

# Info Note

## Diversification of livelihoods among small-scale farmers in the Nyando Basin, Kenya

*Findings from a climate-smart agriculture baseline survey*

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DECEMBER 2019

### Key messages

- Livestock and crop farming are the two key primary and secondary income sources for rural households in Nyando.
- Access to formal education promotes livelihood diversification among smallholder farmers.
- Non-governmental organizations in Nyando have a significant impact on the decision of households to diversify their livelihood sources.
- Community-based farmer organizations in Nyando have a negative impact on the decision of residents to diversify from on-farm activities.
- Young farmers are more likely to diversify as compared to older farmers.

This brief summarizes findings of a climate-smart agriculture (CSA) research project led by the Amsterdam Center for World Food Studies (ACWFS) with the participation of the CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS) in East Africa, University of Nairobi (School of Economics) and Wageningen Economic Research. It is based on baseline data collected as part of an ongoing survey of 122 households located in the Climate-Smart Villages (CSVs) and non-CSVs villages of Nyando Basin in Kisumu and Kericho Counties. It discusses diversification of livelihood sources.

The livelihood of an individual or group is defined by access to productive and non-productive resources, capabilities of individuals, asset ownership, economic activity of the individual and institutions (Sisay 2010). Diversification of livelihoods is one of the strategies used by rural households to improve their disposable income. In the Nyando Basin, farming households have diversified to

different livelihoods, especially in the wake of climate change and climate variability.

### Overview of livelihood diversification in the Nyando Basin

Three diversification strategies available to smallholder farmers in Nyando include engaging in on-farm, off-farm and non-farm activities. On-farm income is derived from production in own farm; off-farm income is obtained from working in other people's farms; while non-farm income refers to income obtained from working in non-agricultural occupations in urban or rural areas (Kassie et al. 2017). Diversification of livelihoods is driven by pull and push factors. Push factors are negative factors such as unfavorable climate; drought, floods, and unreliable and erratic rainfall, which push an individual to eventually seek other sources of income. Pull factors are positive forces that encourage households to diversify, especially for wealth accumulation reasons, they include an individual having requisite skills enabling them to diversify, access to productive resources like having assets that can be deployed to alternative activities, for instance, a truck that can be used for own farm use as well as renting out. There are a number of reasons that convince households in Nyando to diversify their livelihoods:

- Obtaining cash to purchase food items when crops fail following unfavorable weather;
- Earning an income to finance farming operations in the absence of formal and informal credit access;
- Accessing cash to finance investment in CSA technologies;
- Reducing income risks by having multiple sources of income.

Livelihood sources in Nyando are derived from crop farming, livestock farming, salaried employment, self-employment off-farm and casual labor, both non-farm and off-farm. Crop and livestock farming are on-farm while the remainder are non-farm and off-farm livelihood sources. Individuals who choose crop or livestock farming or both as their primary and secondary sources of income are classified to have not diversified, while households engaging in at least one off-farm or non-farm activity as a primary or secondary source of income are considered to have diversified.

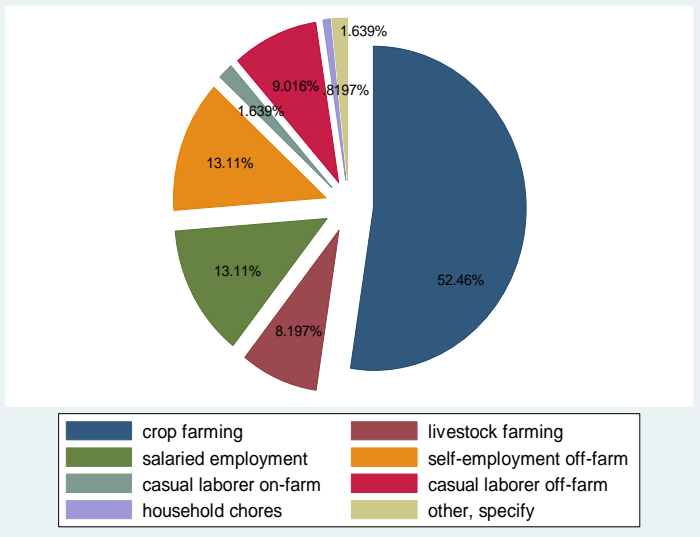


Figure 1. Primary sources of income in Nyando. Source: Survey Data (2019)

On-farm activities account for at least 60% of primary household income; non-farm income accounts for at least 36%; while off-farm accounts for nearly 2% of the income with very few people engaging in rural wage employment. On-farm income contributes 68% of secondary income; non-farm income accounts for 22%, while off-farm accounts for at least 4%.

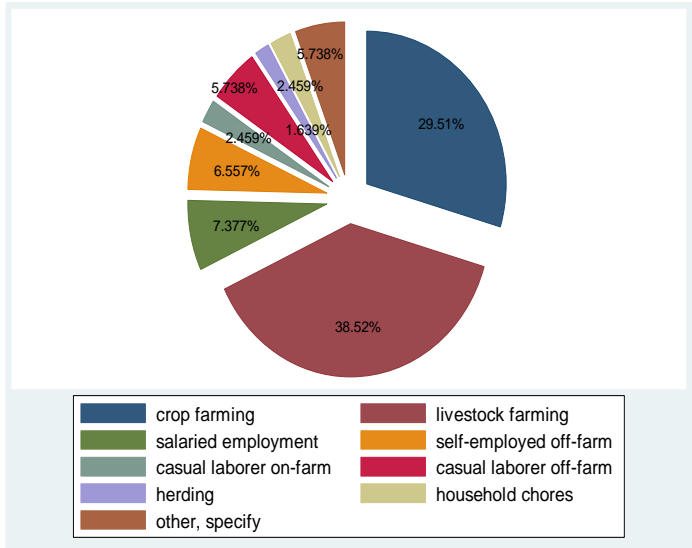


Figure 2: Secondary sources of income in Nyando. Source: Survey Data (2019)

Crop farming contributes only 29% of secondary income but 52% of primary income, while livestock farming contributes 38% as a secondary income source as compared to 8% of primary income. Notably, on-farm income accounts for more than 50% of either primary or secondary income. CSA technologies would prove useful since the majority of the households rely on farming as a livelihood source.

55% of households have at least diversified to other sources of income other than on-farm income (Figure 3). The diversification could be ex-post or ex-ante depending on the unique circumstances of a given household. Ex-post diversification refers to diversifying sources of income in order to supplement available income while ex-ante diversification involves diversifying to cushion against a possible income loss in the future.

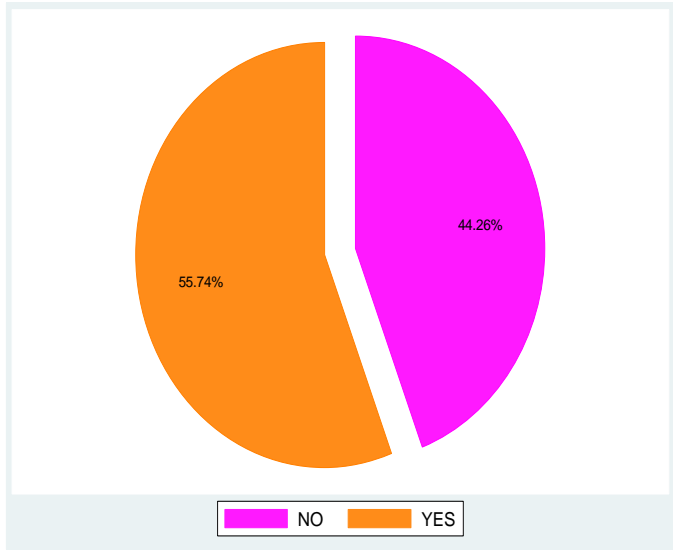


Figure 3. Diversification choices for households. Source: Survey Data (2019)

### What influences diversification of livelihoods in the Nyando Basin?

Completion of at least secondary education by the household head influences diversification. The possible explanation is that education enables one to acquire capabilities that enable them to engage successfully in off-farm and non-farm activities. Older farmers are less likely to diversify possibly because they are reluctant to take up new ideas and exhibit rigidity in trying new ways of earning income. Similarly, membership to community-based organizations (CBOs) and access to training had a negative influence on the decision of a household head to diversify. The fact that a respondent belongs to a CBO and is less likely to diversify is contrary to expectations in literature. The reason may be that CBOs within the Nyando Basin encourage their members to concentrate on on-farm sources of income. A household head trained by a non-governmental organization (NGO) is less likely to diversify. The reason could be that non-governmental organizations encourage the residents to engage more on on-farm

activities as opposed to off-farm and non-farm activities as alternative livelihood sources.

## Conclusions and policy recommendations

Although slightly more than half of the respondents have diversified their sources of income, there remains a large population of households who rely solely on on-farm income. Nyando Basin is particularly prone to adverse climate change and relying on on-farm income alone makes households vulnerable to uncertain income loss. CBOs can organize workshops to encourage their members to diversify to non-farm and off-farm activities. Older farmers should be trained by the local and national governments to acquire capabilities that enable them to diversify easily. Thirdly, formal education within the region should be expanded because formally educated individuals have higher chances of diversifying. Lastly, NGOs working with farmers in Nyando should train farmers on non-farm and off-farm income sources as possible livelihood alternatives.

## Further reading

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*This series of briefs summarizes findings of a research project "Climate-Smart Financial Diaries", a project led by the Amsterdam Center for World Food Studies (ACWFS) with participation of CCAFS East Africa, University of Nairobi (School of Economics) and Wageningen Economic Research. This brief focuses on assessing the financial inflows and outflows of poor households by gathering data on income, consumption, savings, lending, and investment in climate smart villages(CSVs) and non-CVSs in Nyando basin.*

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