



# Agricultural intensification and youth in Malawi, Tanzania and Zambia

## SAIRLA Research Briefing

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### At a glance

The AFRINT IV project has been collecting data as part of a longitudinal study on agricultural intensification in Malawi, Tanzania and Zambia since 2002. To explore generational patterns in agricultural intensification AFRINT IV identifies three age groups: farmers aged 18-35, 36-64 and farmers aged 65 and above. In this briefing we focus on the younger generation of farmers up to 35 years of age. Policies in all three countries recognise the key role young people play in national development. However, they are also recognised to be a vulnerable group due to lack of access to land, unemployment and poverty.

Our findings suggest that with regards to maize yields, only the sampled youth in Zambia show a positive trend while yields have stagnated among the sampled farmers in Malawi and Tanzania for all age cohorts. By contrast, youth have taken a central role in the intensification of rice production in the Tanzania, the only country sample where rice is produced. We also find that youth have been disproportionately affected by decreasing farm sizes, and that they lack agricultural inputs such as fertiliser and improved seeds.

Despite similar challenges and opportunities, the rural youth cohort is not a homogenous group and the diversity within the cohort needs to be acknowledged in policies. Furthermore, these policies need to address rural infrastructure to improve conditions for marketing agricultural products.

In this briefing we explore youth participation in agricultural intensification by studying trends in maize and rice yields. The research draws on a mixed method approach and includes a longitudinal database covering three rounds of data collected between 2002 and 2017/18. In the final round of data collection, 1071 households were included, out of which nearly a thousand maize farmers were found throughout the three countries. In addition, roughly 200 households in Tanzania cultivated rice. To better understand the trends, qualitative interviews and focus group discussions with youth were held. The qualitative data includes interviews with youth headed households and youth who live in households headed by other family members.

## Findings

### Policies on youth and agriculture

All three countries have a youth policy that acknowledges the importance of youth for both present and future population trends. While the participation of young people in socio-economic development is regarded as critical they are also recognised as a vulnerable group, disproportionately affected by high unemployment, underemployment, poverty, health related issues and lack of land. In this context,





agriculture is identified as a potential absorber of rural youth, keeping them out of urban unemployment and underemployment.

## Sustainable agricultural intensification in Malawi, Tanzania and Zambia

**Finding 1: Malawi, Tanzania and Zambia show strong regional variations in agricultural intensification.** In Zambia, increased use of agricultural inputs and improved technology have increased productivity and maize yields for all age groups over the course of the research. This is the consequence of a broadening of the criteria for input subsidies to include both inorganic fertilisers, but also agro-chemicals and farm implements. Moreover, the coverage of the subsidy programme has been expanded both numerically as well as geographically. In Malawi and Tanzania, maize yields have stagnated over the same period, however. This is explained by a general lack of agricultural inputs, aggravated by the ending of subsidy programmes, poor soil fertility in Malawi and changes in land use patterns in Tanzania. Intensification in rice has, however occurred in Tanzania, involving all age groups, including youth.

**Finding 2: Access to land is a precondition for youth to participate in agricultural intensification. Meanwhile, access to land is becoming more challenging for youth in all three countries.** In all countries, mean cultivated area decreased among youth headed households. In 2017, farms headed by youth were the smallest in all three countries, and shrinking farm sizes have disproportionately affected the youngest farmers. This is explained by population growth, increased life expectancy and consequently a postponed intergenerational transfer of land. Financial constraints prevent youth from buying land to access land through the market. The situation is most severe in Malawi where the mean cultivated farm size among youth headed households in 2017 was 0.60 ha.

## Youth participation in sustainable agricultural intensification

**Finding 3: In Malawi, youth are not participating in any intensification processes.** Stagnant maize yields between 2008 and 2017 and the overall low use of chemical fertiliser and improved seeds points to a general stagnation of smallholder agriculture among all age groups. Mean cultivated area has dropped over the same period. Youth are especially vulnerable due to their lack of access to land and financial constraints.

**Finding 4: In Tanzania, youth's participation in agricultural intensification differs by region.** Stagnant maize yields are found among all age groups, however youth are especially affected by decreased yields. This is explained by their lack of agricultural inputs compared to other age groups, and a termination of subsidy programmes in 2013. By contrast, in rice producing regions youth headed households have had the highest yields throughout, in turn tied to the use of inorganic fertilisers, high yielding seed varieties and herbicides for weed control. The explanation for this difference lies in regional dynamics and the commercial incentives for maize and rice respectively. Maize is grown primarily in Iringa, where it competes with horticultural production and youth lack capital for external inputs, when compared with older generations. In Morogoro, which is part of the rice-producing heartland, commercial opportunities in paddy are drawing youth into production and they are also able to purchase inputs, while they can use their labour to deal with heavy weeding demands, which in turn raises yields.

**Finding 5: In Zambia, maize yields among youth headed households have nearly doubled between 2002 and 2017.** This is explained by the expansion of the subsidy programme as well as a modernisation of farming through chemical fertilisers, extension services and a commercialisation of maize.



## Conclusions

Youth participation in agricultural intensification in Malawi, Tanzania and Zambia differs between, as well as within, the countries. Youth are involved in the intensification process in Zambia, and in the rice producing regions in Tanzania. By contrast, youth are not participating in agricultural intensification in maize producing regions in Tanzania or in Malawi. The explanation for these differences between the country samples lies in financial constraints in Malawi and Iringa, Tanzania where maize is mainly produced. In the latter case, also other commercial opportunities in agriculture, particularly horticulture, are more relevant especially for land-constrained households, such as those headed by youth.

Increases in life expectancy have delayed land transfer between generations, and as youth are financially constrained, their possibilities to form independent livelihoods on their own are postponed. Most youth therefore farm on family land, and contribute to family income.

Policies on youth in all three countries acknowledge the potential of youth as a human resource to enhance development at the national level. Although cognisant of the vulnerability of youth in terms of land access and their limited possibilities of establishing independent livelihoods, policies often fail to acknowledge the large diversity among youth. Land especially, is a crucial factor in determining the opportunities for youth to participate in sustainable agricultural intensification.

For youth who have land, a lack of capital to buy inputs or invest in land improvement constitutes an obstacle to intensification. Moreover, relatively small household sizes among youth headed households means that labour is often lacking. Policies that can provide soft loans to redress capital constraints and lead to investments in labour saving technologies provide opportunities for improving participation in agricultural intensification for this group.

For youth who do not have land, skills training related to the parts of the agricultural value-chain that are not directly linked to cultivation are more relevant. Examples include keeping of poultry and small stock or value addition to crop production for instance processing of cassava or brewing.

Finally, generic rural investments in infrastructure including transport, storage facilities, water and electricity can enhance the more general prospects for sustainable agricultural intensification as the quality as well as amount of labour increases.



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The opinions expressed in this briefing are those of the authors and do not necessarily reflect the views of DFID. Readers are encouraged to quote and reproduce material with full acknowledgment.

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## Further Reading

Andersson Djurfeldt, A., Kalindi, A., Lindsjö, K. and Wamulume, M. (2019) 'Yearning to farm – Youth, agricultural intensification and land in Mkushi, Zambia', *Journal of Rural Studies*, Vol. 71, pp.85-93.

## About Afrint IV

Afrint IV – Equity and Institutions in Sustainable African Intensification – is implemented by the Department of Human Geography at Lund University in cooperation with the University of Malawi, Sokoine University of Agriculture, the University of Zambia and LUCSUS. It is supported by the Sustainable Agricultural Intensification Research and Learning in Africa programme (SAIRLA). For more information about Afrint IV see <https://sairla-africa.org/what-we-do/research/policy-for-equity-in-african-agriculture-afrint-iv>

## About SAIRLA

SAIRLA is a UK Department for International Development funded initiative that seeks to address one of the most intractable problems facing small-holder farmers in Africa – how to engage in the market economy and to deliver sustainable intensification of agriculture which avoids negative impacts on the environment. The programme is managed by WYG International Ltd and the Natural Resources Institute, University of Greenwich. For more information visit [www.sairla-africa.org](http://www.sairla-africa.org)