

# Developing Zambia's agriculture: a hard road to hoe

Zambia's small-scale farmers are even poorer today than they were 40 years ago. According to the 2010 Human Development Report, Zambia is one of just three nations whose development has fallen behind 1970 levels. And yet Zambia is one of Africa's "lion states" with annual economic growth rates of more than 5 percent. It is not easy to explain such a contradiction, but a DIE study is drawing closer to finding an answer.

Zambia is one of the world's most important copper exporters. Its economy is based almost entirely on mining, which is responsible for the country's high economic growth. The revenues earned from copper exports, however, benefit only the urban and political elites, while productive sectors such as agriculture and manufacture are neglected. The minimal taxes imposed on copper revenues do indeed attract foreign investment but do nothing to help the poor. This has been the case for many years, and the low level of state spending on agriculture reflects the elites' disinterest in changing the situation.

Most of Zambia's poor live in small-scale farmers' households in the rural areas. Although they have access to large fertile lands and adequate water resources only about 50 percent of these households are food secure. This means that many of them are net food consumers who are forced to buy food at the end of the season, when their own stocks are used up. With little cash at their disposal they can barely afford to do so.

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## Susanne Neubert

Deutsches Institut für  
Entwicklungspolitik –  
German Development Institute, DIE  
Bonn, Germany  
Susanne.Neubert@die-gdi.de

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## ■ 50 years of failed agricultural policy

The above-mentioned disinterest of the elites alone cannot be held fully responsible for the stagnation of the agricultural sector. A 50-year failed agricultural policy, along with historic, demographic and socio-cultural factors, have all played a role.

The Farmer Input Support Programme (FISP) and the policies of the Food Reserve Agency (FRA), both focusing almost solely on maize, have had a particularly devastating effect.

Together they account for up to 70 percent of the agricultural budget each year but have failed to reduce poverty. On the contrary, such subsidies have led to an agricultural monopoly in which maize is even grown in areas for which it is unsuitable. Unsurprisingly, yields are correspondingly poor.

A closer look reveals that a much smaller group of farmers benefits from the FISP fertiliser subsidies than was

*Although Zambia has large fertile lands and sufficient water resources only half of the rural population is food secure.*



Photo: S. Neubert

originally intended. Supplies of “one-size-fits-all” fertiliser are frequently delivered too late, and in such meagre quantities that they make no appreciable difference to yields, which average only two tonnes per hectare. The cooperatives responsible for distribution degenerate into purely sales outlets which are open to corruption. The farmers have consequently lost all faith in cooperatives. Cultivation which concentrates only on maize and inadequate fertilisation have impoverished soils and reduced land and labour productivity even further.

Another factor is Zambia’s low population density, which – together with the negligence of rural infrastructure – has resulted in a serious lack of agricultural manpower. This lack has proved to be a crucial poverty trap for the country: when all the veterinary services were discontinued in 1992, under pressure for structural reform at the end of the socialist era, a large proportion of draught animals died of epidemics. The country’s budding mechanisation of agriculture went so far into reverse that a large proportion of the arable land was again cultivated manually using axe and hand hoe only. Deteriorating soil fertility has meant that today an increasingly large area must be cultivated in order to achieve the same harvest. The shortage of manpower – worsened still by the high prevalence of AIDS – means this is an insurmountable task for many households. Large areas of arable land therefore lie fallow, while at the same time people are starving.

To date it has been unthinkable for the vast majority of small-scale farmers to purchase draught animals from their own budgets. Credits are seldom available and those that are on offer are usually too expensive, as they generally cost more than 25 percent interest. As there is still a considerable risk of the animals becoming diseased, the credit risk is high, both for the lender and the borrower.

## The e-voucher system as an alternative to conventional subsidy policy

Small farmers who register with the scheme are eligible to receive scratch-cards for mobile phones (e-vouchers). They can use these to purchase fertilisers, lime, pesticides or veterinary medicines of their own choice from any participating agro-dealer. This creates a triple win situation: fewer public funds are spent on fertiliser transport, the private sector is attracted to the rural areas, and farmers finally have a choice as to what they need, when they need it and where they want to buy it.

The e-voucher is therefore ideal for eliminating the inefficiency and unfairness of the old subsidy system. Delayed deliveries, corruption and blanket fertilisation formulas are replaced by more transparency and personal responsibility. This in turn would empower farmers and increase their adaptive capacity. Areas where the e-voucher was introduced for testing have shown promising results. All that now remains is for the system to be implemented. It is hoped that, with a little pressure and a favourable opportunity – following the 2011 election for instance – the political barriers will also fall.

## External factors behind the predicament

External disturbances such as climate change and economic shocks are also contributing to the stagnation of the agricultural sector. Shorter rainy seasons and frequent flooding reduce yields and increase production risk. Escalating fertiliser prices and price fluctuations for cash crops make their use or cultivation uneconomic or precarious.

Its heavy reliance on copper exports also makes Zambia vulnerable to currency fluctuations. Rising demand and prices for copper have led to a high level of foreign currency revenues, which have already caused the Zambian kwacha to be revaluated several times. This in turn has made agricultural exports more expensive, i.e. less competitive on international markets. Conversely, agricultural imports are cheaper, but this weakens internal agricultural production. This phenomenon, known as Dutch disease, was most pronounced during 2006/2007 and almost led to the collapse of the cotton sector, on which many small-scale farmers rely. Although effective policies against sudden currency appreciation do exist, as other resource-rich nations such as Botswana and Chile have shown, no suitable policies have been put in place in Zambia to counteract the familiar effects.

The farmers themselves have few options, at least at an individual level. They have their own “counter-cyclical” way of doing things, which can be explained by an urgent need for cash and a lack of organisational capacity. This reasoning makes their situation even worse. They sell a portion of their yield directly after harvesting – when prices are low. At the end of the season – when prices are high – their reserves are used up and they have to buy in food again.

In addition to development measures aiming at productivity, the agricultural sector therefore needs strategies which will make it more resilient to both climate change and economic shocks.

## Suggested solutions

A German Development Institute (DIE) research group has formulated recommendations:

1. Nationwide re-introduction of draught animals and the parallel re-establishment of veterinary services,
2. Conversion of the FISP fertiliser subsidy programme to the much more effective e-voucher system (see Box),
3. Setting up a decentralised “warehouse” system to allow decentral-



Photo: S. Neubert

Promoting conservation agriculture can be an important contribution to making Zambia's agriculture more resilient to climate change.

ther. One of the mistakes of the past was that organisations frequently concentrated on individual methods and failed to work together.

When looking at existing approaches it becomes clear that these have usually been geared towards either the policy level or the practical level. It is therefore a further proposition of this study that in order for the measures to work a form of interaction must be mapped out between the national, district and local levels. Correspondingly, it should be worked out exactly how each method could be implemented on every level.

The third proposition of the study is that, in order to assure success, measures should be channelled through the private sector as far as possible. The past has shown that the government is not the right actor to implement change on the operational level. While the government's task is to provide the legal environment, the infrastructure and extension services, the private sector, farmers' organisations as well as NGOs and donors can work much more appropriately on the ground.

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For further reading: S. Neubert et al. (2011): *Agricultural Development in Zambia – Increasing Resilience to Climate Change and Economic Shocks in Crop Production*, DIE Study 57, Bonn, currently in press.

- ised grain storage and flexibility in selling,
4. Expansion of conservation agriculture, and improved adaptation of conservation methods to different locations,
  5. Diversification of crop varieties and species, including better multiplication and distribution structures for seed,
  6. Rapid installation and expansion of (supplementary) irrigation systems in order to further develop high potential areas.

These measures are the "hardware" which, combined with the appropriate "software" – i.e. measures aimed at improving marketing, capacity development, and access to credit – can help ensure that agriculture is geared towards poverty reduction and resilience to climate and economic shocks. At the same time it addresses distribu-

tive justice, because many more small-scale farmers can participate in the e-voucher system than was possible with the FISP.

The suggested measures are not in fact new. They have already been advanced individually and sporadically by many donors and organisations. However, one proposition of the research study in question is that they will only be effective if they are implemented simultaneously. What is the use of diversification, for instance, when it is based on the use of the hand hoe alone? The workload would increase further and thus hamper the breakthrough of new crop varieties. And what use is irrigation if it is implemented without an awareness of sustainable soil management practices? The nutrient requirements of soils would still not be met and thus the environment would degrade still fur-

## Zusammenfassung

Die Landwirtschaft Sambias kann sich nur entwickeln, wenn ganze Maßnahmenbündel zusammen mit enormen Anstrengungen zum Capacity Development gleichzeitig umgesetzt werden. Diese Maßnahmen müssen die Produktivität und Verteilungsgerechtigkeit erhöhen und zur selben Zeit externe Schocks abpuffern. Nach all dem Scheitern in der Vergangenheit verlangt

dies jetzt die Umsetzung durch andere Akteure. Auch müssen die Bauern selbst initiativ werden und sich mehr Handlungsspielräume erobern.

## Resumen

La agricultura de Zambia no se desarrollará a menos que se implementen paquetes específicos de medidas en forma paralela a los masivos esfuerzos de desarrollo de

capacidades. Estas medidas deben incrementar la productividad y la justicia distributiva, y al mismo tiempo amortiguar los choques externos. Después de los muchos fracasos en el pasado, la situación exige que otras partes interesadas se encarguen de la implementación. Además, es crucial que los agricultores se tornen proactivos y recuperen la facultad de tomar sus propias decisiones.