long-term institutional and technical support.* Provide support to communities for community-based institution building and for a wide choice of appropriate and affordable technologies.

At the local level:

- *Livelihoods-based planning and design.* Facilitate an inclusive planning and design process in which women and men articulate their domestic water needs as shared responsibilities for household welfare and their respective productive water needs as equal opportunities for improved livelihoods.
- *Appropriate technologies.* Translate multiple water needs into affordable small- and medium-scale technical designs, in particular storage for year-round water provision.
- *Sustainable water use.* Tap synergies for more efficient water use by combining multiple sources for “more use and reuse per drop,” prioritizing basic domestic and productive water needs in periods and sites of scarcity.
- *Inclusive institutions.* Graft new integrated water management institutions upon existing community-based water arrangements that already holistically govern shared water resources for multiple uses.
- *Financing.* Establish sustainable cost-recovery mechanisms at the local level, while providing smart subsidies for those who cannot afford to pay.

### Project preparation

The following questions guide the preparation of projects for multiple-use water services across the various levels:

- Are project goals, mandates, and evaluation criteria constraining toward one single water use, or do they acknowledge people’s multiple water needs? If constraining, what short-term strategies can be deployed to widen the mandate (such as pilot projects with intensive monitoring)? Which strategies are needed in the long term, and how can they be initiated (such as research to reexamine national standards)?
- Are technical experts in the projects sufficiently aware of clients’ water needs outside their immediate focus? Are they encouraged to look outside the disciplinary box?

- Which participatory process is foreseen that allows the target group of poor women and men to express their water needs at the very beginning of a project, to identify affordable technologies, to sustainably tap multiple water sources, to design inclusive new institutions on the basis of existing water arrangements, and to establish sustainable financing mechanisms while supporting the poor and the poorest? What are the incremental costs of such a process?
- How are women's and men's mutual domestic labor and monetary responsibilities articulated and translated into the technical and institutional design?
- How are women's and men's equal needs for water for productive use considered and translated into the technical and institutional design? Which additional support is required for both women and men to make more productive use of water?
- Which incremental health benefits can be achieved for the microquantities of drinking water and for other health dimensions of water services?
- How will the capacity of the intermediate-level service providers be built to continue support to target communities and to replicate lessons learned in other communities?

Projects with a multiple-use water services focus can include the following monitoring and evaluation indicators:

- Changes in relevant dimensions of well-being by gender and wealth group: food and other products, income, reduced labor, and other costs for water conveyance, water quality for drinking, and water quantity for hygiene
- Participatory planning and design process that allows for bottom-up needs definition by women and men and articulation of gendered needs for external support
- Level of cost recovery
- Technical innovations allowing for multiple uses
- Capacity building of intermediate-level service providers to apply needs-based multiple-use water services on a larger scale
- Removal of current barriers to multiple-use water services in national policy and legislative frameworks.

## Gender and Institutional Approaches to Groundwater Development and Management

**G**ender-sensitive approaches to groundwater development and management help secure and protect groundwater access and use for women and the rural poor. Gendered water rights determine access and control over groundwater resources. Men and women differ in their needs and technological preferences for groundwater extraction and are affected differently when groundwater development interventions are introduced. Gender analysis should thus be undertaken throughout the project cycle. Only when the needs and preference of all users are taken into account can the project objectives of poverty reduction be attained.

Recognition of gender issues in the use and management of the groundwater resource is vital to realizing the project objectives of poverty reduction and sustainable management of the resource. Groundwater has certain characteristics that make it different from surface sources. Groundwater, available in deep and shallow aquifers, provides security against drought by offering a reliable year-round natural storage of relatively good-quality water, close to the point of use, usually at a lower cost of development. It has been a crucial resource in livelihood creation programs in different parts of Asia and Africa through intervention in both deep and shallow groundwater projects. The unique characteristics of groundwater have made the provision of its services for drinking, irrigation, and other productive purposes an effective way to reduce poverty and enhance gender equity.

Investment in a gender-sensitive institutional approach to groundwater development and management brings user-preference issues to the fore and is a key part of planning for sustainable water use systems. Gender inequalities in access to and control over groundwater abound. This Note examines issues regarding access to groundwater abstraction technology and use of the resource, as well as challenges in ensuring participation of women and the poor in groundwater management activities.

Women and men have different priorities and needs with respect to water, which result from their different roles and responsibilities. Women and men also have different skills and knowledge with respect to groundwater use for domestic, agricultural, or other productive purposes and are affected differently when groundwater development initiatives are introduced. Even though groundwater offers different advantages, overexploitation of this resource through unregulated pumping as well as water quality issues poses serious threats to the well-being of rural persons, especially women and poor men and women.

### GENDER AND ACCESS TO GROUNDWATER

A crucial issue in groundwater development and management is that of access to and use of the groundwater resource, including access to groundwater abstraction technology and groundwater management activities. Different rights come into play when discussing groundwater: rights to the resource either by virtue of owning the groundwater technology (individually or through a group) or by being a member of the groundwater users' group, rights to decide water allocation and distribution after water is pumped out, as well as adjudication and decision-making rights on who holds which rights (Gautam 2006; Zwartveen 2006). Water rights are directly related to land rights in many countries. In such cases men and women without clear land titles are restricted from being members of groundwater users' group even when they may be the main decision makers on the farm or in the household (see box 6.3 for a project that overcame this constraint). In the Andean countries, Bangladesh, India, Nepal, and countries in southern Africa, migration of men from rural areas has led to an increase in women-headed households so women are overburdened with the task of maintaining the household as well as the farms.<sup>1</sup> The same case can be found in Yemen (box 6.3).

### Box 6.3 Yemen: Women and the Water Crisis

Yemen's water crisis has affected women adversely in different ways. Groundwater irrigation for cash cropping has resulted in aquifer depletion in different agroecological regions. Traditional sources of water-harvesting structures are no longer maintained. Women and young girls travel longer distances for water in rural areas, affecting their health, safety, and literacy levels. As more men migrate to cities and other Gulf countries, women's role in irrigated agriculture has increased, although it is not always formally acknowledged because commercial cultivation was traditionally a man's preserve. In the case of urban water supply, richer households purchase water from tanks, whereas poorer women have to line up to buy water from richer neighbors, to obtain lower-quality water from wells, or periodically to get water from municipality water projects.

*Source:* Frédéric Pelat, "A Brief Overview of the Water and Gender Situation in Yemen," [www.idrc.ca/en/ev-99527-201-1-DO\\_TOPIC.html](http://www.idrc.ca/en/ev-99527-201-1-DO_TOPIC.html).

### Box 6.4 Gender and Water Quality

Naturally occurring arsenic in groundwater poses a serious threat to more than 60 million people living in South and East Asia. Almost 700,000 people have been affected by arsenicosis in the region. Skin cancer; cancer of the bladder, kidney, and lungs; diseases of the blood vessels leading to gangrene; and reproductive disorders are the main effects of arsenic poisoning. A stigma associated with arsenicosis has serious social effects on marriage prospects for men and women, as well as for job opportunities. One of the most seriously affected regions is Bangladesh in the Meghna-Brahmaputra-Ganges Delta, where arsenic has been detected in water from shallow aquifers. Women in Bangladesh prefer tubewells over surface water because these reduce their workload. However, with the rise in arsenic-contaminated groundwater, women and young girls have been disproportionately harmed.

*Sources:* Caldwell and others 2002; [www.worldbank.org/gwmate](http://www.worldbank.org/gwmate); [www.who.int/water\\_sanitation\\_health/diseases/arsenicosis/en](http://www.who.int/water_sanitation_health/diseases/arsenicosis/en).

Women and girls are typically responsible for collecting water for daily needs. This includes water for drinking purposes for the household, livestock, cooking, cleaning, and overall health and hygiene within the household.

Clear water rights lead to improved access to water, which is critical for maintaining good health and a sustainable livelihood. Studies from Africa show that both rural and urban women are engaged in small-scale enterprises and that improved access to water would help them to pursue these activities more effectively.<sup>2</sup> Experience from India has shown that when groups of landless women were provided a share of water by the members of a "land-owning" water users' association in a lift irrigation project, the women were able to work out alternative livelihood strategies. They contracted the available wasteland in the village on a long-term lease and derived an income through biomass produced from this land (Kulkarni 2005), while taking part in the restoration of the land.

#### **GROUNDWATER OVEREXPLOITATION, WATER QUALITY, AND GENDER**

Groundwater use in most developing countries is not regulated. This has led to the overexploitation of the aquifers,

causing the lowering of water tables, an increase in pumping costs, and pollution of aquifers. Continued overexploitation of groundwater reduces the availability of freshwater for use and poses challenges to health for people who are bound to live near these affected areas. Groundwater is the major source of drinking water for cities in the developing world, and demand is rising with unplanned expansion of cities. Commercial agriculture and industries are other major users.

Groundwater overabstraction negatively impacts the rural poor because they cannot afford to dig deeper wells. In water-dependent societies, this particularly impacts the lives of poor women. Industrial waste disposal, wastewater from urban areas, oil spills, and excessive use of pesticides and insecticides in agriculture are some causes of groundwater pollution. In coastal areas overexploitation causes a rise in saline intrusion. Another type of groundwater poisoning that has emerged as a serious health hazard is due to naturally occurring arsenic (box 6.4).

#### **BENEFITS FROM GENDER-RESPONSIVE ACTIONS**

An institutional approach to groundwater development and management that puts gender at the center stage:

### Box 6.5 Nepal: Leadership Development of Deep Tubewell Group

The Bhairahawa Lumbini Groundwater Irrigation Project (BLGWIP-III) initiated a “demand-based participatory approach” to deep tubewell (DTW) development and management. Women and men in Durganagar village sought a DTW from the BLGWIP-III only after they were convinced of the nature of the layout of the distribution system, flow and discharge rates, expected operational costs, and the possibility of integrating DTW with the traditional spring water distribution system already in use.

After realizing the design would support their interests in vegetable cultivation, they actively participated in project planning, including the layout of the underground pipe flow distribution system. Vegetable cultivation

*Source:* Gautam 2006.

became a lucrative business among women and smallholders who take it up on a sharecropping basis. With water in high demand, the water user group (WUG) did not face difficulties in collecting fees and has been able to hire a full-time pump operator. Both men and women actively sought out WUG leadership positions, which resulted in an overall increase in the executive board from 7 to 11 positions for the second WUG election. According to the farmers, they realized that it was “important to get a representation across all castes, ethnic lines and from women.” A woman was elected to the second committee in 2004. More women were interested but were not eligible because they were not landowners.

- Helps reduce gender inequalities in water by ensuring access to groundwater for women and those without clear land titles
- Recognizes women as important water stakeholders and recognizes the class diversity and social differentiation among women
- Facilitates the representation and participation of women in aquifer management to communicate groundwater priorities of men and women for different activities (such as irrigation versus domestic supply). Consulting with men and women from the start helps improve water regulation and governance through a bottom-up process (box 6.5).

#### **POLICY AND IMPLEMENTATION ISSUES**

Livelihood support programs featuring groundwater interventions require gender-specific approaches to realize poverty reduction and gender-equity goals. Groundwater development programs should be accompanied by efforts to create an enabling environment with gender-sensitive technical and other support services and context-specific strategies to involve both women and men in decision making at the system and aquifer levels. Intravillage groups organized around water sources are particularly important mechanisms for improving women’s access to water management at the local level.

Programs must improve women’s access to and control over groundwater resources, including through WUA membership and leadership roles:

- Introduce and maintain a “quota” system for women and disadvantaged groups in aquifer management organizations and national organizations.
- Make social mobilization and dialogue on reforming WUA membership criteria more inclusive and not dependent on men’s gender or land ownership status.
- Where women face sociocultural obstacles to interacting in public forums with men, set up separate women’s groundwater users groups. Care has to be taken that such groups are then formally linked to the larger representative user associations and apex groups. In conjunctive use settings, ensure that groundwater users are also represented in the surface irrigation system WUAs.

Planners should also create an enabling environment to enhance women’s participation and provide technical and support services:

- Facilitate access to credit, agricultural extension, and local commercial repair and maintenance services.
- Ensure that technical assistance programs (for example, training on pump installation, repair, and maintenance) target both men and women.



- Promote tubewells as women's collective enterprises, together with other specific income-generation and market linkage activities.
- Set up savings groups for the landless via the sustainable functioning of community organizations renting pump sets; part of the profit of renting out the pump is kept in a savings fund for repair and maintenance.
- Highlight women's rights in water management through awareness-raising and educational programs.
- Encourage interdepartmental dialogue regarding gender and groundwater undertaken by the water supply and irrigation departments to address the multiple water needs of the poor and women.

### GOOD PRACTICES AND LESSONS LEARNED

Groundwater development has long focused on individual (men) "farmers'" control over technology and the resource, with less attention to organizing institutions and gender impacts. Tubewell subsidies have similarly disproportionately benefited large farmers, usually men:

- Landownership as a criterion for tubewell or pump ownership or for membership in WUAs typically excludes women, smallholders, and tenants. User association criteria need to be examined closely to prevent social exclusion.
- A single-sector approach to groundwater development (especially for irrigation) has often resulted in oversized, underused pumps. The water needs of the rural poor are diverse: if drinking water and other needs are considered, the resulting infrastructure will likely be on a smaller scale and more affordable for women and the poor.
- Maintaining quota systems helps ensure that women's interests in WUAs are represented. It also generates discussions at the local level on women's rights and roles, which can be seen as a first step in awareness raising.
- Provision to women's groups of such technologies as treadle pumps, shallow tubewells, and deep tubewells is more effective when complementary training inputs in managerial and technical skills are provided. In Bangladesh women were able to successfully manage tubewells as a collective water-selling enterprise when given management control from the start (Van Koppen 1999).
- Projects that actively included both women and men in participatory planning, design, and implementation helped generate a cadre of women leaders in formal decision-making positions.

- Providing complementary inputs (credit access, agricultural extension, and marketing support) to women farmers helps extend the impact of water infrastructure investments and overcome their institutional disadvantage in accessing services.

### GUIDELINES AND RECOMMENDATIONS FOR PRACTITIONERS

- Prioritize groundwater systems to serve both domestic and productive needs of the rural poor in programs that serve to enhance agricultural livelihoods.
- Promote lightweight and portable machines in areas with high land fragmentation and a high water table.
- Provide incentives to those WUAs that combine water-saving technologies, especially in water-deficit areas.
- Support capacity building for staff with interdisciplinary approaches and gender training to enhance social analysis skills.
- Coordinate across sectors that provide technical and support services to make sure that women and the disadvantaged are appropriately targeted.
- Develop gender-specific interventions based on the local social, cultural, and agroecological context and the nature of the project. Plan and design water use systems through a participatory inclusive process.
- Allow for flexibility to incorporate innovative strategies for both the technical and institutional designs, rather than using a rigid blueprint approach. Men and women may have different choices in terms of site selection, design, and layout of groundwater structures. Differences may also exist in preferences between foldable canvas pipes, underground pipes, or open flow channels for water distribution. If wells are to serve both domestic and productive needs, a decision on the location (between homestead and field) is important to minimize walking/water-carrying distance.
- Identify existing women's groups and coordinate with women's organizations, NGOs, cooperatives, and professional women's networks for enhanced gender inclusion in countries where such provisions exist. Examples from the Licto project in Ecuador show that women wanted water titles to be in the names of both husbands and wives after a long period of awareness raising by an NGO (GWA and Both ENDS 2006).

Box 6.6 provides questions for gender-responsive project design.

### Box 6.6 Sample Questions for Project Design

Institutional approaches to groundwater development and management should include gender analysis throughout the project cycle. Issues of water rights determine access and control over groundwater resources. Men and women may differ in their preferences and needs for water and are affected differently when groundwater is introduced. Some specific design questions and indicators to take into consideration are the following:

- How have rights to groundwater abstraction technology ownership been defined (in terms of landownership)? Are there asset or collateral requirements?
- How have criteria for water users' group membership been defined?
- Are there land title or groundwater technology elements that may constrain the participation of women or the poor?
- What are the access and use rights to groundwater once it has been pumped? Who defines this, and who has the right to dispose of the right or adjudicate disputes?
- Who makes decision regarding allocation and distribution of water? Are women involved? Are women members of the WUAs? Are they in leadership positions in these groups?
- Does the project design take into account user flow preferences for specific crops, from different water sources?
- Has technical training and access to complementary support services been provided to both men and women?
- What are the expected changes in workload for men and women with the introduction of groundwater infrastructure (for example, might the workload for women increase in the case of irrigation and decrease for domestic water collection?).

*Source:* Authors.

## Ghana: Upper East Region Land Conservation and Smallholder Rehabilitation Project (LACOSREP)

The Upper East Region Land Conservation and Smallholder Rehabilitation Project (LACOSREP) was initiated in the early 1990s by the International Fund for Agricultural Development to contribute to the poverty reduction and improve livelihoods of the second poorest region of Ghana through irrigation and agricultural development.

The second phase LACOSREP (1998–2006) was aimed at addressing the shortcomings of the first phase of the project. Although WUAs were established as a precondition for small-scale dam construction and rehabilitation in the first phase, they were not considered as a key component of the project's implementation strategy. These WUAs lacked the necessary organizational skills and a clear legal status, which explain the modest achievements in some sites, with respect to collected fees, catchment area protection, and adequate operation and maintenance. The last two factors are critical to the sustainability of the small-scale dams. It was also recognized that the project in its first phase was not able to address adequately

**What's innovative?** The membership in water users associations (WUAs) was not limited to farmers associated with irrigation or to one member per household, and thus opened up the opportunity to get women involved in WUAs. The recognition of multiple types of users (gardeners, livestock owners and fishermen) facilitated WUA development. This also strengthened the WUAs, by avoiding possible conflicts over water use and facilitating watershed protection measures. A quota of irrigated land allocation was also established for women so that they could get access to water from the irrigation schemes and be involved in the decision-making process.

important issues such as capacity building of the WUAs and women's access to land and water. Therefore, the second phase of the project sought to pursue rigorously and systematically granting women access to dry season irrigated plots by involving them in WUAs and establishing a quota in-plot allocation for women. WUAs thus played a greater role in the planning of the whole irrigation project and had a clear understanding on their part of their obligations to ensure the sustainability of the project (IFAD 2003).

### PROJECT OBJECTIVES AND DESCRIPTION

The objectives of LACOSREP II were to (1) further develop irrigation in the Upper East Region; (2) increase productivity through farmer training and demonstrations of new technologies for increasing the productivity of crops, livestock, and fish; (3) build the capacity of government institutions that provide technical and social services at the district and sub-district levels; and (4) construct rural infrastructure to reduce women's labor burden and take measures to mitigate the possible risks of health and negative environmental impacts.

The target group included rural people and smallholders, landless farmers, and women, in particular women-headed households. The beneficiaries were drawn from the "at risk" category that embraces both economic and social criteria and included those most at risk from malnutrition, ill health, and a generally low quality of life. They came from an area that had the highest population growth rate (3 percent) and the lowest living standards in the country. About 50 percent of the direct beneficiaries (34,400) were estimated to be from the target group.

### INNOVATIVE ACTIVITIES IN THE PROJECT

The project had two innovative activities: (1) membership in WUAs was not limited to farmers associated with irrigation or to one member per household and, by doing so, opened

up the opportunity to get women involved in WUAs; and (2) a quota for irrigated land allocation was established for women so that they could get access to water from the irrigation projects during the dry season and be involved in the decision-making process.

The program identified three groups of predominant water users: gardeners, livestock owners (coinciding or not with gardeners), and fishermen. The apex WUA was defined as a combination of these subgroups, with an executive body comprising members from each of the three subassociations. The project offered substantial material incentives, including food rations and improved irrigation facilities, for farmers, livestock keepers, and fishermen to participate in the small-scale dam construction and rehabilitation and WUA activities. The recognition of different stakeholder groups facilitated WUA development. This also strengthened the WUA by avoiding possible conflicts over water use and facilitating watershed protection measures.

The WUAs were responsible for land allocation in the dam command areas; modalities of this procedure were left up to them to decide, the only condition being that plot sizes should be equal, not smaller, for women, and 40 percent should be reserved for women. This affirmative action was taken to give women access to productive resources because traditionally in this region women did not own land and to encourage their participation in WUAs.

Another innovative aspect of the project was the incorporation of disabled and blind farmers in the WUAs, as a form of social equity and inclusive targeting in some communities. This is a replication of the successful IFAD project in Upper West Region, where blind WUA members (a majority being women) have sustainable access to land and water. The use of community animators in tandem with extension staff was catalytic, and facilitatory mechanisms were set up for the acceptance of this category of water users.

## **GENDER APPROACH**

WUA membership was open to all members of the target group who would benefit from the results of the project as smallholder dry season irrigators (gardeners), livestock owners, and fishermen. The percentage of women who became ordinary members was around 38 percent (and thus slightly below the 40 percent target of the project). At some dam sites, this figure, however, was much higher, up to 80 percent. Typically, general meetings were held once a month, and a quorum for decision-making authority was spelled out in the WUA bylaws. Although a woman did not become chairperson, it was common for the executive

committee's treasurer to be a woman. Furthermore, women have formed an exclusively women's group that provides a platform to discuss and form a unified opinion before any major decision is discussed in the WUA.

The main activities of the project that helped achieve the gender-mainstreaming-related objectives of the project include (1) recruitment of a gender officer, (2) farmer training demonstrations (FTDs), and (3) functional literacy groups (FLGs).

LACOSREP II employed a gender officer on a contract basis to ensure the objectives of appraisal were met; this was an effective strategy.

FTDs were conducted based on community needs assessment and planning exercises. Farmers were trained, among other things, in composting and vegetable growing. Out of 6,266 participating farmers, 40 percent (2,546) were women. This shows a considerable achievement by the project in getting a good representation of women within the groups.

FLGs, which were originally not included in the project design, were introduced during the implementation of the project to teach beneficiaries (most of them women) numeracy and literacy in indigenous languages. These groups were also aimed at establishing solidarity among groups for other purposes such as collective work and microfinance.

Other special, transitional measures taken to promote women's participation in all aspects of the project included charging slightly lower fees to women members of WUAs, although this was not applied throughout all the associations, and accepting illiterate women in community credit management committees.<sup>1</sup>

## **BENEFITS AND IMPACTS**

The overall impact of LACOSREP II on beneficiary communities has been considerable in the areas of food security, income generation, cohesion, literacy, and promotion of gender issues.

Women are not traditionally land owners in this region, but the WUA system has given them direct access to dry season irrigated land. As a consequence, women play a much greater role in the management of irrigation; this is highly visible at meetings in which they speak up to represent their own views. The project has undoubtedly been influential in promoting these changes and making them sustainable. Women can grow vegetables more easily: this both contributes to food security and improved nutrition and generates cash.

Given a demonstrated, strong correlation between widowhood and extreme poverty, the inclusion of vulnerable

women-headed households in at least some WUAs is an indication of the project's having been able to reach IFAD's target group.

WUAs and FLGs have also had an impact in creating modalities for increased social solidarity; the previous patterns of dispersed household settlement are changing as communities develop and perceive a need to act together more coherently in accessing key tools and input in community development.

FLGs have also provided an arena for women to cooperate and organize collective income-generating activities. The project's interim evaluation report (IFAD 2006) reported the changing dynamics of the household decision-making patterns. Husbands were reported to be listening increasingly to their wives' views on issues concerning the household and even passing on financial responsibilities to their wives, as they consider them to be financially knowledgeable. Access to greater capital and means of transport, such as bicycles, has undoubtedly accelerated women's entry into the market. The livestock component, by increasing access to investments in goats, chickens, and guinea fowl, has played a similar role.

As a contribution to institutional sustainability and empowerment, WUAs were envisaged to evolve into a "council" at the district level. Formation of district WUA councils was embedded in the project as one of the exit strategies. To date, only one council was formed with elected WUA council executives, with an operational bank account and draft by-laws. Other WUA councils are under development, and an important issue remains how to mainstream gender considerations into their operational plans systematically.

### LIMITATIONS AND CONSTRAINTS

The project has successfully involved women in WUAs, but it has not been as successful on other fronts, such as providing mitigation measures for water-borne diseases. Moreover, a large number of hand-dug wells (about 40 percent of the total), which were aimed at reducing the workload of women in fetching water, are not functional (IFAD 2006). In some communities water for domestic use is fetched from the small-scale dam, which creates health and social problems.

It was also observed in some cases that plot sizes were not always equal in practice. Plot allocation differed according to, among other means, patrilineal versus matrilineal population groups; the personalities and the "morphology" of

local traditional authorities, for example, the degree of decision-making power of the traditional landowner, that is, the man descendent of the community's founding lineage—the *tindana*, earth priest, or *tigatu*—versus that of other clan heads ("headmen"), family heads, chiefs (called "skins"), and government; and the degree of "urbanization" and "politicization" (IFAD 2006).

Paradoxically, where women have access to equal (to that of men) irrigation plots, evidence suggests that these plots are overfragmented, in part because of social relations and in part because of women having limited time for agricultural labor and maximization of the output from their irrigated plot. This implies that gender-equity issues must be contextualized in project design and implementation.<sup>2</sup>

Another major challenge lies with ensuring effective operation and maintenance of district-level WUA councils. Line ministries responsible for the development of WUA councils have limited resources and capacities at the district level.

### LESSONS LEARNED AND ISSUES FOR WIDER APPLICABILITY

- Consideration of multiple users and organizing them is a sure way to obtain beneficiaries' commitment and active participation in project activities.
- Domestic water inclusion needs to be done carefully: domestic water supply is a basic need and requires adequate technical measures to address health issues properly. Also, addressing domestic water requirements is a way to give women an opportunity to engage more in income-generating activities.
- Social equity and inclusive targeting of the marginalized and disabled rural poor can be mainstreamed into WUA activities.
- WUAs to some extent secure a "minimum platform" to ensure greater participation of women in the WUAs' decision-making processes if membership criteria are transparent and equitable.
- Bottom-up approaches to WUA formations thrive where legal and institutional frameworks exist and decentralization is advanced.
- Upscaling WUAs to district, regional, and national WUA councils will be self-empowering, but also the means for WUAs to engage in policy dialogue, advocacy, and autonomy at higher levels, where attention can be brought to women's needs.

## The Gambia: Lowlands Agricultural Development Programme (LADEP)

Rice production in The Gambia is traditionally a woman's domain, with the men concentrating their farming efforts on cereals and livestock in the uplands. Rice land ownership in the traditional system is vested to men first settlers who allocate rice land to their wives and daughters. The rest of the women rice farmers (later settlers) depend on borrowing rice land on an annual basis, without the assurance of availability (renting or share cropping of farmland is not common in The Gambia). This traditional land tenure system discourages landless women rice producers (later settlers) to participate in any land reclamation efforts, because the land does not belong to them, and they have no secured access to land, even in a midterm perspective. Owners of large tracts of land cannot provide the labor required for reclamation of these lands, and therefore land reclamation is not implemented. For successful implementation of self-help (through the provision of labor and locally available materials), the issue of access to land had to be resolved.

### PROJECT OBJECTIVES AND DESCRIPTION

The main objective of the IFAD-supported Lowlands Agricultural Development Programme (LADEP; 1997–2005) in

**What's innovative?** Community participation was made mandatory during the design phase. Land was allocated in exchange for labor provided to rehabilitate swamps for rice production. A site selection committee and intercommunity negotiations were set up to look into cross-cutting issues in the community; subsequently, a "land for labor" agreement, valued under traditional law, was reached between the program's beneficiaries and the founder settlers of the community.

The Gambia was to involve local communities in the development process of national socioeconomic issues and to have them assume control over some activities and be empowered to make their own decisions on matters pertaining to their development.

The objectives of the innovation were as follows:

- Mobilize the beneficiaries to provide the self-help labor required to rehabilitate or develop rice fields.
- Create the environment under which landless women rice producers would permanently own land.
- Make sure that the beneficiaries take over the responsibility of repairing and maintaining the infrastructure after the project phases out.

LADEP was targeted to benefit 8,960 rice farmers under various rice-growing ecologies in the country, on 8,075 hectares of land. The intended beneficiaries were the farmers, mainly women (about 90 percent), who participated in the land reclamation efforts.

### INNOVATIVE ACTIVITIES IN THE PROJECT

During the design phase of LADEP, community participation was made mandatory. The main innovative activity of the project was allocation of land in exchange for labor provided to rehabilitate swamps for rice production.

This innovation was chosen from a range of options identified by focus group discussions (part of the site management committee [SMC], itself part of the village development committee [VDC] introduced by the government):

*Option 1:* Use of machinery for the construction of the required infrastructure without changes in the land tenure system. Here ownership of the infrastructures, an important factor for future operation and maintenance, could not be secured.

*Option 2:* Construction of the infrastructures by the landowners. This option faced labor shortages by the landowners.

*Option 3:* Devolution of ownership of an equal piece of land from traditional landowners to a few men and mostly women of the communities who participated in the reclamation efforts. With the devolution of land ownership, the people had a clear incentive to contribute their labor to reclamation efforts.

The program's other innovative features included setting up site selection committee and intercommunity negotiations. Site management committees were established to look into cross-cutting issues in the community related to rice production, particularly the provision of labor and land allocation. The committees were grouped under 35 district-level farmers' associations. A legal constitution as a community-based organization was prepared for the farmers' associations and adopted in a participatory manner, before their official registration. Institutional sustainability is one of their goals, as well as an increased contribution of farmers to local decision-making processes.

Intracommunity negotiations were facilitated using the participatory rapid appraisal (PRA) method to find solutions to common community problems. The PRA method was first introduced to extension services in charge of mobilizing communities under program activities and was the foundation of the self-help approach adopted under LADEP. Through these negotiations, a "land for labor" agreement was reached between the program's beneficiaries and the founder settlers of the community. When such an agreement is made at the community level, it gains legal value under traditional law.

## **GENDER-RESPONSIVE ACTIVITIES**

The project's innovation activity addressed the landlessness of women, traditional rice growers, and consisted of transferring the ownership of an equal piece of land from traditional landowners to the few men and mostly women of the communities who participated in the reclamation efforts. These "land against labor agreements" between landless individuals and founder settlers (landowners) were made in the presence of the whole community, which conferred a traditional legal status to the agreement. This option was chosen because of the following advantages: the allocation of land to landless women farmers who participate in reclamation efforts and the recognition of the need for women farmers to own land if they are to invest their labor in its reclamation.

The innovation of providing land ownership to landless rural people, mainly women, helped provide the long-term incentives required to mobilize beneficiaries to (1) provide the labor necessary to rehabilitate rice fields and (2) assume responsibility for infrastructure operation and maintenance after the close of the program. The innovation brought about changes in the traditional land tenure system. In the traditional system, land tenure was held by founder settlers (who were sometimes women). LADEP brought about the devolution of individually owned land to the community, and this new common land was equitably redistributed and shared among individuals, mainly women, who participated in land reclamation works.

The main factors that facilitated the innovation and played an important role in the success of the project are the following:

- The setting up of SMCs to look into the community's cross-cutting issues, especially the provision of labor and land allocation
- The facilitation of intracommunity negotiations to find solutions to common community problems.

Other actions that contributed to the success of the project include the steps taken at the design phase of the project to ensure community participation in the decision-making process:

- Public extension services sensitized communities concerned with the lowlands on LADEP.
- Public extension services collected formal requests for assistance.
- A community mobilization coordinator (belonging to the Department of Community Development, delegated to the project) visited selected communities to establish SMCs, as part of the VDCs established by the government when they existed. The process involved participatory rural appraisal, focus group discussions in which beneficiaries and the local government authorities were presented the advantages and disadvantages of each option and supported the elaboration of community action plans.

## **BENEFITS AND IMPACTS**

The innovation brought about changes in the traditional land tenure system. In this traditional system, land tenure was held by founder settlers (women in a few instances). Yet the innovation represents the devolution of individually

owned land back to the community and the sharing of this new common land property among the individuals who participated in land reclamation works.

The innovation settles the issue of land ownership in the project intervention sites. Land tenure security for the land poor has contributed to food security in no small way because of more land reclamation efforts and more land being cropped.

Planners assessed the performance of the innovation and made an impact assessment of the project. The main findings are the following:

- Poverty is streamlined as more women farmers own land and confidently work it for production. Women beneficiaries now have permanent ownership of land, and their children will inherit ownership of the land.
- Women have benefited greatly. LADEP was targeted to benefit 8,960 rice farmers in various rice-growing environments in the country, on a total area of 8,075 hectares of land. LADEP reached 24,684 farmers (90 percent of them—a total of 22,216—women) and reclaimed a total of 7,481 hectares of land.
- Community cohesion has increased.
- Beneficiaries reported a 30–100 percent increase in food production. The impact assessment found that most communities report that with upland and lowland crops they are now food secure.
- Either by water retention or swamp access, the LADEP experience resulted in an additional three months each year of rice self-sufficiency.
- Food self-reliance and household food security were improved as more land was put under cultivation. The advantage of the process followed lies in its self-regulation: communities develop the area they can actually manage to reclaim and cultivate.

## LESSONS LEARNED AND ISSUES FOR WIDER APPLICABILITY

The LADEP experience provided evidence that people-led project interventions contribute to the sustainability of change. Also, the following principles or lessons were identified:

- Land reforms have to be initiated by the beneficiaries and agreed upon by mutually binding arrangements (under traditional or other law).
- Household food security can be improved if the landless are assisted in securing land permanently.

- Poverty can effectively be reduced when rice land is equitably distributed.

The key contextual elements that should be considered as prerequisites for replication outside of The Gambia are the following:

- *Social*: The communities, including the landowner minority, should be prepared to negotiate favorable land allocation systems.
- *Regulatory*: Land reforms under local government reforms (decentralization processes) should exist to support the innovation.
- *Institutional*: The village development committee concept, through which negotiations with site management committees can be jump-started, must be present.

## NOTES

### Overview

This Overview was prepared by Juan A. Sagardoy (Consultant) and reviewed by Chitra Deshpande Gunnar Larson, and Catherine Ragasa (Consultants); Sasha Koo (FAO); Maria Hartl (IFAD); and Nilufar Ahmad, Indira Ekanayake, and Anne Kuriakose (World Bank).

1. *FAO's Gender and Development Plan of Action 2008–2013*, conference, Thirty-fourth Session, Rome, November 17–24, <ftp://ftp.fao.org/docrep/fao/meeting/012/k0721e.pdf>.

2. Additional material is available at the GAL *eSourcebook* at [www.worldbank.org](http://www.worldbank.org).

3. FAO, “Gender and Food Security Statistics,” [www.fao.org/Gender/stats/genstats.htm](http://www.fao.org/Gender/stats/genstats.htm).

4. See also Technical Note 3 in the GAL *eSourcebook* at [www.worldbank.org](http://www.worldbank.org).

### Thematic Note I

This Thematic Note was prepared by Barbara van Koppen (Consultant) and Anne Kuriakose (World Bank) and reviewed by Robina Wahaj (Consultant); Rudolph Cleveringa, Maria Hartl, and Audrey Nepveu (IFAD); and Indira Ekanayake and Riikka Rajalahti (World Bank). Many concepts and evidence in this note are based on the findings of the action-research project “Models for Implementing Multiple-Use Water Supply Systems for Enhanced Land and Water Productivity, Rural Livelihoods and Gender Equity” ([www.musproject.net](http://www.musproject.net)), supported by the Challenge Program on Water and Food of the Consultative Group of International Agricultural Research ([www.waterforfood.org](http://www.waterforfood.org)). Initial findings of this research project are also synthesized in Van Koppen, Moriarty, and Boelee (2006).



1. Ede Ijjasz-Vasquez, Mexico World Water Forum, PRODWAT 2006, [www.musproject.net/content/download/810/8113/file/MUS%20Stockholm%20meeting.pdf](http://www.musproject.net/content/download/810/8113/file/MUS%20Stockholm%20meeting.pdf).
2. Lenton, GWP, Mexico World Water Forum, PRODWAT 2006, [www.musgroup.net/content/download/555/5690/file/Newsletter%20](http://www.musgroup.net/content/download/555/5690/file/Newsletter%20).
3. [www.musproject.net](http://www.musproject.net).

## Thematic Note 2

This Thematic Note was prepared by Suman Gautam (Consultant) and Anne Kuriakose (World Bank) and reviewed by Karin Kemper and Catherine Tovey (World Bank) and the GW-MATE team; and Indira Ekanayake (World Bank).

1. Both ENDS, “Effective Gender Mainstreaming in Water Management for Sustainable Livelihoods: From Guidelines to Practice,” Both ENDS Working Paper Series, November 2006, [www.bothends.org](http://www.bothends.org).
2. Eva M. Rathgeber, “Women, Men and Water-Resource Management in Africa,” [www.idrc.ca/en/ev-31108-201-1-DO\\_TOPIC.html](http://www.idrc.ca/en/ev-31108-201-1-DO_TOPIC.html).

## Innovative Activity Profile 1

This Innovative Activity Profile was prepared by Robina Wahaj (Consultant) and reviewed by Catherine Ragasa (Consultant); Moses Abukari, Maria Hartl, and Audrey Nepveu (IFAD); and Indira Ekanayake (World Bank).

1. CCMCs assisted in group mobilization and training and were responsible for screening loan requests using local knowledge of the community and the groups, and assisted in loan recovery. The groups were required to have at least three women members out of seven.
2. IFAD and GTZ, “Knowledge Profiling: Promoting Easy Access to Knowledge and Experience Generated in Projects and Programmes: A Manual,” [www.ruralpovertyportal.org/english/topics/water/ifad/manual/kp.pdf](http://www.ruralpovertyportal.org/english/topics/water/ifad/manual/kp.pdf).

## Innovative Activity Profile 2

This Innovative Activity Profile was prepared by Robina Wahaj (IFAD) and reviewed by Catherine Ragasa (Consultant); Moses Abukari, Maria Hartl, and Audrey Nepveu (IFAD); and Indira Ekanayake (World Bank). This Profile was adopted from Nepveu, Fye, and Cleveringa (2005).

## REFERENCES

### Overview

Centre on Housing Rights and Evictions (COHRE). 2006. *In Search of Equality. A Survey of Law and Practice Related to*

*Women’s Inheritance Rights in the Middle East and North Africa (MENA) Region*. Geneva: COHRE.

Gender and Water Alliance (GWA) and Both ENDS. 2006. *Effective Gender Mainstreaming in Water Management for Sustainable Livelihoods: From Guidelines to Practice*. Both ENDS working paper series. Available on CD from Both ENDS, Nieuwe Keizersgracht, 45 1018 VC, Amsterdam, the Netherlands.

International Fund for Agricultural Development (IFAD). 2007. *Gender and Water Securing Water for Improved Rural Livelihoods: The Multiple-Uses System Approach*. Rome: IFAD.

Sagardoy, Juan Antonio, and Atef Hamdy. 2005. *Training of Trainers Manual on Integration of Gender Dimension in Water Resources Use and Management*. Bari, Italy: CIHEAM, MAI.

Sagardoy, Juan Antonio, Vittoria Pinca, Nicola Lamaddalena, Rosanna Quagliariello, Dora Chimonidou, and Raouf Guelloubi. 2007. *Mainstreaming Gender Dimensions in Water Management for Food Security and Food Safety*. Option Méditerranéennes, Series A, No. 77. Centre International de Hautes Etudes Agronomiques Méditerranéennes. Bari, Italy: Mediterranean Agronomic Institute of Bari.

Stalker, Linda Prokopy. 2004. “Women’s Participation in Rural Water Supply Projects in India: Is It Moving beyond Tokenism and Does It Matter?” *Water Policy* 2: 103–16.

United Nations Population Fund (UNFPA). 2002. *Water: A Critical Resource*. New York: UNFPA.

Van Koppen, Barbara, Patrick Moriarty, and Eline Boelee. 2006. “Multiple-Use Water Services to Advance the Millennium Development Goals.” IWMI Research Report 98, International Water Management Institute, Challenge Program on Water and Food, and International Water and Sanitation Center, Colombo, Sri Lanka.

World Bank. 2006. *Reengaging in Agricultural Water Management: Challenges and Options. Series Directions in Development*. Washington, DC: World Bank.

———. Forthcoming. “Gender, Participation and Decentralization in Agricultural Water Management.” Investment Note 10.1, update for *Shaping the Future of Water for Agriculture—A Sourcebook for Investment in Agricultural Water Management*. Washington, DC: World Bank.

———. Forthcoming. “Poverty-Gender Issues in Agricultural Water Management Policy.” Investment Note 10.3, update for *Shaping the Future of Water for Agriculture—A Sourcebook for Investment in Agricultural Water Management*. Washington, DC: World Bank.

———. Forthcoming. “Gender-Sensitive Planning, Monitoring and Evaluation in Agricultural Water Management.”

Investment Note 10.4, update for *Shaping the Future of Water for Agriculture—A Sourcebook for Investment in Agricultural Water Management*. Washington, DC: World Bank.

### Thematic Note I

- Binswanger, Hans P., and Tuu-Van Nguyen. 2005. "A Step by Step Guide to Scale Up Community Driven Development." In *African Water Laws: Plural Legislative Frameworks for Rural Water Management in Africa*, ed. Barbara Van Koppen, John A. Butterworth, and Ibrahima Juma, 11-1–11-20, Proceedings of a Workshop held in Johannesburg, South Africa, January 26–28. Pretoria: International Water Management Institute.
- Butterworth John A., Patrick B. Moriarty, Minnie Venter Hildebrand, Barbara van Koppen, Barbara Schreiner, and Dirk Versfeld, eds. 2003. *Proceedings of the International Symposium on Water, Poverty, and Productive Uses of Water at the Household Level*, Muldersdrift, South Africa, January 21–23. Natural Resources Institute, IRC International Water and Sanitation Centre, Department of Water Affairs and Forestry, International Water Management Institute.
- Clasen, Thomas, and Sandy Cairncross. 2004. "Editorial: Household Water Management: Refining the Dominant Paradigm." *Tropical Medicine and International Health* 9 (2): 187–91.
- Cullis, James, and Barbara van Koppen. 2005. "Applying the Gini Coefficient to Measure Inequality of Water Use in the Olifants River Water Management Area." Unpublished paper, Pretoria: International Water Management Institute and Ninham Consulting Services.
- Esrey, S. A., J. B. Potash, L. Roberts, and C. Schiff. 1991. "Effects of Improved Water Supply and Sanitation on Ascariasis, Diarrhoea, Dracunculiasis, Hookworm Infection, Schistosomiasis, and Trachoma." *Bulletin of the World Health Organization* 69 (5): 609–21.
- Hebert, James R. 1985. "Effects of Water Quality and Water Quantity on Nutritional Status: Findings from a South Indian Community." *Bulletin of the World Health Organization* 63 (1): 143–55.
- Howard, Guy, and Jamie Bartram. 2003. "Domestic Water Quantity, Service Level and Health." Informal paper WHO/SDE/WSH/03.02, Water Engineering and Development Centre, Loughborough University, U.K., and Water, Sanitation and Health Programme, World Health Organization, Geneva.
- Hussain, Intizar. 2005. *Pro-Poor Intervention Strategies in Irrigated Agriculture in Asia: Poverty in Irrigated Agriculture. Issues, Lessons, Options and Guidelines*. Bangladesh, China, India, Indonesia, Pakistan and Vietnam. Final synthesis report. Manila: Asian Development Bank and International Water Management Institute.
- Jensen, Peter K., Yutaka Matsuno, Wim van der Hoek, and Sandy Cairncross. 2001. "Limitations of Irrigation Water Quality Guidelines from a Multiple Use Perspective." *Irrigation and Drainage Systems* 15 (2): 117–28.
- Kuriakose, Anne T., Waqar A. Jehangir, and Mehmood ul-Hassan. Forthcoming. "Will the Diggi Go Dry? Multiple Uses of Irrigation Water in Punjab, Pakistan." *Society and Natural Resources*.
- Mahfouz, A. A. R., M. Abdel-Moneim, R. A. G. Al-Erian, and O. M. Al-Amari. 1995. "Impact of Chlorination of Water on Domestic Storage Tanks on Childhood Diarrhoea: A Community Trial in the Rural Areas of Saudi Arabia." *Journal of Tropical Medicine and Hygiene* 98: 126–20.
- Maluleke, Theo, Vincent Thomas, Tessa Cousins, Stef Smits, and Patrick Moriarty. 2005. "Securing Water to Enhance Local Livelihoods (SWELL): Community-Based Planning of Multiple Uses of Water in Partnership with Service Providers." Unpublished paper, AWARD, CARE, IRC, and MUS, Bushbuckridge, South Africa.
- Mintz, Eric D., Fred M. Reiff, and Robert V. Tauxe. 1995. "Safe Water Treatment and Storage in the Home: A Practical New Strategy to Prevent Waterborne Disease." *Journal of the American Medical Association* 273: 948–53.
- Quick, R. E., A. Kimura, A. Thevos, M. Tembo, I. Shamputa, L. Hutwagner, and E. Mintz. 2002. "Diarrhoea Prevention through Household-level Water Disinfection and Safe Storage in Zambia." *American Journal of Tropical Medicine and Hygiene* 66 (5): 584–89.
- Quick, R. E., L. Venczel, E. Mintz, L. Soletto, J. Aparicio, M. Gironaz, L. Hutwagner, K. Greene, C. Bopp, K. Maloney, D. Chavez, M. Sobsey, and R. V. Tauxe. 1999. "Diarrhoea Prevention in Bolivia through Point-of-Use Water Treatment and Safe Storage: A Promising New Strategy." *Epidemiological Infections* 122 (1): 83–90.
- Reller, M. E., C. E. Mendoza, M. B. Lopes, M. Alvarez, R. Hoekstra, C. A. Olson, K. G. Baier, B. H. Keswick, and S. P. Luby. 2003. "A Randomized Controlled Trial of Household-Based Flocculant-Disinfectant Drinking Water Treatment for Diarrhoea Prevention in Rural Guatemala." *American Journal of Tropical Medicine and Hygiene* 69 (4): 411–19.
- Republic of South Africa (RSA), Department of Water Affairs and Forestry. 2005. "A Draft Position Paper for Water Allocation Reform in South Africa: Towards a Framework for Water Allocation Planning." Discussion document, Directorate Water Allocations, Department of Water Affairs and Forestry, Pretoria.
- Roberts, Michael. 2003. "Ceramic Water Purifier: Cambodia Field Tests. International Development Enterprise, Denver.

- Shah, Tushaar, Barbara van Koppen, Douglas J. Merrey, Marna de Lange, and Madar Samad. 2002. *Institutional Alternatives in African Smallholder Irrigation: Lessons from International Experience with Irrigation Management Transfer*. Research Report 60. Colombo, Sri Lanka: IWMI.
- Upadhyah, Bhawana, Madar Samad, and Mark Giordano. 2005. "Livelihoods and Gender Roles in Drip-Irrigation Technology: A Case of Nepal." IWMI Working Paper 87, International Water Management Institute, Colombo, Sri Lanka.
- Van der Hoek, Wim, Flemming Konradsen, Jeroen H. J. Ensink, Muhammad Mudasser, and Peter K. Jensen. 2001. "Irrigation Water as a Source of Drinking Water: Is Safe Use Possible?" *Tropical Medicine and International Health* 6: 46–55.
- Van Koppen, Barbara, Patrick Moriarty, and Eline Boelee. 2006. *Multiple Use Water Services to Advance the Millennium Development Goals*. Research Report No. 98. Colombo, Sri Lanka: International Water Management Institute.
- World Health Organization (WHO). 2004. *Guidelines for Drinking-Water Quality*, 3rd ed. Volume 1—Recommendations. Geneva: WHO.

## Thematic Note 2

- Caldwell Caldwell, Bruce K., John C. Caldwell, N. Mitra, and Wayne Smith. 2002. "Tubewells and Arsenic in Bangladesh: Challenging a Public Health Success Story." Australian National University, Canberra.
- Gautam, Suman Rimal. 2006. *Incorporating Groundwater Irrigation: Technology Dynamics and Conjunctive Water Management in the Nepal Terai*. Wageningen University Water Resources Series 8. Hyderabad: Orient Longman.
- Gender and Water Alliance (GWA) and Both ENDS. 2006. *Effective Gender Mainstreaming in Water Management for Sustainable Livelihoods: From Guidelines to Practice*. Both ENDS working paper series. Available on CD from Both ENDS, Nieuwe Keizersgracht, 45 1018 VC, Amsterdam, the Netherlands.
- Kulkarni, Semma. 2005. "Looking Back, Thinking Forward: The Khudawadi Experience with Access to Irrigation for Women and Landless." In *Flowing Upstream: Empowering Women through Water Management Initiatives in India*, ed. Sara Ahmed. Thousand Oaks, CA: Sage.
- Van Koppen, Barbara. 1999. "Targeting Irrigation Support to Poor Women and Men." *International Journal of Water Resources Development* 15 (1/2): 121–40.
- Zwarteveen, Margreet. 2006. "Wedlock or Deadlock: Feminists' Attempts to Engage Irrigation Engineers." Ph.D. dissertation. Wageningen University, the Netherlands.

## Innovative Activity Profile 1

- International Fund for Agricultural Development (IFAD). 2003. "A Brief Institutional Assessment of Water User Associations in Northern Ghana: Early Stages of Pro-Poor Local Institutional Development in Irrigated Smallholder Agriculture." Working Paper 2, Ghana design mission for Country Strategic Opportunities Programme (COSOP), IFAD, Rome, prepared by Norman M. Messer.
- . 2006. *Upper East Region Land Conservation and Smallholder Rehabilitation Project (LACOSREP)—Phase II*. Interim Evaluation Report, IFAD, Rome.

## Innovative Activity Profile 2

- Nepveu de Villemarceau, Audrey, John Fye, and Rudolph Cleveringa. 2005. "Rice Land for Labour Agreements Benefiting Women: the Lowlands Agricultural Development Programme (LADEP), Gambia." Case Study, IFAD, Rome.

## FURTHER READING

### Overview

- Food and Agriculture Organization of the United Nations (FAO). 2001. *Irrigation Sector Guide. Socioeconomic Gender Analysis Programme (SEAGA)*. Rome: FAO.

### Thematic Note 1

- Bakker Margaretha, Randolph Barker, Ruth Meinzen-Dick, and Flemming Konradsen, eds. 1999. *Multiple Uses of Water in Irrigated Areas: A Case Study from Sri Lanka*. SWIM Paper 8, International Water Management Institute, Colombo, Sri Lanka.
- International Fund for Agricultural Development (IFAD). 2007. "Gender and Water: Securing Water for Improved Rural Livelihoods: The Multiple-Uses System Approach." IFAD, Rome.
- Moriarty, Patrick, John Butterworth, and Barbara van Koppen, eds. 2004. "Beyond Domestic. Case Studies on Poverty and Productive Uses of Water at the Household Level." IRC Technical Papers Series 41, IRC, NRI, and IWMI, Delft.
- PRODWAT Thematic Group. International Water and Sanitation Center. Available at [www.prodwat.watsan.net](http://www.prodwat.watsan.net).

### Thematic Note 2

- Deere, Carmen Diana, and Magdalena Leon. 1997. "Women and Land Rights in the Latin American Neo-Liberal Counter Reforms." Working Paper No. 264, Women in Development, Michigan State University.

- Kuriakose, Anne, Indira Ahluwalia, Smita Malpani, Kristine Hansen, Eija Pehu, and Arunima Dhar. 2005. "Gender Mainstreaming in Water Resources Management." Agriculture and Rural Development Internal Paper, World Bank, Washington, DC.
- Prakash, Anjal. 2005. *The Dark Zone: Groundwater Irrigation, Politics and Social Power in North Gujarat*. Wageningen University Water Resources Series 7. Hyderabad: Orient Longman.
- Stallings, Anne Marie. 2006. "History, Cultural Knowledge, and Property Rights in the Emergence of Groundwater Irrigation in Cochabamba, Bolivia." Ph.D. dissertation. Catholic University of America, Washington, DC.
- Van Koppen, Barbara, and Simeen Mahmud. 1996. *Women and Water Pumps in Bangladesh*. London: Intermediate Technology Publications.
- World Bank. 1990. "Nepal: "Bhairahawa Lumbini Groundwater Irrigation Project III." Project ID: P010348, World Bank, Washington, DC.
- . 2004. "Arsenic Contamination of Groundwater in South and East Asian Countries: Toward a More Effective Operational Response." Volume 1, Policy Report No. 31303, World Bank, Washington, DC.

### **Innovative Activity Profile I**

International Fund for Agricultural Development (IFAD). 2001. *Thematic Study on Water User Associations in IFAD Projects*. Vol. I: *Main Report*. IFAD Office of Evaluation and Studies, Rome.