

FEED THE FUTURE INNOVATION LABORATORY FOR SMALL SCALE IRRIGATION (FTF-ILSSI) PROJECT NOTES

I. Promoting Gender Equality in Irrigationⁱ

Small-scale irrigation is increasingly recognized as a key strategy for enhancing agricultural productivity and food security under growing climate uncertainty in Africa south of the Sahara. Rainfed production dominates the region, but governments and other stakeholders are increasing investments in irrigation. As these efforts are being rolled out, the gender implications of irrigation must be considered to ensure that both men and women have the opportunity to adopt irrigation technologies and benefit from these investments.

In March and April 2016, the International Food Policy Research Institute and the International Water Management Institute convened workshops on gender and irrigation in Ethiopia, Ghana, and Tanzania in collaboration with national partners, bringing together 150 experts from government, nongovernmental organizations, and research institutes. As part of the [Feed the Future Innovation Lab for Small Scale Irrigation \(ILSSI\)](#),ⁱⁱ these workshops focused on identifying constraints to women's equal access to irrigation.

Irrigation has tremendous potential to improve time-use efficiency, stabilize and increase income, enhance nutrition, buffer seasonal and climate-related shocks, and boost women's status in the household and community. But these positive outcomes are unlikely to occur automatically. Gender-based differences in preferences, responsibilities, and access to resources need to be considered in the design and implementation of irrigation technologies, to maximize the contribution of irrigation both to these outcomes and to empowering women.

Across the three countries, workshop participants expressed strong interest in promoting gender equality in irrigation to improve agricultural growth, household nutrition, and women's empowerment. Participants also recognized rural women's access to water for both agricultural and domestic uses as a human right, as affirmed in the recent Convention on the Elimination of

All Forms of Discrimination Against Women (CEDAW) General Recommendation No. 34 on the rights of rural women.ⁱⁱⁱ Yet policy makers, practitioners, and researchers also described difficulties in identifying solutions to a broad range of constraints and challenges in adapting solutions to local contexts. Government and nongovernmental irrigation implementers noted low rates of technology adoption and control by women and limited participation in decision-making processes.

Recognizing that constraints vary widely across and within countries, this project note summarizes the range of constraints identified during the workshops, synthesizes opportunities to address these constraints, and offers approaches to tailor these solutions to local contexts and thus promote gender equality in irrigation.

CONSTRAINTS

Gender-based constraints vary by irrigation type, and specifically by (1) household technology adoption, such as private wells and pumps, and (2) shared water resources, such as canals or small reservoirs. Women often face constraints in both areas, and lack of access to shared water resources may preclude adoption of household technologies. Because these issues manifest distinctly in



Workshop participants in Dar es Salaam, Tanzania, April 2016. Photo: IFPRI.

different contexts, flexible, participatory approaches are required to identify and respond to the specific constraints in a given setting.

Household Irrigation Technologies

Household irrigation technologies are rarely designed to meet women's needs or disseminated through strategies that effectively reach women. Often, they are designed without taking into account women's specific preferences related to irrigation practices, including investment and operational costs; ease of using, transporting, maintaining and fixing; and appropriateness for women's diverse uses of water, including drinking, cooking, washing, agricultural production, and other economic livelihood activities. Improved water-lifting, application, and storage technologies have the potential to reduce women's time burden if they safely provide for multiple needs. But irrigation may also increase women's already heavy workload.

Yet preferences are not solely determined by practical need. Cultural sensitivities may render certain technologies inappropriate for women to use. In addition, some technologies that have higher value or are more technologically advanced convey social status. This may be motivating, but can present a risk for women. Women's visible increase in social status through asset acquisition can be threatening, and the risk of backlash by other members of the community or household needs to be fully assessed and mitigated. Community perceptions of early adopters also influence others' decisions to adopt technology. Workshop participants reported that women irrigators are often told by other community members that they are wasting their time because their contributions to commercial agriculture and water management are not recognized.

Men's and women's preferences for household irrigation technologies are often quite different, given differences in the crops they cultivate; unequal access to land, credit, information, labor, and markets; and differing responsibilities for household chores. A one-size-fits-all model of irrigation cannot be assumed to serve men and women equally. While in dual-headed households, men and women may share irrigation technologies to a certain extent, women may have less access to, control over, or decision-making power over the technology, including which plots or crops are irrigated and how income from the sale of irrigated produce is spent.

Many constraints to adopting irrigation technology affect both men and women, although the intensity and drivers of the constraints differ. Across all three countries, credit was identified as a significant constraint to invest in irrigation technologies. Credit is often unavailable or is

What is gender equality in irrigation?

- Equal opportunities, based on access to credit, labor, information, and land, to adopt affordable irrigation technology that meets user's needs
- Tailored training for men and women on irrigation and agronomic practices
- Equal access to and control over collective water resources (e.g., irrigation canals, small reservoirs)
- Meaningful participation in community and household decision making about water use and allocation
- Control over the use of irrigation (e.g., what plots, crops are watered); the benefits of irrigation (e.g., use of income, food); and access to markets (e.g., inputs, sale of irrigated produce)
- Reduced workload related to water distribution and application for all water uses

accessible only on unfavorable terms to small farmers. For women, limited ability to provide collateral, less favorable repayment terms, and credit agencies' discrimination in the application process often make this constraint more pronounced. In addition, definitions of economic versus domestic uses of water may hamper women's access to credit. In Ethiopia, some rural financial institutions do not extend credit for household wells because they are not considered economically productive, though they are used for homestead gardening and critical livelihood activities.

Similarly, access to land and tenure security support irrigation adoption. However, women in most cases have less access to land, less secure tenure, and less decision-making power over land than men,^{iv} which inhibits their access to irrigation, willingness to adopt the technology, and ability to control its benefits.

Collective Irrigation Schemes

Where agricultural water is collectively managed, women face challenges in gaining access to and participating in decisions related to the resource. Community institutions allocate certain quantities of water to farmers, and may also regulate *when* farmers get access to irrigation canals. Women's membership in these institutions is frequently limited by exclusive formal or informal factors, including membership contingent on land ownership or household headship, the timing or location of meetings, and social norms that define public participation as the domain of men. When women do participate, their active and independent participation can be constrained by

norms about speaking in front of, or disagreeing with, men or extended family members. Gender gaps in education and social status further limit the acceptability of women's active participation in community meetings, especially in leadership positions.

Indirect means of influencing these decisions or gaining water allocations may be available to women, in addition to or instead of formal membership in water governance institutions. However, women's inclusion in formal institutions is essential to ensure their access to information about the management of shared resources and to solicit their input to resource governance rules, which can also increase the likelihood that women abide by these community rules.

Indirect exclusion of women from collective schemes can occur through rules governing *when* irrigation water is available (for example, only at night, when women do not feel safe working in the fields) and *where* irrigation is available (for example, a canal or a small reservoir may prioritize men's plots). In many cases where contributing to the labor for constructing a canal or small dam is a prerequisite to receiving water from the infrastructure, women's exclusion from the labor (whether because of their conflicting work burden or social norms) can deny them access to the benefits.

OPPORTUNITIES

Promising Programmatic Approaches

At the end of the workshop, participants were asked to synthesize promising approaches to overcoming constraints to gender equality in irrigation. Responses included:

- Conduct participatory needs assessments with men and women, including married women and women heads of household, to understand gender-based differences in access to, control over, and preferences for irrigation technology and irrigation schemes.
- Support women's participation in water user associations (WUAs) by changing WUA bylaws or national regulations to facilitate women's participation—for example, removing land ownership as a criterion for membership and allowing both husband and wife to participate in meetings, considering meeting times and provisions for child care.^v
- Develop nested organizational models where women-only groups can debate and synthesize their preferences and then relay them to the village authority through a representative.
- Develop new outreach models to reach women with trainings and information about available irrigation technologies, by targeting women's groups, training

extension agents on gender and irrigation issues, and promoting women extension agents.

- Facilitate access to credit on the supply and demand sides by providing financial literacy training for women and men, forming groups to manage and share risk, and creating an enabling environment for rural credit providers.
- Promote secure land access for both women and men to help guard against the risk that farmers' land is expropriated when irrigation investments increase land value.
- Design water-lifting, application, and storage technologies that meet the needs of both men and women, considering the technology's mobility, ease of use and maintenance, and labor intensity.
- Promote social sensitization on joint ownership and decision making over productive assets, including irrigation technologies, through joint registration and incentives for equitable sharing of the technology.
- Work with communities over the long term to recognize the value of women's work, reduce drudgery, redistribute labor within the household, and increase shared decision making and shared benefits from irrigation investments.^{vi}

Improved Data on Gender and Irrigation

Constraints to gender equality in irrigation identified in this note differ across communities. Addressing these constraints adequately requires an approach that identifies and responds to the specific priorities of men and women in the community. Collecting more nuanced and comprehensive data on gender and irrigation is possible, and doing so would enable policy makers, practitioners, and implementers to better diagnose challenges, design interventions, prioritize investments, and track progress.

A number of tools exist and are being developed to guide the collection of information needed to tailor irrigation policy and projects to the local context and the different preferences of men and women. In particular, the workshops informed the development of two resources.

1. [Diagnostic for Gender Equality in Irrigation](#): to understand drivers of the gender gap in access to and control over irrigation
2. [Gender in Irrigation Learning and Improvement Tool](#): to assess and improve gender integration in irrigation scheme planning

These tools are designed to be complementary. The first tool can guide a participatory diagnostic to identify priority aspects of gender inequality in irrigation in a community, including issues that gender-responsive technology design and promotion should seek to understand and address. The second tool can be used to

evaluate women's participation in the development of a collective irrigation scheme and guide the design and implementation of future schemes.^{vii}

These tools can also be used to inform regional- and national-level data collection. Data on irrigation practices are rarely sex disaggregated. In general, household surveys that cover irrigation ask only whether irrigation is practiced, on which crops, and using which water source, but do not ask who has control or decision-making power over water. Also, while the gender of the household head may be recorded, allowing comparison between male- and female-headed households, relatively little is known about women's agricultural water management in dual-headed or married households.

By including questions about men and women in irrigation, agricultural censuses or other household surveys could collect sex-disaggregated data that would illuminate gender gaps in access to irrigation technologies, water resources, and land. Both men and women could be interviewed about their own irrigation access, use, and ownership rights, with joint ownership included as a response option.^{viii}

Targeted Policies

In Ethiopia, Ghana, and Tanzania, participants pointed out that challenges in coordinating between water, agriculture, and gender are a significant impediment to gender-equitable irrigation policies. However, countries are taking important steps to improve knowledge exchange and clarify responsibilities. Ethiopia's newly formed multistakeholder Network for Gender Equality in Agriculture is developing a work plan, increasing participation of the water sector, and considering creating a working group on gender and water. In Tanzania, the multistake-

holder Policy Analysts' group, convened monthly by the Platform for Agricultural Policy Analysis and Coordination, will explore mechanisms to improve coordination on gender in the agriculture and water sectors.

In addition, there are specific opportunities to improve how policies address gender. Ethiopia expressed interest in including irrigation in the revised gender mainstreaming guidelines of the Ministry of Agriculture and Natural Resources. Tanzania's National Irrigation Policy is due for review and could integrate gender equality objectives. Ghana is considering an affirmative action law that aims to raise women's representation to 40 percent in all decision-making bodies, including WUAs, and will integrate this into the review of the National Irrigation Development Policy, for example in trainings for irrigation operations and management.

Each country workshop also emphasized an interest among policy makers and practitioners in promoting gender equality across sectors, and in some cases, strong commitments to gender equality already exist in policy. However, know-how about putting gender equality into practice in the irrigation sector is still lacking. The tools presented in this brief offer technical guidance on identifying gender issues within the irrigation sector. Yet to apply this guidance systematically and use it to develop tailored solutions to context-specific constraints, continued capacity development is needed for both irrigation and gender specialists, coupled with new knowledge-sharing mechanisms; improved coordination across the water, gender, and agriculture sectors; and institutional arrangements that promote and monitor sex-disaggregated data and inclusive participatory planning and implementation.

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ⁱⁱ Workshops were convened in partnership with the Ministry of Agriculture and Natural Resources and the Agricultural Transformation Agency (Ethiopia); the Ghana Irrigation Development Authority (Ghana); and the Platform for Agricultural Policy Analysis and Coordination (PAPAC) and Sokoine University of Agriculture (Tanzania). More information on the ILSSI project is available at <http://ilssi.tamu.edu>

ⁱⁱⁱ Article 85 of the Convention on the Elimination of All Forms of Discrimination against Women, [General Recommendation No. 34](#), March 2016.

^{iv} Doss et al. 2015. "Gender Inequalities in Ownership and Control of Land in Africa: Myth and Reality." *Agricultural Economics* 43 (3): 4403–4434.

^v See for example, [Tanzania Association of Women Lawyers \(TAWLA\)](#) work on community bylaws regarding land.

^{vi} [Household methodologies](#) is an approach being used around the world, including by one workshop presenter, Send a Cow, in Ethiopia.

^{vii} The Gender and Irrigation Learning and Improvement Tool was designed and validated in Malawi and Uzbekistan in 2015. The Diagnostic for Gender Equality in Irrigation was informed by qualitative fieldwork in Tanzania, Ghana, and Ethiopia and feedback from the workshops. These tools can both be accessed at <https://www.dropbox.com/sh/8ctri9vhs0htlbi/AAC66YjuN897XhplWGutVbHra?dl=0>

^{viii} Further guidance on sex-disaggregated data collection is being developed by UNESCO: [UNESCO World Water Assessment Project on Gender Sensitive Water Monitoring, Assessment, and Reporting](#), including [Guidelines for Sex-Disaggregated Data in Gender and Irrigation](#).