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Why gender matters: reflections from the livestock-water productivity research project

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Abstract

Livestock water productivity (LWP) is becoming a major area of research. IWMI and ILRI are attempting to understand the gender implications of different interventions to increase LWP, through research funded by BMZ (Bundesministerium für Wirtschaftliche Zusammenarbeit und Entwicklung). This paper draws on research conducted in Ethiopia and Zimbabwe and also the wealth of information emerging from the Multiple Use Systems Project (CPWF Project 28 on www.musproject.net). Some of the emerging results show that technological innovations are not gender neutral, because their design, timing, and labor requirements have differential gender implications. Some technological interventions to increase livestock water productivity might result in more work for women and fewer benefits going to the women. Secondly, gender and power relationships also shape the benefit terrain, which results in differential access and control of the benefits from the improved livestock water productivity. What matters is not just improving livestock water productivity, but the type of livestock targeted. Smaller livestock are seen to be largely benefiting women, thereby improving education and health prospects of the children within poorer households more than larger livestock. Therefore improving LWP does not necessarily result in improved well-being for men, women, and children and reduce poverty at large. Gender nuanced interventions are likely to contribute toward improvements in the livelihoods of both men and women.

Media grab

Gender is central in understanding the impact of 'development' interventions for increased Livestock Water Productivity, targeting poor women and poor men.

Introduction

Gender is a central organizing principle of societies and often governs the processes of production and reproduction, consumption, and distribution. Gender roles are the 'social definition' of women and men, and vary among different societies and cultures, classes and ages, and during different periods in history. They vary greatly across the Nile Basin and sub-Saharan Africa at large. Gender-specific roles and responsibilities are often conditioned by household structure, access to resources, political stability, and ecological conditions. Gender research in rural development is therefore essential in poverty reduction and sustainability of development interventions (van Hove, undated).

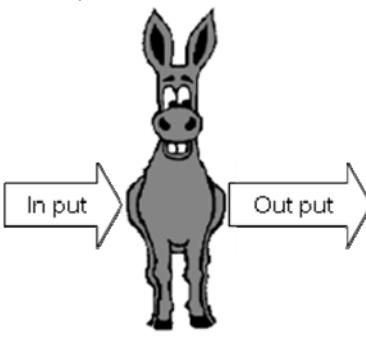
Within sub-Saharan Africa, livestock are perceived as playing a major role in poverty alleviation (Peden et al., 2007; ILRI, 2000, 2002) and environmental services. LWP is part of overall productivity of water for food production, and is defined here as the scale dependent efficiency of direct and indirect use of water for provision of livestock products and services. It includes water for production of livestock products and services and takes into account the impact of livestock on water quality, availability, and value to subsequent users (Peden et al., 2007). It needs to be viewed using a gendered lens, however, that will enable an assessment of the differential impact of the proposed interventions on poor women and men. Rural development in sub-Saharan Africa has attempted to improve the livelihoods of the poor people, but has resulted in the entrenchment of central power (Ferguson, 1990) or has not taken into account the gendered dimension of poverty. It has often only improved the well-being of well-off male-headed households, leaving poor females and males worse off (*cf.* van Hove and van Koppen 2005).

This BMZ-funded research promotes gender equity as a moral imperative in reaching the Challenge Program on Water and Food's poverty reduction and livelihood goals. It uses gender analyses and gender-balanced participation as a requirement of 'good science' (ILRI). Gender-conscious research is more likely to contribute to poverty reduction.

Conceptual framework: a gendered sustainable livelihood framework (GSLF)

This research draws upon the Gendered Sustainable Livelihood Framework (GSLF) (Figure 1), which was developed by van Hove and van Koppen (2005). This framework in Figure 1 largely borrows from the Department for International Development framework on sustainable livelihoods, which merges together DFID's SLF with the gendered framework that was developed by Feldstein and Poats (1989) (cf. van Hove and van Koppen, 2005).

Figure 1. The Gendered Sustainable Livelihood Framework (van Hove and van Koppen, 2005).

Livelihood assets (five assets)	Costs to access assets	Access/ control					Livestock as an asset Keeping livestock as a strategy/activity	Benefits /outputs or outcomes/	Access/ control					Risks/vulnerability contexts= shocks, trends, seasonality/	Institutional contexts	
		M	W	H	C	G			M	W	H	C	G		Local/ community	Government or private
Natural - Water - Land - Feed							Water? Feed? Land? <ul style="list-style-type: none"> Where? How much? In what cost? (Time, labor, price?) Which mechanism helps to optimize water use? 	-Soil fertility -Biodiversity -Optimum water use								
Human - Labor - Knowledge - Skills								-Nutrition								
Physical - Water infrastructure - Services								-Traction -Transport -Energy/fuel								
Financial - Cash to purchase or pay for goods and services								-Income -Insurance -Coping								
Social - Resource sharing groups - Gifts, bride price - Cultural festivals								-Status -Social security								

Key: M = Men; W = Women; H = House hold; C = Community, G= Government

: The last two columns - Vulnerability and Institutional - help to show the different constraints and opportunities of livestock keeping in the context of other productive and nonproductive activities in the system.

In the first column, there are the five livelihoods assets: natural, human, physical, financial, and social. Examples of each of the assets are listed under the respective asset type. The second column looks at the costs to access the assets. This is further disaggregated by gender to demonstrate the costs of different interventions within the household and in the community at large.

Gendered labor contribution

This research project attempts to analyze not only the overall labor requirements of new interventions, but disaggregated along gender lines. For instance, if a new 'cut and carry' scheme is introduced, depending on the specific circumstances, it might result in increased labor requirements for women through collecting fodder for the livestock. If cattle herding was previously the responsibility of boys and men, is the result of an increased workload for the women (cf. van Hove and van Koppen, 2005). Such extra labor requirements have also to be further juxtaposed on the different types of households. *De jure* female-headed households tend to have labor constraints for their agricultural activities when compared with *de facto* female-headed households, where the male heads of household are based in urban areas and tend to send remittances that can then be used to

hire extra labor. Male-headed households tend to have more labor reserve than the two types of female-headed households (cf. ICRISAT, 2007; van Hoes and van Koppen, 2005). It is, however, important that the intra-household assessments also look at the impact of women labor contribution in male headed households. Some studies have demonstrated that in some irrigated areas in the Awash River Basin of Ethiopia women in male-headed households were worse off than women who headed their own households and had access to irrigation plots (Aredo et al., 2006). The Access/Control column shown in Figure 1 identifies who has access and control of the input attribute. Quality of labor available is also an important issue, especially in countries in Southern Africa that have been negatively affected by HIV/AIDS. The result is a dominance of elderly and widows in rural areas. The available quality of labor is already overstretched due to caring for the sick, especially in South Africa, where the sick tend to move to rural areas when they are too weak to continue working (Mapedza et al., 2008).

Gendered control and access of benefits from livestock

The right side of Figure 1 looks at outputs, or the benefits coming from improved LWP. The benefits include income, insurance, and draft power (depending on the type of livestock). The next column–Access/Control–looks at who benefits from increased income. How does one also access increased income? Often women and children contribute most of the labor requirements, but the income distribution does not reflect that contribution. Studies by ICRISAT (2007) have demonstrated that women tend to have access and control of benefits derived from small livestock (cf. Van Koppen et al., 2005). Aredo et al (undated) further point out that marketing for large livestock such as cattle is tilted in favor of males. In such circumstances, promotion of small livestock such as goat and chicken might help reduce poverty amongst the women. The ICRISAT study also found that income controlled by women was also significantly contributing toward schooling of the children. For example, benefits such as increased milk production may not benefit women and children because the males sell the milk to buy alcohol. Children and women are worse off when their labor requirements increase without any benefits accruing to them.

The access and control of benefits terrain is also shaped by the political, economic, and institutional contexts. Laws and rules on livestock and land tenure will directly and indirectly impinge on who has access and who benefits from the improved LWP. Institutions—from local to community level—and how they are nested to national level, also has important implications in access and control of benefits by both women and men.

New innovations meant to improve LWP might also affect social relationships

Not all innovations toward improving LWP negatively affect women. If there are better forages that will result in less time spent on harvesting and collecting forages, this will be beneficial to the women. If clean water is made available for multiple use systems that include livestock and domestic requirements, this will save time previously spent collecting water for domestic, livestock, and other uses (cf. van Koppen et al., 2005). This frees the women to carry out other duties such as spending more quality time with their children and family. For the children, this might also entail more time available to play and to do their homework. Improved milk production as a result of improved fodder quality might benefit the family through improved nutrition for the family.

In Lege Dini watershed in Eastern Ethiopia, livestock productivity increased with improved water supply services. Milking livestock is a responsibility of women, and an ability to have fewer animals that yielded more milk provided women with higher incomes for reduced labor (Van Hoes, undated). This was one of the very few sources of cash income for women in this area. They organized themselves into a milk group, where they would daily gather any surplus milk (left over after home consumption) and mix it, regardless of animal types. This milk is marketed to the nearest town, almost an hour drive, and group members rotate who goes to the market and keeps the revenue (Van Hoes, undated). The women used this additional income for improved hygiene at the household level and for school costs (Jeths, 2006).

If women derive benefits and financial independence as a result of improved livestock water productivity, this might result in the empowerment of women beyond crop and livestock issues. Such empowerment might result in women renegotiating their position and status in the household. Such household reconfiguration will, in a small way, contribute to the increased esteem of poor women and men in sub-Saharan Africa.

This paper and associated research emphasize the following recommendations:

- Gender matters in LWP and has to be seriously evaluated.
- Development initiatives should avoid using 'labor contribution' as an indicator of empowerment and participation. It is important to note what women are getting relative to their contribution. Special attention should be given to the labor contribution by children and what the consequences are of increased or reduced workloads, e.g. enrolment in schools.

- Preconceptions about the well-being of married and female-headed households should be assessed for each context. In Ethiopia's Awash River Basin, female-headed households were observed to be well off because they had access to irrigation land.
- Impact of HIV and AIDS has to be considered in view of the labor and time requirements of the different types of interventions.
- Access and control of benefits has to be assessed. This has to be linked to the inter- and intra-household power dynamics and institutions that help alter and shape the structure of incentives, and determine who has access and control.

Conclusion and recommendations

Whilst it is important to note that improving LWP is central to improving the livelihoods of communities in rural sub-Saharan Africa, it is equally important to further evaluate what such improvements imply for different members within the household. Technological innovations are not gender neutral but their design, timing, and labor requirements will have differential gender implications for poor women, men, and children. If the household benefits, it does not mean that the welfare of all household members is improved. A gendered livelihoods approach enables a critical assessment of the winners and losers at the intra- and inter-household levels. Such an approach is informative and will enable the restructuring of the type of livestock to focus on in certain communities to get maximum benefits from interventions. Development is meant to reduce poverty for the most vulnerable. The LWP research being carried out under the auspices of the BMZ project, and building upon the earlier CPWF research, hopes to contribute toward meeting such objectives with lessons distilled from the sub-Saharan Africa region.

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