

# Understanding landscape restoration options in Kenya



## Risks and opportunities for advancing gender equality

### Key messages

- Agricultural technologies for land restoration present both opportunities and risks for women's empowerment.
- Activities such as digging planting basins can increase women's autonomy to carry out farming activities that usually require male assistance. However, they take additional time and labour.
- Planting fruit trees benefits both men and women farmers, without significant issues relating to labour or timing. However, water availability is a constraining factor.
- To ensure that restoration efforts advance gender equality rather than perpetuate existing inequalities, projects need to assess these potential synergies and trade-offs. Both men and women should be involved in the design of project activities to ensure that their needs are met and that benefits outweigh the costs.

### Background

Given their different roles, responsibilities, access to and control of resources, the costs and benefits of land restoration are likely to differ for men and women. Yet, many restoration projects fail to consider gender dimensions when designing their interventions. Efforts to restore agricultural lands are often knowledge- and labour-intensive, and risk increasing women's already heavy workloads. They reduce time available for other economic and non-economic activities (Berti et al. 2004). Women may also lose control of land and production as land is restored and becomes more productive (Theis et al. 2018). Assessing the opportunities and risks that land restoration presents for both men and women is therefore key to the design of equitable and sustainable restoration initiatives.



The World Agroforestry-led project entitled 'Restoration of degraded land for food security and poverty reduction in East Africa and the Sahel: Taking successes in land restoration to scale', is an EC-IFAD-funded initiative aimed at developing innovative ways to achieve the scaling of land restoration through embedding research in development. It does this by collaborating with development programs to systematically test promising restoration options across a range of contexts. In the eastern drylands of Kenya, the project is working with over 1,800 farmers across Kitui, Makueni and Machakos counties to implement on-farm comparisons of various land restoration options, including different tree planting practices and species, and the use of planting basins.

Planting basins is a simple soil and water conservation technique, where small holes are dug and crops planted within them. These basins reduce surface water run-off and increase water availability for the crop, thus improving plant survival and growth. In Kenya, over 500 farmers have been comparing the performance of these basins to that of their usual cultivation practices (e.g., oxen and plough). This includes trying different hole sizes and soil amendments.



Investing in rural people



*On-farm comparison of planting basins (left of the photo) and a farmer's normal planting practice (right of the photo). Mitito Andei, Makueni County, Kenya (Photo: Mary Crossland)*

Around 1,400 farmers are also involved in testing different tree planting practices, comparing the effect of different sized planting holes of various sizes, watering regimes and soil amendments on the survival of various tree species. Through monitoring the performance of these planned comparisons, the project aims to better understand which restoration options work best where, why and for whom.

Using methods adapted from the INGENAES toolkit, 'Assessing how agricultural technologies can change gender dynamics and food security outcomes' (INGENAES 2017), we explore the risks and opportunities that planting basins and tree planting present for advancing gender equality, focusing on how men and women control and benefit from the interventions, and the differentiated impacts on their time and labour. Here, we present initial insights from our assessment structured around potential risks and opportunities.

### Preliminary insights

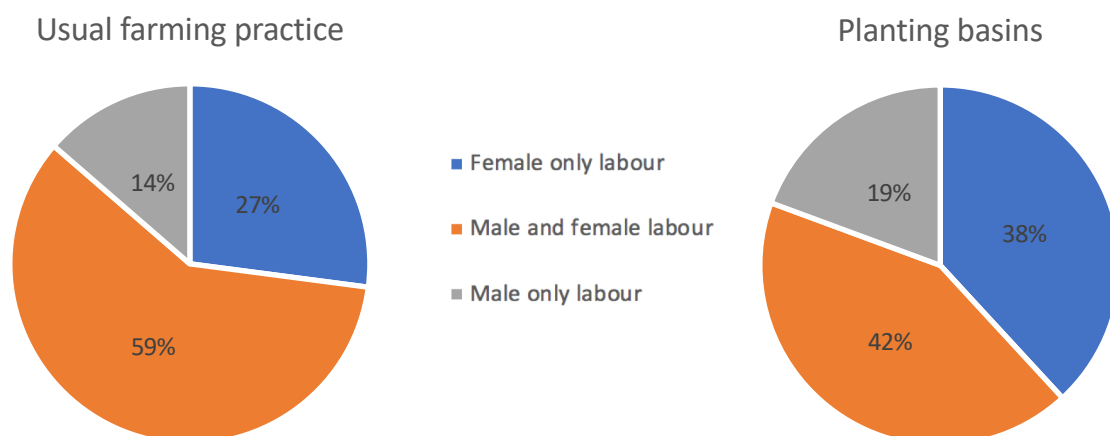
**Risk/opportunity:** Planting basins may alter the traditional division of labour between men and women, with respect to land preparation activities. Monitoring the planting basins revealed a higher incidence of female-only labour used to dig the basins, compared to the typical planting practices utilizing an oxen and plough (Figure 1). This suggests a potential shift in labour between men and women with the uptake of basins, presenting both a risk and opportunity for women's empowerment.

For example, women reported that digging basins has limited their ability to perform other tasks, such as collecting firewood and water. On the other hand, the use of planting basins has increased their autonomy to carry out farming activities that previously required male assistance (e.g., ploughing).

**Opportunity:** Planting basins have altered the timing of farming activities. Planting crops before the start of the rainy season is important for successful germination. However, the basins are dug during the dry season, while traditional land preparation using a plough occurs closer to the start of the rains. Some farmers have reported having to wait for the use of a hired plough and, as a result, planting late.

Since basins can be dug throughout the dry season, farmers do not have to wait for the use of a plough and are able to plant in time for the rains. This may be a particularly important benefit for women; although they may take on more responsibility for on-farm activities, they typically have less access to resources such as an oxen and plough.

**Opportunity:** Decision-making dynamics are changing in the region. In households where few or no men are available full-time on the farm (e.g., have taken up jobs in towns or cities), and even when these are still considered male-headed, a high percentage of women reported making decisions about the use of basins on their own (Figure 2). Even where spouses are present full-time on the farm, female farmers have reported increased participation in decision-making, compared to five years ago.



**Figure 1. Comparison of men and women's involvement in land preparation using planting basins and farmers' usual planting practices (e.g., ploughing), based on monitoring data from February 2017.**

**Opportunity:** Unlike planting basins, activities related to the planting and management of trees were not perceived to substantially affect workloads or timing of other activities on the farm – by both women and men. Both recognized the value of planting trees on farms in terms of their potential to generate income (e.g., through selling of fruit and/or timber) and for the environmental services they provide.

**Risk:** Restrictions on women’s mobility and the availability of water influence the location of trees on farms. Women reported planting trees around the homestead, where they can care for them more easily. Men reported planting trees both around the homesteads and in the fields, highlighting moisture retention and nitrogen fixation as benefits of having trees on croplands.



Women involved in a training workshop on how to construct planting basins. Kalawa, Makueni County, Kenya (Photo: World Agroforestry/ Ake Mamo)

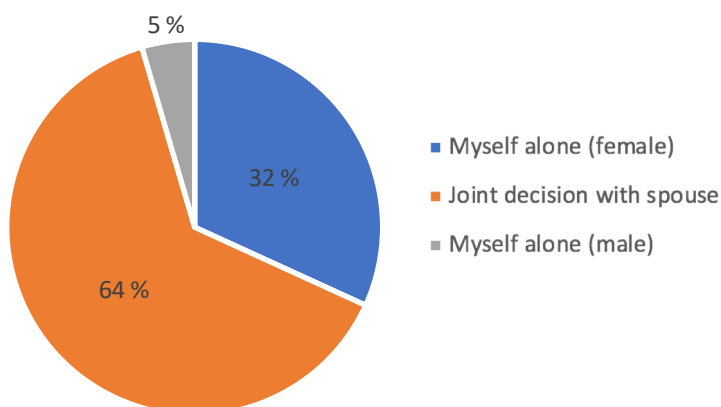
“I was reluctant to embrace the idea but my wife moved fast and implemented the basins on our farm. Therefore, after I saw the idea was productive I had to allow my wife to make decisions of how many [basins] to dig at a particular season. Fortunately, with time I also joined [the] trainings and we were able to flock together.”

Male farmer from Kitui County

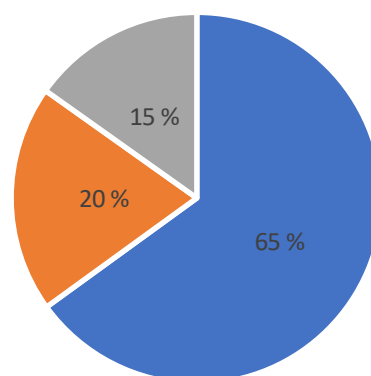


Newly dug planting basins on a farm. Mwingi, Kitui County, Kenya (Photo: World Agroforestry/ Ake Mamo)

Households where men are more involved with on-farm activities



Households where men are less involved with on-farm activities



**Figure 2.** Comparison of who was involved in deciding whether to plant basins, between households where men are involved in farming activities (i.e., land preparation, planting, weeding) and those where they are not, based on monitoring data from February 2017.



### Recommendations and future research

- To ensure that benefits associated with restoration outweigh any associated increases in workload, or actually reduce workload, project teams should collect data disaggregated by sex and other relevant social differentiation factors (e.g., age, ethnic group). In particular, understanding the implications of different technologies and management practices in terms of an individual's time and labour requirements, is critical for designing actions to either diminish any negative impacts or magnify those that are positive.
- Technology dissemination is not gender-neutral. The way in which farmers are involved in restoration initiatives can influence women's agency, and perceptions around women's roles and capacities. For example, the 'planned comparisons' approach encourages on-farm experimentation, that is: farmer-designed and managed; based on their needs and circumstances; and can contribute to increasing women's agency and participation in decision-making. Closer monitoring of the effects of this type of technology dissemination approach is needed to better understand whether, how and in what circumstances 'planned comparisons' can enhance agency and empowerment.

### References

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