

Gender Integration along the Resource Recovery and Reuse Research for Development Impact Pathway

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This article distils lessons from the experience of integrating gender throughout the research for development (R4D) impact pathway of IWMI's Resource Recovery and Reuse (RRR) sub-programme, drawing on examples of interventions and promising approaches.

RRR is a sub-programme of the CGIAR Research Program on Water, Land and Ecosystems (WLE) dedicated to applied research on the safe recovery of water, nutrients and energy from domestic and agro-industrial waste streams. It aims to create impact through different lines of action research, including developing and testing scalable RRR business models.

Under the RRR sub-programme, the research for development (R4D) impact pathway is a key tool in the results-based management approach, which is based on a progression from knowledge generation, to adaptive research, to implementation plans, to knowledge sharing, and finally to upscaling. Progressing through this pathway also enables integration of lessons learnt along each stage, to inform research and project design. While it is important to integrate gender at each stage of the impact pathway, in this article we focus on gender integration during:

1. RRR business model development,
2. feasibility and investment climate assessment,
3. RRR business model implementation.



Putting briquettes out to dry, Kibera, Kenya Photo by © IWMI

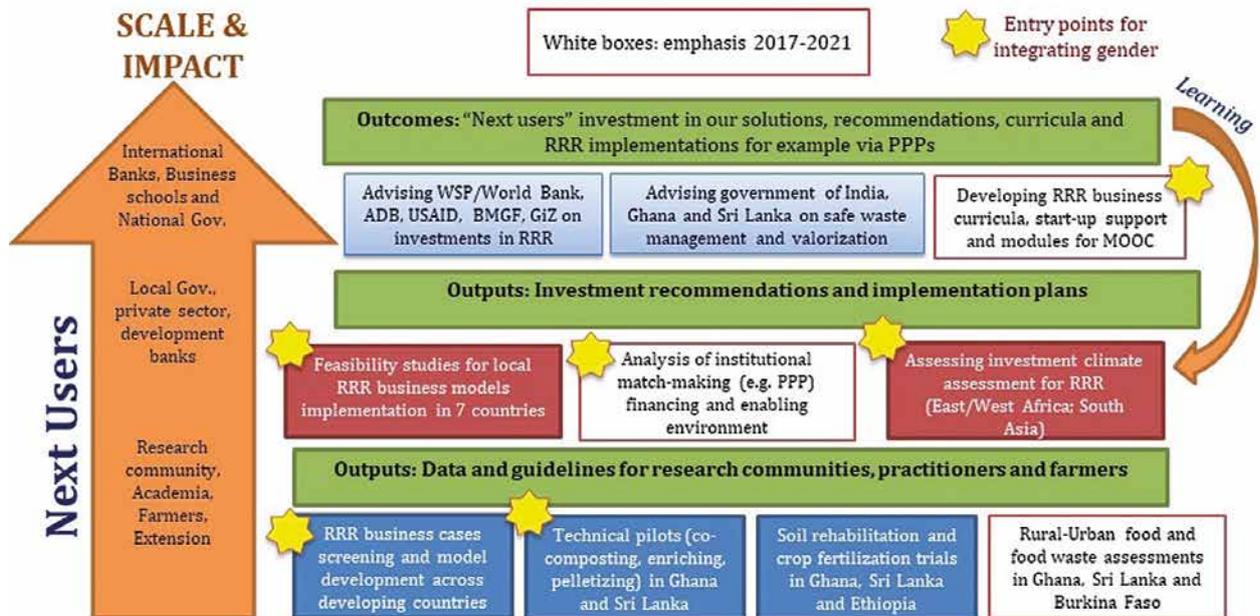


Figure 1 IWMI's RRR R4D impact pathway

Box 1. Adoption and economic impact of briquettes as cooking fuel: Women Fish Smokers in Ghana

In implementing a new business model in Ghana, fish smokers were identified as a potential users of briquettes, which are made from municipal solid waste or agricultural residues. Smoking fish is a commercial activity predominantly undertaken by women. It is carried out using traditionally designed stoves with firewood as the main source of fuel.

Replacing firewood with briquettes has the potential to minimise costs on energy incurred by fish smokers. Switching from firewood at GHS 0.33 kg⁻¹ (USD 0.09 kg⁻¹) to briquettes at GHS 0.44 kg⁻¹ (USD 0.12 kg⁻¹) can reduce the cost of energy for fish smokers by 10%, as fewer briquettes are required to produce the same amount of heat. In addition to reduced expenditure, switching to briquettes would enable the women fish smokers to save income spent on paying for labour to split firewood. When the cost of buying the firewood and labour to split it are combined, the total saving is estimated at 26%.

Developing inclusive RRR business models

RRR business models need to be socially inclusive, targeting men, women and youth along the RRR value chain. In assessing empirical RRR business cases and developing business models, the question of equality is considered particularly in terms of how far men, women and youth are positively or negatively impacted by engaging in the waste valorisation process, whether as entrepreneurs, workers, or as direct users of the resulting products (Otoo and Drechsel, 2018). This is assessed using both qualitative and quantitative approaches. The qualitative assessment looks at positive implications for common gender roles, such as time spent on water or fuel collection and provision of improved services or clean energy. Based on detailed assessment of empirical RRR business models, a pictorial balance beam reflecting possible gender specific dis/advantages has been drawn up (Figure 2). However, further studies are also needed to take local context into account.

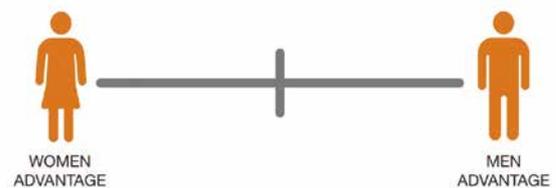


Figure 2 Balance beam reflecting possible gender specific dis/advantage of RRR business models

Most common business models providing advantages for women are those producing energy, such as briquettes, out of waste. These benefit households or enterprises run mainly by women (Box 1).

While it has been relatively easy to identify gender dimensions for waste-to-energy business models, we continue to struggle to identify and develop gender responsive water and nutrient business models. To develop gender responsive solutions, there is a need for business models that take into account perception and cultural acceptance of women's employment, that are embedded in enabling regulatory and financial environments, and that provide capacity development tailored to their needs.

Gender and investment climate for RRR enterprises

Women are involved as owners, workers and managers of RRR enterprises. Assessing the gender dimension of an investment climate is important when considering strategies to improve the business environment and promote private sector development in the RRR sector. Women often find it more difficult than men to formalise their businesses due to low levels of education and business skills, as well as sociocultural factors that may restrict the female domain to low-level economic activity and the domestic environment (Simavi et al. 2010).

Box 2. Investment climate for waste-to-energy enterprises: insights from women entrepreneurs in Kenya

Enterprises' perceptions of policy and infrastructure factors

Female-owned enterprises rated their access to land, water, business licensing and permits, and access to finance as major constraints to the establishment and growth of their enterprises. Access to land is a constraint on enterprise expansion, especially in urban and peri-urban areas where most of the businesses were located.

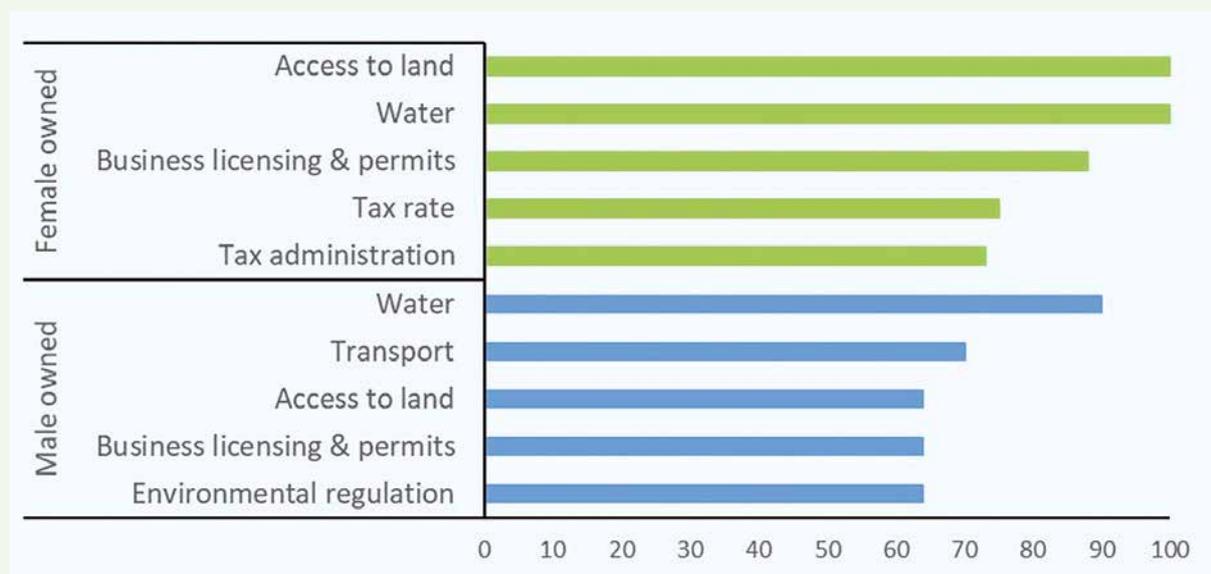


Figure 3 Top ranked constraints related to policy and infrastructure by gender of owner

Access to finance and its disproportionate effect on women and men. Both male and female entrepreneurs rated access to different financing schemes as the most severe constraint to their business. However, female entrepreneurs were particularly intimidated by the application procedures for requesting loans or grants from financial institutions or donors. Furthermore, female entrepreneurs doubted if the institutions processing loans would give their applications favorable consideration and as a result they ended up not submitting them. Owners of the waste-to-energy enterprises preferred to borrow money from informal sources such as friends and relatives, providing women with limited funds for investment and hence their businesses remain as informal and small scale. Access to different forms of finance are key reform priorities that need to be put in place to address the gender disparities in accessing resources for businesses.

RRR business model implementation

RRR business models, such as the recovery of energy and nutrients from waste streams, catalyse small business creation and have great potential for improving livelihoods of women and youth. IWMI, in partnership with municipal assemblies, private sector, and NGOs, has implemented waste-to-nutrient and energy business models in Ghana. The design and implementation of these business models were cognisant of the need for gender equity throughout the entire business model — including through job creation and improving livelihoods and working conditions for women.

The production of these RRR products is labour intensive and mainly done by males, for example turning of compost frequently in a windrow composting process, as women are less likely to be willing to engage in such strenuous activity. However, the business models' implementation ensured gender equity through women's representation in management and business operations, as well as targeting the RRR products to benefit women end users (Box 1).



Checking temperature of co-compost, Ghana Photo by © IWMI

Gender responsive RRR innovations

The need for proper understanding of women's needs and perceptions is critical in the development of appropriate and gender responsive RRR solutions. Gender must be integrated along each stage of the R4D impact pathway to support implementation and scaling of gender-responsive RRR options. Thus researchers and practitioners designing innovative and inclusive RRR solutions to agricultural and natural resource challenges need to understand the local social and cultural contexts. Particular attention should be given to roles and technology preferences of men, women and youth in RRR product production.

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