

Full report

Walking the talk:

Why and how African governments should transform their agriculture spending.

ActionAid December 2013



Acknowledgements:

This is an ActionAid policy brief based on baseline survey by ActionAid Country Programmes in Burundi, Ghana, Nigeria, Kenya, Rwanda, Uganda and Zambia.

Thanks to all the Public Finance for Agriculture Project Managers from the respective Countries as well as the Country Management Team and other colleagues for their input and support: Ruchi Tripathi, Constance Okeke, Aftab Alam, Alberta Guerra, Buba Khan, Fredrick Kawooya, Francis Akorikin, Edward Karangwa, Innocent Mutabaruka, Philip Kilonzo, Jessica Mwanzia, Tunde Aremu, Queronica Quartey, Laura Hawksworth, Kate Carroll, Katie Campbell, Marie Brill and Sumathi Pathmanaban. Special appreciation also goes to our friends Boaz Keizire Department of Rural Economy and Agriculture of the African Union Commission, Martin Bwalya NEPAD Coordinating Agency and our friends at IFPRI for their valuable inputs and comments.

Report written by Mark Curtis and David Adama

Report contributors: Patrick Oketa, Oji M.Ogbureke, PhD, Institute for Economic Affairs, Kenya and Fred Matavu, PhD.

Editor: Hannah Beardon

Design: www.NickPurser.com

Front cover image:

Smallholder farmer in her groundnut farm in Alayere community, Ondo state, Nigeria. PHOTO: ACTIONAID

Contents

Table of acronyms	4
Summary	5
Introduction	16
1. Country contexts: Agriculture and government policy in the seven states	16
2. Increasing spending on agriculture	26
2.1 The seven countries spending on agriculture	27
2.2 How to raise more resources for agriculture	33
3. Improving the quality of agriculture spending	35
3.1 Capacity and coordination	35
3.2 Lack of resources for operations	37
3.3 Mismatch between plan and spending	38
3.4 Corruption	38
4. Supporting women farmers	39
4.1 Women farmers in Burundi's agriculture budget and policy ASDAASDS	41
4.2 Women farmers in Ghana's agriculture budget and policy	42
4.3 Women farmers in Kenya's agriculture budget and policy	43
4.4 Women farmers in Nigeria's agriculture budget and policy	44
4.5 Women farmers in Rwanda's agriculture budget and policy	45
4.6 Women farmers in Uganda's agriculture budget and policy	46
4.7 Women farmers in Zambia's agriculture budget and policy	46
5. Improving extension services	48
5.1 Low and high spenders	50
6. Improving agricultural research	55
6.1 Poor links to farmers	56
7. Re-focusing on sustainable agriculture	57
7.1 Lack of priority to sustainable agriculture	58
8. Providing agricultural credit	63
8.1 Government spending on credit	65
9. Transforming participation and transparency	68
9.1 The lack of budget transparency	68
9.2 Top-down policy making	70
10. Recommendations	73

Table of acronyms

AGF	Agriculture Guarantee Fund (Rwanda)
ARD	Agricultural research and development
ASAL	Arid and semi-arid lands
ASDS	Agricultural Sector Development Strategy (Kenya)
AU	African Union
CAADP	Comprehensive African Agriculture Development Programme
DSIP	Agriculture Sector Development Strategy and Investment Plan (Uganda)
EPRC	Economic Policy Research Centre (Uganda)
FADC	Focal Area Development Committee (Kenya)
FAO	UN Food and Agriculture Organisation
FISP	Farm Input Subsidy Programme (Zambia)
FNDP	Fifth National Development Plan (Zambia)
FASDEP	Food and Agriculture Sector Development Policy (Ghana)
GADS	Gender and Agricultural Development Strategy (Ghana)
GM	Genetically modified
GPRSF	Growth and Poverty Reduction Strategic Framework (Burundi)
KARI	Kenya's Agricultural Research Institute
MAAIF	Ministry of Agriculture, Animal Industry and Food (Uganda)
MAFAP	Monitoring Food and Agricultural Policies (Zambia)
METASIP	Medium Term Agriculture Sector Investment Plan (Ghana)
MFI	Microfinance institution
MINAGRI	Ministry of Agriculture and Animal Resources (Rwanda)
MINAGRIE	Ministry of Agriculture and Livestock (Burundi)
MOFA	Ministry of Food and Agriculture (Ghana)
NAADS	National Agriculture Advisory Services (Uganda)
NALEP	National Agriculture and Livestock Extension Programme (Kenya)
NAP	New Agricultural Policy Thrust (Nigeria)
NARO	National Agricultural Research Organisation (Uganda)
NEEDS	National Economic Empowerment and Development Strategy (Nigeria)
NMK	Njaa Marufuku Kenya
PSTA	Strategic Plan for the Transformation of Agriculture (Rwanda)
RCB	Rural and Community Banks (RCBs)
ReSAKSS	Regional Strategic Analysis and Knowledge Support System
WIA	Women in Agriculture (Nigeria)
WIAD	Women in Agriculture Department (Ghana)

Summary

In 2003, the Maputo Declaration of the African Union stated that, within five years, 10 per cent of the budgets of member states would be dedicated to agriculture. Ten years on, despite spending increases by some countries, African governments still allocate an average of only 5 per cent of their national budgets to agriculture.¹ Only seven out of 49 countries in sub-Saharan Africa have consistently reached the 10 per cent target. This failing is holding back food production and food security in Africa, where 223 million people (a quarter of the population) live in hunger.²

African governments are largely failing the continent's smallholder farmers. These farmers, along with their dependents, constitute the largest socio-economic group and produce most of the continent's food. In addition to insufficient spending, much agricultural expenditure is poorly focused on the real needs of smallholder farmers. Women, who are most likely to work in small-scale agriculture and who manage Africa's food security, are largely ignored. All over Africa, millions of smallholder farmers are eking out a precarious existence with little or no support from their governments.

African Heads of State and Government have designated 2014 as the Year of Agriculture and Food Security. Yet, like the Maputo Declaration, this will remain an empty phrase unless governments commit to "*walking the talk*" when it comes to spending on agriculture.



Smallholder Women Farmers Network (SHOWFAN) members, clearing their demonstration plot for a Sustainable Agriculture practical training in Alayere Community, Ondo state, Nigeria.

PHOTO: ACTIONAID

Governments must provide a fair budget allocation to the millions of smallholder farmers who undertake most of Africa's farming. This means that smallholder farmers – and especially women farmers – must be the focus of agriculture budgets. It also means that governments must promote investments and policies that recognise, support and encourage smallholder farmers' own investments in agriculture and food security.

This report involves extensive secondary and primary research in seven African countries - **Burundi, Ghana, Kenya, Nigeria, Rwanda, Uganda and Zambia**. It examines how well focused government agriculture spending is on promoting the needs of smallholder farmers, especially women farmers, and makes recommendations for far-reaching changes.

Increasing spending on agriculture

There is broad consensus that African countries invest too little in agriculture. Only Ethiopia, Niger, Mali, Malawi, Burkina Faso, Senegal and Guinea have consistently reached the 10 per cent budget target.³ Africa's low allocation to agriculture does not appear to recognise that most of its citizens are farmers.

The result of low spending is that only a fraction of Africa's farmers have access to critical services such as extension support (i.e. advice and training) or small loans (credit), while rural infrastructure and access to markets is also often poor. All of these factors contribute to low farm productivity and low incomes. Much greater public investment in critical services is needed, combined with efficient ways to deliver them to farmers.

Of the seven countries under review, none has consistently achieved the 10 per cent spending target. Only two - **Burundi** and **Ghana** - have done so in a single year. **Ghana** currently allocates 9-10 per cent of its spending to agriculture and **Burundi** increased its allocation to agriculture in 2011 to 10.9 per cent, a doubling over the previous year. Very low spenders include **Kenya** (which allocated an average of only 4.6 per cent of its national budget to agriculture during 2009-13), **Uganda** (3-5 per cent in recent years) and **Nigeria** (an average of just 3.5 per cent during 2007-11). In the middle are **Zambia** (6.4 per cent during 2009-13) and **Rwanda** (6.7 per cent in 2010/114).

Governments can find extra resources for agriculture in several ways. One way is to reduce *military spending*. Every year, **Zambia** spends more on defence than on agriculture. **Uganda's** budget allocation to security is double that of the allocation to agriculture for every year but one during the period 2011-16.⁴ **Nigeria's** spending on defence in 2013 is projected to be four times larger than its spending on agriculture and rural development.⁵

Governments could also reduce or abolish the *massive tax exemptions* (such as corporate income tax holidays) they give to companies. Recent research by ActionAid and the Tax Justice Network Africa found that four East African countries - **Kenya, Uganda, Tanzania** and **Rwanda** - lose up to US\$2.8 billion a year from the tax incentives and exemptions their governments provide.⁶ This is much more than they spend on agriculture. A further option is to clamp down on '*illicit financial flows*', mainly tax evasion by transnational corporations, which cost Africa an average of US\$60 billion a year during 2005-10.⁷



Mrs. Grace Bukola Oyediji - SHOWFAN President
Ondo state Nigeria, at home working on her cola nut seeds.
PHOTO: ACTIONAID

Improving the quality of agriculture spending

Increases in spending on agriculture need to be matched by improvements in the quality of spending and in the efficiency of ministries in the agriculture sector. Ministries often lack adequate capacity to implement policies, such as staff with appropriate skills or mechanisms to ensure coordination within and across departments. In **Burundi**, for example, the agricultural sector suffers from a lack of competent advisors and researchers, while planning and coordination capacity is very weak. Larger countries with bigger agriculture ministries, such as **Uganda**, also suffer from inadequate staff training and poor quality equipment.

Lack of capacity and poor coordination can mean that budgets (often already low) are not entirely spent. **Kenya's** actual spending on agriculture averaged 80 per cent of its budget allocation during 2009/10 and 2011/12.⁸ The government blames this on delayed disbursements from donors and cumbersome international procurement procedures,⁹ but internal inefficiencies are also partly responsible. In **Nigeria**, Kwara state spent only 56 per cent of its budget, while Ondo spent only 68 per cent of its agriculture budget in the five years 2007-11.¹⁰

Agriculture budgets also often lack funds for operations (ie. money allocated to actual projects) because too much of the budget is absorbed by recurrent costs such as salaries. **Kenya, Uganda** and **Zambia**, for example, spend 23–27 per cent of their agriculture budgets on salaries and administration.¹¹ A further problem is that countries such as **Zambia** and **Uganda** suffer from a mismatch between the priority areas identified in government policy plans and actual budget allocations. Thus budgets are sometimes not actually spent in the manner that national governments had intended.

Finally, corruption is a problem that besets agricultural activity. In **Uganda**, one MP estimates that perhaps 20 per cent of the agriculture budget goes missing.¹² In **Kenya**, the Ministry of Agriculture's tagline (on its website) states that it is a 'corruption free zone'.¹³ Yet a senior researcher in a leading public policy institute estimates that 20–30 per cent of the agriculture budget goes missing.¹⁴ The greatest opportunities for corruption are during the procurement and supply of goods and services and at the point of service delivery.¹⁵



Smallholder Women Farmers Network (SHOWFAN) members with their patrons watching a demonstration at the International Institute of Tropical Agriculture (IITA) demonstration centre federal Capital Territory (FCT), Abuja, Nigeria.

PHOTO: ACTIONAID

Supporting women farmers

Most farmers in Africa are women and they produce and manage most of the continent’s food. Yet women farmers are too often ignored by their governments and in agriculture budgets, women are largely invisible. Some projects benefit women farmers, but there are almost no budget lines specifically targeting them.¹⁶ A review of our seven African governments’ agriculture budgets and policies shows that gender commitments remain confined to statements on paper and have yet to be translated into reality.

Table 1: The role of women farmers in seven African countries

Burundi	Women account for 55 per cent of the workforce ¹⁷ and do 70 per cent of farm work. ¹⁸
Ghana	Women constitute over half of the agricultural labour force and produce around 70 per cent of the country’s food. ¹⁹
Kenya	Women account for 75 per cent of the labour force in small-scale agriculture, manage 40 per cent of small farms and play a major role in food preparation and storage. ²⁰
Nigeria	Women constitute 60–80 per cent of the agricultural labour force ²¹ and are responsible for carrying out 50 per cent of animal husbandry and 60 per cent of food processing. ²²
Rwanda	Women contribute up to 70 per cent of agricultural labour ²³ and do 80 per cent of the sowing, 65 per cent of food processing, 61 per cent of hoeing and 72 per cent of the storage and transportation of produce. ²⁴
Uganda	Women constitute 55 per cent of farmers. ²⁵ They head 26 per cent of households in rural areas and do 85 per cent of the planting and weeding, 55 per cent of land preparation and 98 per cent of food processing. ²⁶
Zambia	Women constitute around 65 per cent of smallholder farmers. ²⁷ They are the main producers of food and manage, either independently or jointly, around 60 per cent of the land under maize production. ²⁸

Women face greater barriers in farming than men. They have significantly less access to land, extension and credit services and, often, markets. Crucially, many agriculture policies need to differentiate the needs of women farmers to reflect the different reality of their experience on the ground. ActionAid believes that women need to be explicitly targeted in extension services, subsidy programmes, credit schemes and agricultural research. Otherwise these programmes will continue to bypass women and their needs.

Major investments are needed in women farmers, but not only for equity reasons. It is estimated that even if women simply had the *same* access to productive resources such as land and seed as men, they could increase yields on their farms by 25–30 per cent. This would raise agricultural output in developing countries by 2.5–4 per cent and reduce the number of hungry people in the world by 12–17 per cent.²⁹ Improved investment in rural infrastructure, along with greater investments in labour-saving technologies are needed to address the increasing hours women spend collecting water and fuel as environmental degradation intensifies. Expanding early childhood education and/or paying social welfare benefits directly to mothers would have dual benefits for women and children.

Improving extension services

Farming advisory and training (or 'extension') services can be vital in providing and sharing information on ways to improve farm productivity. Studies by the International Food Policy Research Institute conclude that there are high rates of return to public investment in extension services and that consequently 'extension investments are a good buy.'³⁰

Yet, instead of being seen as a 'good buy', many African governments have tended to abandon extension services. They were severely cut back, under donor pressure, in the public spending cuts of the 1990s and in many cases have never recovered. In countries such as **Kenya, Uganda** and **Rwanda**, donor pressure has encouraged governments to outsource or part-privatise their extension services, and to reduce public investment whilst encouraging private companies or NGOs to provide such services. Now, farmers must often pay for services, a practice which tends to exclude the poorest. The result is that most farmers in Africa are now without access to advice or information from a formal extension system. The proportion of farmers seeing extension officers varies from just 1.3 per cent in Nigeria³¹ to 23 per cent in Zambia (but half of those see extension officers only 'rarely').³²

Low spenders (relative to other spending areas) on extension services include **Nigeria, Rwanda, Zambia** and **Burundi** whereas **Ghana, Uganda** and **Kenya** are relatively high spenders.

Table 2: Proportion of agriculture budgets allocated to extension services

Burundi	7.6 per cent of government contribution to agriculture budget (ie. excluding donors in 2011). ³³
Ghana	Unclear, but may be 50-80 per cent of MOFA budget. ³⁴
Kenya	Around 25 per cent. ³⁵
Nigeria	0.6 per cent of Federal Government budget (2007-11).
Rwanda	0.5 per cent of MINAGRI budget (2010/11); ³⁶ 1.9 per cent of Agriculture Sector Investment Plan (2009/10–2011/12). ³⁷
Uganda	50 per cent (2012/13). ³⁸
Zambia	Around 5 per cent. ³⁹

None of the seven countries under review can be said to have effective extension services. Rather these were widely recognised as being of poor quality. Extension services in most countries have focused on increasing farm production for better-off male farmers who often grow cash crops.

What is needed is a broader service that reaches larger numbers of poor farmers, especially women. This requires more women to be trained as extension officers and for services to be provided in appropriate ways. Promoting sustainable approaches to farming is also increasingly vital in light of the need to adapt to climate change. This is another area in which current extension services lack capacity.

Improving agricultural research

Investing in agricultural research can be vital for imparting knowledge and technology to farmers. Research can develop improved seed varieties, promote better sustainable agricultural practices to increase yields, or develop small-scale farming equipment to save labour time. For every one per cent increase in yields resulting from investments in agricultural research in Africa, two million Africans can be lifted out of poverty.⁴⁰ Thus in 2003, African governments committed to double their annual public spending on agricultural research within five years.⁴¹ Unfortunately, this commitment is long forgotten. Many governments now spend little on agricultural research, often only a small proportion of their already low agriculture budgets.

Table 3: Proportion of agriculture budgets allocated to agricultural research

Burundi	8.6 per cent of government contribution to the agriculture budget (2011). ⁴²
Ghana	Hard to establish. Possibly 15–22 per cent. ⁴³
Kenya	15 per cent (2011–12). ⁴⁴
Nigeria	28 per cent of Federal Government allocation (2013). ⁴⁵
Rwanda	4.6 per cent of MINAGRI budget (2010/11). ⁴⁶ 1.5 per cent of Agriculture Sector Investment Plan (2009–12). ⁴⁷
Uganda	22 per cent (2012/13). ⁴⁸
Zambia	1.6 per cent of MACO budget (2011). ⁴⁹

A few African countries, such as **Ghana** and **Nigeria**, have a considerable infrastructure of research institutions. These have developed dozens of improved seed varieties and strategies for the control of poultry and livestock diseases.⁵⁰ However, this spending has not always translated into significant increases in farm productivity. This can mainly be attributed to the fact that agricultural research has been divorced from the real needs of farmers. For example, programmes have tended to be top-down and have failed to consult farmers on the crops or technologies to be developed. In **Ghana**, for example, the government recognises that there has been a ‘top-down approach to research’, along with low uptake among farmers and low levels of funding. In response, the government has committed to increasing funding to agricultural research.⁵¹ Although **Nigeria** has produced over 200 new technologies since 1997, the participation of farmers has been weak. One recent survey found that 25 per cent of researchers had no interaction with farmers and 51 per cent had no interaction with extension agents.⁵²

There is an urgent need to democratise agricultural research and enable broader farmer participation in the design and implementation of programmes that respond to the specific needs of smallholders and women farmers. Priority areas for research include promoting sustainable agriculture in the light of climate change, explicitly supporting women farmers (especially in developing affordable labour-saving technologies) and promoting public seed breeding (rather than the current focus on the private patenting of seeds and their monopolisation by private corporations). As stated by the CFS, the ideal approach should combine the traditional knowledge of farmers and indigenous peoples with the findings of scientific research.

Re-focusing on sustainable agriculture

Smallholder farmers in Africa need to improve their farm productivity but also adapt their farming to cope with the increasing impact of climate change. Sustainable agriculture (or agro-ecological) practices offer the prospect of achieving both. Critical approaches include soil conservation, using animal and green manure, agro-forestry and intercropping, integrated pest management and water harvesting.⁵³ Increasing evidence suggests that sustainable agriculture produces good yields. A comprehensive meta-study examined 286 such projects in 57 countries and found an average yield increase of 79 per cent.⁵⁴

African governments need to massively increase their investments in sustainable agriculture, especially in agricultural research and extension services, since sustainable agriculture is often knowledge-intensive. Some African governments are already making increased investments. In Malawi, for example, the government is supporting maize agro-forestry, which is providing broad benefits for smallholder farmers.⁵⁵ Similarly, the Shinyanga Soil Conservation Programme in Tanzania has rehabilitated large areas of land using agro-forestry, benefitting tens of thousands of smallholders.⁵⁶

However, most African governments are failing to allocate considerable proportions of their budgets to sustainable agriculture. Indeed, most are still prioritising conventional farming, which advocates increasing the use of chemical fertilizer, chemical pesticides and hybrid (and sometimes GM) seeds. In Ghana, for example, the government's input subsidy programme – which mainly provides subsidised chemical fertilizer to farmers – accounted for a massive 79 per cent of actual spending (as opposed to budget allocation) on agriculture during 2008-11.⁵⁷ These inputs, even when subsidised, are still overly expensive for many poor farmers and also often pollute soil and water, while reliance on expensive seeds can lock farmers into depending on transnational corporations. Yet many governments and donors have bought into the false 'Green Revolution' idea that such inputs are the solution to Africa's low farm productivity.

Providing agricultural credit

Access to small loans at low interest rates is often critical for smallholder farmers to invest in future production, expand farming or diversify into producing new crops. For example, women in ActionAid's **Ghana public finance for agriculture baseline research** identified access to credit as their main priority.

Yet most African governments are either failing to invest sufficient resources in providing credit to farmers, or despite considerable expenditure, they fail to reach sufficient numbers of farmers. NGOs and informal lending fill some of the gap, but there is still a major shortfall. Rural women are especially disadvantaged – their access to credit is hindered by their lack of collateral (ie. ownership of land), lack of information regarding how to access credit from banks, and banks' perception of agriculture as high risk.⁵⁸ Other barriers include high interest rates and the seasonal nature of farming, which does not fit the fixed repayment periods of short-term loans. The result is a massive gap in funding for agriculture that is locking millions of farmers into poverty.

Table 4: Proportion of farmers with access to credit

Ghana	Around 16 per cent. ⁵⁹
Kenya	7 per cent and less than 2 per cent of women farmers (in three districts surveyed by ActionAid). ⁶⁰
Nigeria	Around 24 per cent have access to informal financial services. ⁶¹
Rwanda	Around 3 per cent. ⁶²
Uganda	Around 9 per cent. ⁶³

Government spending on the provision of credit varies from country to country. **Uganda** has no policy measures for improving access to credit for poor farmers. By contrast, the **Kenyan, Nigerian and Rwandan** governments support several credit programmes. Government-subsidised credit programmes are generally poorly regarded by donors who typically oppose the state playing a role in the provision of credit. Yet, as the UN's High-Level Panel of Experts on Food Security and Nutrition has recently noted, there is a strong argument for the government to provide subsidised credit to farmers, or to offer public guarantees to private financial institutions.

Transforming participation and transparency

Smallholder farmers in Africa are insufficiently involved in the design and implementation of agriculture budgets and policy. Moreover, farmers' organisations and movements are often ignored or bypassed in policy-making. Government attempts to involve stakeholders in policy design are often superficial, especially when it comes to reaching out to women farmers. Many African governments have improved mechanisms to consult with farmers in recent years, but inadequate attention is still paid to smallholder farmers' declared needs. These failings give rise to poor service delivery. It also means that policies affecting the lives of millions of farmers are formed without their substantial input and with a lack of grassroots support.

Promoting the 'inclusive participation' of farmers and other stakeholders in agriculture is one of the stated founding principles of the Comprehensive African Agriculture Development Programme (CAADP). Most African governments are signatories to this Programme which attempts to align agriculture policies across Africa.⁶⁶ Yet analysis suggests that the participation of local private sector and civil society in agriculture policy making processes under CAADP is still very limited.⁶⁷ Ownership of CAADP is vested mainly in high political and bureaucratic circles.

A transformation is required in the way that smallholder farmers are viewed, especially women farmers. Governments need to champion farmers' organisations and movements and work with them to uphold farmers' rights.



Participants at the ELBAG training for smallholder women farmer groups and CSOs at Bwari, FCT, Abuja Nigeria (SHOWFAN members and CSOs drawn from Gombe, Bauchi, Ondo, Delta, Kwara, Kogi,FCT, states of Nigeria)
PHOTO: ACTIONAID

Recommendations

Governments are urged to consider the following measures:-

Agriculture spending

- In countries where the 10 per cent budget target on agriculture spending has not been met, correctional action should be taken to allocate the agreed 10 per cent.
- The African Union should adopt a timeline for reaching this commitment during the 2014 Year of Agriculture and Food Security.

Quality of spending and participation in budget process

- Make Ministries in the agriculture sector more accountable for results, not outputs. Call on Ministries to demonstrate how they will address current internal inefficiencies.
- Invest more in adequate staff training and capacity building in the agriculture sector and improve coordination between and among Ministries involved in the sector.
- Increase the role of farmer cooperatives and civil society in the budget process as well as monitoring agriculture spending at national and district level.

Women farmers

- Re-orient agriculture spending and policy to focus on women farmers by dedicating specific budget lines to them. Also better targeting of women in extension services and in credit, research and other

programmes. *Extension services* need to be overhauled to support women farmers. *Agricultural research* programmes need to be reviewed to promote the productivity of crops grown by women; to invest more in labour-saving devices; and to better involve women in research design and dissemination. *Credit schemes* need to be reformed to target larger numbers of women farmers. Input subsidy programmes, where these are appropriate, need to have better targeting to ensure that women have at least equal access. *Gender-disaggregated data* should be produced or enhanced to support women and to monitor the effectiveness of policies.

- Improved investments in infrastructure along with greater investments in labour-saving technologies are needed to address the increasing hours women spend collecting water and fuel as environmental degradation intensifies. Expanding early childhood education or paying welfare benefits directly to mothers would have dual benefits for women and for children themselves.
- Greater steps should be taken to ensure that women are treated equally under the law and in practice, especially in relation to land ownership.

Extension services

- Increase resource allocation to extension services and make significant investments in training extension agents, including women, to ensure that advice and training is provided on the issues that matter to smallholder farmers. Services must be provided to poor farmers for free.

Agricultural research

- Reorient agricultural research services to ensure these are driven by the imperative to increase food security and crop productivity, to diversify production, enhance its nutritional value and build resilience, are relevant for women farmers and are focused on supporting sustainable agriculture.
- Cease top-down approaches and develop mechanisms to ensure the broad participation of farmers' groups in research design and implementation.

Sustainable agriculture

- Step up investments in sustainable agriculture and develop a national strategy for encouraging larger numbers of farmers to practice farming approaches that reduce dependence on chemical inputs.
- Build or further develop a country-owned vision for smallholder agriculture with broad-based national support and support the review, financing and implementation of inclusive, gender-sensitive, multi-sectoral policies and strategies linked to sustainable agricultural development.

Agricultural credit

- Introduce or improve government-backed credit subsidy schemes to ensure that large numbers of farmers have access to small loans at low interest rates; that farmers are aware of such schemes; that the schemes have sufficient capital; and that they are transparently and efficiently managed.

Introduction

In 2003, the Maputo Declaration of the African Union stated that, within five years, 10 per cent of the budgets of member states would be dedicated to agriculture. Ten years on, despite recent spending increases in some countries, African countries still allocate an average of only around 5 per cent of their national budgets to agriculture.⁶⁸ African governments are largely failing the continent's smallholder farmers. These farmers, along with their dependents, constitute most of Africa's people and produce most of the continent's food. In addition to insufficient spending, much agricultural expenditure is poorly focused on the real needs of smallholder farmers. Women, who are most likely to work in small-scale agriculture, and who manage Africa's food security, are being largely ignored.

This report demonstrates that millions of smallholder farmers in Africa are eking out a precarious existence with little or no support from their governments. This failing is having massive consequences in holding back the production of food and the promotion of food security. To contextualise the impact of this failure, 223 million people - a quarter of Africa's population - are still living in hunger.⁶⁹ African Heads of State and Government have designated 2014 as a Year of Agriculture and Food Security. Yet this, like the Maputo Declaration, will remain an empty phrase unless governments commit to "*walking the talk*" when it comes to agriculture spending.

Governments must provide a fair budget allocation to the millions of smallholder farmers who undertake most of Africa's farming. This means that smallholder farmers – and especially women farmers - must be the focus of agriculture budgets. It also means that governments must promote investment and policies that recognise, support and encourage smallholder farmers' own investment in agriculture and food security.

This report is based on extensive secondary and primary research in seven African countries - Burundi, Ghana, Kenya, Nigeria, Rwanda, Uganda and Zambia. It examines the quality and targeting of government spending on agriculture in relation to the needs of smallholder farmers, especially women farmers.

The report analyses expenditure levels, the quality of spending and the degree to which the government is promoting key services and policies that benefit small farmers such as extension services, agricultural research, rural credit and sustainable agriculture.

It concludes with far-reaching recommendations on how governments should transform their agriculture spending.

Box 1: Methodology

This report is based on extensive secondary research and fieldwork (with the exception of Burundi) in seven African countries during 2011-13. Comprehensive literature searches were supplemented by interviews with central and local government officials, academics, NGOs, and fieldwork (focus group discussions and individual interviews) among farmers in the following locations:

- **Ghana:** Seven villages in different districts of the Northern and Upper East regions: Chanshegu (Tamale Metropolitan District, Northern Region) ; Zabzugu (Zabzugu/Tatale district, Northern Region); Kanshegu (Savalegu/Nanton district, Northern Region); Kpandai (Kpandai district, Northern Region); Botanga (Tolon/Kumbugu district, Northern Region); Nangodi (Talensi/Nabdam district, Upper East Region); Nayoki No.1 (Bawku Municipality, Upper East Region).
- **Kenya:** Two field visits in western Kenya were undertaken, one in West Pokot, Greater Trans Nzoia and Greater Kakamega, the other in the counties of Baringo, West Pokot, Kakamega and Migori.
- **Nigeria:** Representatives of 103 cooperatives/associations from 50 communities were consulted in 14 local government areas in six states: Delta, Bauchi, Gombe, Kogi, Kwara, and Ondo.
- **Rwanda:** 11 communities and officials in 5 districts (Musanze, Karongi, Nyanza, Gisagara and Nyaruguru).
- **Uganda:** Farmers' groups and officials in various sub-counties of Pallisa, Kumi and Katakwi districts of eastern Uganda.
- **Zambia:** Farmers' groups in Chongwe, Mumbwa, Choma and Kalomo districts of central/southern Zambia.

1. Country contexts: Agriculture and government policy in the seven states

This section considers each of the seven countries and highlights the key issues faced by smallholder farmers and the main government agriculture strategies.

Burundi

More than 90 percent of the population lives in 1.5 million **smallholder farming households** which produce 95 per cent of the country's food. The most important actors are **women**, who account for 55 per cent of the workforce⁷⁰ and do 70 per cent of farm work.⁷¹ Yet women have few rights. Under customary law, for example, they are not allowed to own land or livestock.

Burundi's 8 million people have average **incomes** of just US\$140 a year, making the country one of the poorest in the world. Although Burundi has been slowly rebuilding itself over the past decade, poverty and hunger remain deep-rooted problems, with around 62 per cent of the population **undernourished**.⁷²

Burundi's smallholder farmers face a myriad of **constraints to increasing their farm production**. They cultivate an average of just half a hectare of land, well below what is needed to guarantee good nutrition. Land scarcity and uncertain land tenure arrangements are major barriers to agricultural growth and can be a source of conflict. Other major constraints to smallholder farm production include inadequate extension and research services, poor access to credit, weak producer associations, as well as variable water supply and localised droughts as a consequence of climate change.

Yet subsistence farming continues, despite increasingly difficult circumstances, because the rural population has few other options. There is little off-farm employment and few adequate markets in which to sell produce. Most food production is consumed by smallholder families themselves; only 20 per cent of harvests reach the market.⁷³ Per capita crop production in 2007 was less than half the 1993 level.⁷⁴

Despite significant constraints, there are still considerable **opportunities** for Burundi's smallholders to increase their farm production and food security. The yields of some crops have been increasing and there are abundant water resources. The government, with donor support, has also developed an impressive range of policy documents to develop the agricultural sector. Yet overall food productivity in Burundi is showing little improvement and government targets outlined in strategy papers are being missed.

The **Growth and Poverty Reduction Strategic Framework** (GPRSF), adopted in 2006, commits the government to promoting agriculture, livestock and fisheries by improving production and stimulating exports of coffee, tea, cotton and non-traditional exports.⁷⁵ Following the GPRSF, the government developed a **National Agricultural Strategy** (*Stratégie Agricole Nationale*) for 2008-15. This aims to rehabilitate the agricultural sector, to move away from subsistence farming and achieve annual growth of 6 per cent or more. In addition, the National Plan for Agricultural Investment (Plan National d'Investissement Agricole) for 2012-17 is a framework for coordinating investments in the agricultural sector aiming to ensure food security for all, increase household incomes and create jobs. It identifies more than 15 agricultural value chains to be promoted, along with irrigation. The Plan also highlights the need to reform and build the capacity of the Ministry of Agriculture and Livestock (MINAGRIE) - to enable it to implement the new policies.⁷⁹

Ghana

More than half of Ghana's 24 million population live in rural areas.⁷⁸ There are around 3.4 million farm households, with **smallholders**, whose average farm size is just 1.2 hectares, accounting for 80 per cent of farm production.⁷⁹ The most widely grown food crops are maize and cassava followed by yam and plantain but the largest land area is given over to cocoa, with oil palm also important.⁸⁰ Over 80 per cent of farm households own livestock.⁸¹ Agriculture remains the key economic sector in Ghana, contributing around 32 per cent of gross domestic product, employing 55 per cent of the labour force and accounting for 75 per cent of export earnings, mainly from cocoa.⁸²

Women are the key actors in Ghanaian agriculture, constituting over half of the agricultural labour force and producing around 70 per cent of the country's food.⁸³ An average of 1 in 3 households in Ghana is headed by a woman but in some areas, such as rural coastal regions, this is as high as 40 per cent.⁸⁴ As in many other African countries, Ghanaian women do most of the planting, weeding, harvesting and transporting of produce and also dominate in food crop farming.⁸⁵ Men tend to be more involved in cash crop production, especially cocoa, and initial land clearing and tilling of soils, while making most of the decisions on land, inputs and labour. Most farming households in Ghana also do some basic processing of food, notably of maize, cassava, groundnuts and fish. These functions are dominated by women, who account for 95 per cent of those involved in agro-processing and 85 per cent of those in food distribution.⁸⁶

The agricultural sector is characterised by **low productivity**, with crop outputs per hectare declining in recent years. Recent rises in food production in Ghana are mainly due to increases in cultivated land.⁸⁷ Current maize, cassava and yam yields are at least three times less than the levels which should be achievable.⁸⁸ The major constraints to food security and agricultural growth include farmers' reliance on rain-fed farming (less than 1 per cent of the cultivated area is irrigated⁸⁹); dependence on simple tools; poor access to inputs and financial services such as credit; inadequate food storage (a third of all harvested maize and cassava is lost⁹⁰); poor road infrastructure and inadequate access to markets.

Despite these challenges, Ghana has in many ways become **an African success story** in terms of reducing hunger and poverty. According to the UN's Food and Agriculture Organisation (FAO), Ghana has already met Millennium Development Goal 1 with the aim of halving poverty by 2015. Ghana reduced the proportion of undernourished people from 27 per cent in 1990-92 to 5 per cent in 2005-07 - the lowest proportion of any sub-Saharan African state.⁹¹ On its current growth path, Ghana will reduce poverty from 28 per cent in 2006 to 16 per cent in 2015.⁹²

Despite Ghana's successes, major **challenges** still remain. The FAO characterises 1.2 million Ghanaians as **undernourished** while Ghanaian figures show that 14 per cent of children are underweight and 28 per cent are stunted due to malnutrition.⁹³ Over 80 per cent of children and 48 per cent of women in rural Ghana are anaemic.⁹⁴ Studies in northern Ghana suggest that most farming households experience food insecurity for three to seven months in any year.⁹⁵ Ghana is also failing to produce sufficient quantities of rice. The country now imports 70 per cent of its rice, costing the country a colossal US\$600 million in 2010, according to government figures.⁹⁶

Further reducing poverty in Ghana primarily means better supporting food crop farmers, who are mainly women. It should also involve targeting Ghana's northern regions where poverty is most profound. Around 45 per cent of the poor are food crop farmers, notably those in the three northern regions - Northern, Upper East and Upper West - who rely on food production, not cash crops for export. Studies by the International Food Policy Research Institute show that the key to reducing poverty is productivity growth in food staple

crops which will have the effect of lowering food prices and increasing incomes (since most farmers are net food buyers).⁹⁷ A 1 per cent annual growth in staples up to 2015 is likely to reduce poverty by 0.9 per cent.⁹⁸

The Ghanaian government has recently produced an impressive range of agriculture policy documents to guide its spending and the main agricultural strategy. The flagship strategy is the **Food and Agriculture Sector Development Policy Phase II** (FASDEP II) and its investment plan, the **Medium Term Agriculture Sector Investment Plan** (METASIP). This strategy places primary emphasis on improving agricultural performance through increasing productivity and market access for farmers, developing rural infrastructure, upgrading the skills of operators in the value chain, research to improve livestock breeds and crop varieties, market information and policies to facilitate supply and access to inputs.⁹⁹

Kenya

Over 80 per cent of Kenya's population of 40 million live in rural areas and derive their livelihoods from agriculture and pastoralism.¹⁰⁰ Four million **smallholder farm households** produce three-quarters of the country's food. The key actors are women, who account for 75 per cent of the labour force in smallholder agriculture, manage 40 per cent of small farms and play the major role in food preparation and storage. Up to two-thirds of the female population in rural areas are subsistence farmers.¹⁰¹ Maize is the main staple crop in the country and the most important crop for food security.

Agriculture accounts for 26 per cent of Kenya's gross domestic product directly and another 27 per cent indirectly, and for 65 per cent of exports.¹⁰² Yet farmers face **massive challenges**. Kenya has a structural deficit in the production of several key foods, including maize, which heightens the risk for the millions of net food buyers in the country, which includes most smallholder farmers.¹⁰³ Their landholdings are small, productivity is low and most have low access to inputs, financial services and markets to sell any surplus produce. They are also dependent on increasingly erratic rainfall (less than 7 per cent of the cropped land is under irrigation). Extreme weather events such as droughts and floods have increased in frequency over the past few decades, further eroding livelihoods. Most rural roads are poor, while crop and livestock diseases, together with post-harvest losses, are significant. The country possesses insufficient strategic food reserves, an inadequate distribution system to move food from surplus to deficit areas and inadequate disaster preparedness and response systems.¹⁰⁴

Hunger remains deep and persistent. Around half the population, especially subsistence farmers and pastoralists, live in poverty and are unable to meet their daily nutritional requirements.¹⁰⁵ This produces devastating health problems - more than a third of children are stunted (low height for age) and one in 6 under-fives is underweight for their age.¹⁰⁶ Millions of Kenyans, especially those in food insecure regions of the arid north, coast and eastern provinces, are regularly fed by food aid. Over half of Kenya's 13 million urban dwellers live in informal settlements lacking basic services and many of them are unable to meet their food needs.¹⁰⁷

Studies suggest that **agriculture-led growth** in Kenya is likely to derive from increases in productivity in maize, livestock, traditional exports such as tea and coffee, pulses, oilseeds and horticultural crops. In some parts of Kenya, agricultural growth driven by cereals, notably maize, is likely to be most effective in reducing poverty.¹⁰⁸ The government estimates that average yields are well below potential, with yield gaps for crops ranging from 150 – 260 per cent.¹⁰⁹

Different strategies are needed in Kenya's ecologically distinct regions. In Kenya's *high rainfall areas*, which cover 11 per cent of the country, mainly in the west – and are home to 80 per cent of Kenyans - farmers grow the full range of crops available in the country, including cereals, pulses, fruits and vegetables and possess a range of livestock. In Kenya's *semi-arid areas*, which cover a fifth of the country, mainly in the south, pastoralism is common but rain-fed agriculture, encompassing a variety of crops, is also practised. In the arid lands, covering 70 per cent of the country in the north and east, the land is not suitable for rain-fed agriculture and pastoralism is the main source of livelihood. Therefore, in these latter dry lands, livestock products are likely to be key to agricultural growth. The latter regions, in particular, are subject to more frequent and more severe droughts and associated hunger, partly as a result of global climate change.¹¹⁰

The Kenyan government has produced some impressive **agriculture policy documents** and strategies that, on paper, go a long way to addressing the challenges faced by small farmers. The framework guiding the agriculture sector was previously the Strategy for Revitalising Agriculture, drawn up in 2004. This was revised into the **Agricultural Sector Development Strategy** (ASDS) covering 2010-2020, reflecting the aspirations of the government's broader Vision 2030 strategy. The government has also developed a Medium-Term Investment Plan (MTIP) for 2010-15 which springs from the ASDS and the compact with the Comprehensive Africa Agriculture Development Programme that the government signed in July 2010, which promotes alignment of agriculture policies across Africa. The government's key policy goals in the sector include raising agricultural productivity, developing irrigation, increasing the commercialisation of agriculture and improving the governance of sectoral institutions.¹¹¹

Nigeria

Smallholder farmers with less than 2 hectares produce over 90 per cent of Nigeria's food and agriculture employs 70 per cent of the population.¹¹² The predominant actors in Nigerian agriculture are women, who constitute 60–80 per cent of the agricultural labour force¹¹³ and are responsible for carrying out 50 per cent of animal husbandry related activities and 60 per cent of food processing.¹¹⁴ Around 16 per cent of households are women-headed.¹¹⁵ They produce both food and cash crops and have multiple and diverse roles on the farm, in the home and in the community. They work on their own plots and those of others, as unpaid or paid workers, employers and employees, and as wage-labourers in both on and off-farm enterprises.¹¹⁶ Yet their access to services is much lower than men's. Around 55 per cent of female-headed households are landless and a further 29 per cent own less than 1 hectare (compared to 33 and 26 per cent, respectively, for men).¹¹⁷

Nigeria is one of the world's largest producers of crude oil and has the second largest economy in Africa and one of the fastest growing economies in the world (7.2 percent in 2011).¹¹⁸ Yet this growth does not translate into an improved quality of life for most Nigerians. Around 54 per cent of the population live below the national **poverty line** (which is close to the US\$1 per day threshold)¹¹⁹ while the incidence of poverty rose by 64 per cent from 2004 to 2010. Some 70 per cent of Nigerians are **food insecure**¹²⁰ and malnutrition is widespread: around 42 per cent of children are stunted (low height for age) and 25 per cent are underweight.¹²¹

Despite oil, agriculture is the largest contributor to the nation's gross domestic product, contributing about 40 per cent. Yet the sector faces **massive challenges**. Smallholder farmers have very low access to extension services, credit and inputs. Around 38 per cent of farm households own no land while a further 25 per cent own one hectare or less.¹²² Typical farm sizes range from 0.5 ha in southern Nigeria to 4 hectares in the north. Only around 40,000 hectares are irrigated, which is less than 1 per cent of the land currently in

use. Though arable land in Nigeria is suitable for cultivating most types of crops, crop yields are far below their potential.¹²³ Nigeria records an average of just 4 tonnes of agricultural product per hectare, compared to 13-14 tonnes in other countries of similar climatic pattern. Thus most Nigerian farmers operate at the subsistence level, with their marketable surplus ranging only between 0-25 per cent of their output depending on the household size.¹²⁴ The country loses 15-40 per cent of its post-harvest output due to its inability to process most of the farm produce.¹²⁵

The impact of **climate change** on agriculture is also a major concern. Farmers in northern Nigeria face accelerated desertification due to limited rains and shrinking water sources; desert encroachment threatens around 35 per cent of Nigeria's landmass. Farmers in southern Nigeria face the late onset and early cessation of rains, shortened length of the rainy season and reduced amounts of rain while others experience flooding due to excessive rain.¹²⁶

The main crops grown include cassava, yam, cocoyam, ginger, sorghum, millet, rice, maize, beans, groundnut, and sweet potato. There is a particular need to boost the **productivity of crops** on which poor people depend for their livelihoods and food security. Studies suggest that, nationally, cereals are likely to be the largest source of poverty reduction - a 1 per cent increase in per capita income arising from cereals would lead to a 1 per cent fall in poverty.¹²⁷ In the central part of the country maize and yams have the highest potential to reduce poverty while cassava and yams have the highest potential in the humid forest zone in the south.¹²⁸

In recent years, the government has increased its attention on agriculture and developed a range of policies to increase productivity. The **Presidential Initiative** gives cassava, rice, vegetable oil, tree crops, livestock, fisheries and aquaculture special priority in resource allocation. Special emphasis is placed on agriculture in the overarching rural development programmes, the **National Economic Empowerment and Development Strategy** (NEEDS) and the **New Agricultural Policy Thrust** (NAP).¹²⁹

The government has also signed up to the Comprehensive African Agriculture Development Programme initiative. As part of this, the government produced in 2010 a **National Agricultural Investment Plan** covering 2011-14. This calls, among other things, for increasing food production and yields, reducing post-harvest losses by 50 per cent, increasing the proportion of irrigated land from 1 to 10 per cent and halving the proportion of households who are food insecure.¹³⁰ Federal and State Governments are promoting other programmes such as soft loans to farmers, a fertilizer subsidy programme, and food security and agricultural research programmes. Yet despite these policies, Nigeria's budgetary allocations and actual spending on agriculture are woefully inadequate to reduce poverty, especially on spending on the key services needed by small farmers.

Rwanda

Agriculture in Rwanda employs 89 per cent of households and contributes around 40 per cent of GDP. The sector is dominated by **women**, who comprise 53 per cent of the 11.7 million population and who are more likely to be subsistence farmers than men. Women contribute up to 70 per cent of all agricultural labour¹³¹ and do 80 per cent of the sowing, 65 per cent of food processing, 61 per cent of hoeing and 72 per cent of the storage and transportation of produce.¹³² Households headed by women comprise over a quarter of all households.¹³³ Women grow crops such as beans, maize, Irish potatoes, cassava, sorghum, sweet potatoes and wheat. Recent research conducted for ActionAid found that 51 per cent of women said they have less than **half an acre** of farmland. Some 73 per cent of farmers said they 'own' the land they farm (meaning ownership of family land in the traditional sense, without having formal land titles) while 23 per cent lease the land from the government.

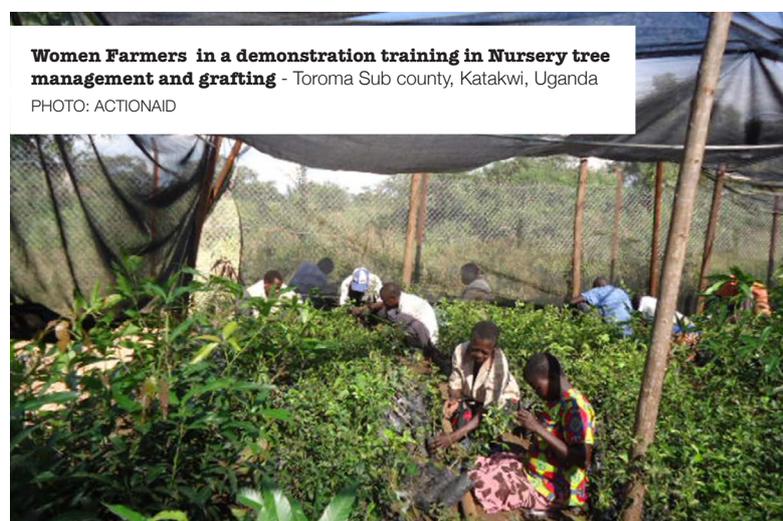
Land is scarce and declining in availability due to population growth – currently there is an average of one hectare for every nine Rwandans.¹³⁴ According to the Ministry of Agriculture and Animal Resources (MINAGRI) arable land constitutes around 52 per cent of the country, but 39 per cent of this arable land is on slopes, where farming exacerbates soil erosion. Some 75 per cent of the land area is highly degraded, one of the highest proportions in Africa.¹³⁵ Thus the available pastureland is of relatively low soil quality, resulting in intense utilization making it susceptible to further degradation and reduced productivity. Farmers face other constraints such as low access to services and inputs (though little hard data is available).

Rwanda's agriculture policy has been guided by the **Strategic Plan for the Transformation of Agriculture** (PSTA), with PSTA I running from 2004-2008 and PSTA II from 2008-12. MINAGRI has recently concluded a review of PSTA II to develop PSTA III which will guide sector activities to 2016. The **National Agricultural Policy** aims to increase farm productivity, promote diversification and increased incomes, enhance market access for farmers and promote the sustainable management of natural resources.

Uganda

Around 73 per cent of households in Uganda and the majority of the poor depend on agriculture for their livelihoods.¹³⁶ Uganda has around 3.9 million farming households with **smallholder farmers** dominating. It is estimated that 58 per cent of farms in Uganda have less than 1 hectare and that a further 38 per cent have less than 5 hectares, while only 4 per cent are large farms, with 5 hectares or more.¹³⁷ Over 60 per cent of households are **net food buyers** (purchasing more food, by value, than they sell) and only around 12 per cent are significant net sellers.¹³⁸ Farming is overwhelmingly focused on primary production. The proportion of Uganda's agricultural commodities and products which is processed is believed to be no more than 5 per cent.¹³⁹

Government figures state that most farmers (55 per cent) are **women** and that the agricultural sector employs a higher proportion of women (83 per cent) than men (71 per cent).¹⁴⁰ Women-headed households constitute 26 per cent of all households in rural Uganda and women are estimated to do 85 per cent of the planting and weeding, 55 per cent of land preparation and 98 per cent of the food processing. But women are widely discriminated against, notably in access to services and in land holding. A 2005/06 survey showed that men-headed households hold an average of twice the land size held by women-headed households.¹⁴¹



Despite recent impressive economic growth in Uganda, the 2012 *Poverty Status Report* shows that 8.4 million Ugandans (24 per cent) live below the national **poverty line** (in 2009/10). This is a decline from 34 per cent a decade earlier, but with high population growth, the actual number of poor Ugandans has barely decreased.¹⁴² Indeed, the number of people who are **food insecure** increased from 12 million in 1992 to 17.7 million in 2007.¹⁴³ The average intake of calories per person per day has improved from 2,066 kcal in 2002/03 to 2,190 kcal in 2005/06, but is still less than the World Health Organisation-recommended level of 2,300 calories per person per day.¹⁴⁴

Ugandan farmers face **numerous challenges**. Yields, use of technology and access to services are all low. Per capita agricultural production has been declining in recent years.¹⁴⁵ Increases in crop production are mainly due to expansion of the area under cultivation rather than increased productivity.¹⁴⁶ Some 90 per cent of agriculture production and post-harvest operations rely on hand-held tools, with only 8 per cent using draught animal power and 2 per cent tractors.¹⁴⁷

Uganda is increasingly affected by **climate change**. During 2010/11, poor rainfall and drought contributed to a decline of 16 per cent in cash crop production (such as coffee, tea and cotton), reducing the growth in agricultural output to 0.9 per cent compared to 2.4 per cent in the previous year.¹⁴⁸ In 2011/12, unfavourable weather conditions also led to a loss of planted acreage and a drop in yields.¹⁴⁹

Despite major challenges, small farmers, and women small farmers, have **considerable potential** to eradicate food insecurity and increase their incomes, helping Uganda on a path to sustained development. For example, a recent World Bank analysis contends that 'smaller farms in Uganda appear to use limited resources more efficiently than larger farms, in contrast to popular beliefs in the country' and that 'smaller farmers are more productive and profitable than large farms because of lower supervision costs and higher incentives for family labour'.¹⁵⁰

The government's **Agriculture Sector Development Strategy and Investment Plan**, 2010/11–2014/15 (DSIP), launched in March 2010, is the flagship programme for improving agriculture in Uganda. It is intended to address four main challenges facing the agricultural sector: low production and productivity; low value addition to agricultural produce and limited market access; weak implementation of agricultural laws and policies; and weak public agricultural institutions.¹⁵¹ The DSIP provides 'a "roadmap" to guide government, the private sector, farmers organisations, other civil society stakeholders and Development Partners to make public interventions that will help meet the key objectives of growth, food security and poverty reduction in the agricultural sector'.¹⁵²

Zambia

Agriculture employs two-thirds of Zambia's population of 13 million.¹⁵³ Half of all Zambians live in around 1.3 million¹⁵⁴ **smallholder farming households** with an average land holding of just 1.2 hectares.¹⁵⁵ Around 65 per cent of the poor in rural areas are subsistence farmers.¹⁵⁶ **Women** are the main actors, comprising around 65 per cent of smallholder farmers.¹⁵⁷ They are the main producers of food and manage, either independently or jointly, around 60 per cent of the land under maize production.¹⁵⁸ One in five farming households is headed by women, but due to lack of access to inputs and support services they presently achieve only two-thirds of the production of male-headed households and own half the number of livestock.¹⁵⁹ The average farm size of a female-headed household is 0.6 ha smaller than those headed by men (thus around half the size for an average small farmer).¹⁶⁰

Maize, the dominant, staple crop, is grown by 70 per cent of all farming households.¹⁶¹ Yet around 70 per cent of all maize farmers do not sell maize at all and only 5 per cent are net sellers (selling more than they buy), meaning they are made worse off by maize price rises.¹⁶² Most farmers who are net buyers of food spend around 80 per cent of their incomes on food.¹⁶³ Other important crops grown include cassava, groundnuts, sorghum, beans, cotton and sugar.

Poverty remains deep in Zambia. The national poverty rate fell only marginally, from 69 per cent to 64 per cent, during 1996 - 2006 (the latest survey). Rural poverty fell from 82 to 78 per cent during 1996 - 2004 but then rose again to 80 per cent in 2006.¹⁶⁴ On its current growth path, Zambia will not meet the first Millennium Development Goal of halving poverty by the target year of 2015. The percentage of people living in poverty is projected to be 58 per cent by 2015 and in rural areas as high as 71 per cent. With an expanding population, the absolute number of poor people will increase by 2015.¹⁶⁵

Life expectancy in Zambia is a mere 51 years, partly reflecting the huge toll of HIV/AIDS.¹⁶⁶ Figures from the FAO show that 43 per cent of Zambians are **undernourished**, a proportion which has grown since 1990 and is the highest in southern Africa.¹⁶⁷ Especially during the peak hunger season – September to February – most families reduce their food intake, leading to micro-nutrient deficiencies and stunting (low height for age).

Zambia has considerable agricultural potential, with only 15 per cent of its arable land currently cultivated and with good water endowments. Yet small farmers face **numerous problems**, including inadequate access to markets and credit services, low soil fertility, disease and pest attacks on crops and livestock, poor access to farm technologies, dependence on rain (only 3 per cent of arable land is irrigated) and vulnerability to drought. Aside from recent bumper harvests, the agriculture sector has been stagnating over the past 20 years, with only marginal productivity increases for most crops, including maize, and low agricultural investments by government.¹⁶⁸

Agriculture-led growth is likely to provide the largest benefits for Zambia's poor and the wider economy – more so than growth led by copper, Zambia's key mineral export.¹⁶⁹ Indeed, the government admits that although economic growth has averaged 5 per cent per year since 1999, this 'has had little positive effect on the income levels of the poor' since economic growth can be attributed mainly to mining, construction and manufacturing – where few of the poor work.¹⁷⁰ Agriculture currently contributes only 12 per cent of Zambia's GDP despite employing two-thirds of the population.¹⁷¹ This is a relatively small contribution to the national economy compared to other African countries. Zambia's **Sixth National Development Plan, 2011-15**, drawn up in January 2011, states that agriculture is 'the *priority* sector in achieving sustainable economic growth and reducing poverty in Zambia'.¹⁷²

2. Increasing spending on agriculture

There is broad international consensus that African countries invest too little in agriculture. Indeed, sub-Saharan Africa is only just emerging from three decades of decline in agriculture spending. Yet, ten years after the Maputo Declaration, only seven of sub-Saharan Africa's 49 countries - Ethiopia, Niger, Mali, Malawi, Burkina Faso, Senegal and Guinea - have consistently reached the target of spending 10 per cent of their national budgets on agriculture.¹⁷³

Africa's small allocation to agriculture flies in the face of the fact that most of its citizens are farmers. Africa spends more on the military on average than on agriculture.¹⁷⁴ African public spending on agriculture per worker declined from US\$152 in 1980-89 to just US\$45 in 2005-07 (in constant dollars). By contrast, every other region of the world witnessed increases in such spending over the same period.¹⁷⁵

The result of this low spending is that only a fraction of Africa's farmers has access to critical services such as extension support or credit, while the rural infrastructure and access to markets is often poor. All of these factors contribute to low productivity. Much higher levels of public investment are needed, *combined with* efficient ways to deliver services to farmers.

Box 2: The case for prioritising agriculture spending

Public agriculture spending is critical for promoting economic growth and the reduction of poverty in developing countries. In countries where agriculture contributes a large proportion of national income, the case for prioritising agriculture is clear:

- GDP growth originating in agriculture is much more effective in reducing poverty in low income countries than growth in other sectors. Some studies say five times more effective (and, in sub-Saharan Africa, 11 times more effective)¹⁷⁶ while other studies suggest 3.2 times more effective.¹⁷⁷
- A 1 per cent per year increase in agricultural growth, on average, leads to a 2.7 per cent increase in the income of the people in the lowest three deciles in developing countries.¹⁷⁸
- Studies suggest that for every 10 per cent increase in farm yields, poverty falls by 7 per cent in Africa and 5 per cent in Asia.¹⁷⁹
- The two countries that have reduced rural poverty the most in recent decades – China and Vietnam – did so by empowering smallholder farmers with tiny plots of land. In China, progress was made by around 200 million small farmers with an average holding of just 0.65 hectares.¹⁸⁰ In Vietnam, the average landholding was around 0.46 ha.¹⁸¹

2.1 The seven countries spending on agriculture

Table 1 below outlines figures for the seven countries' budget allocations to agriculture. Some figures are from the Regional Strategic Analysis and Knowledge Support System (ReSAKSS), managed by the US-based International Food Policy Research Institute. None of the seven countries under review has consistently achieved the 10 per cent spending target. Only two countries - **Burundi** and **Ghana** – have done so in a single year, according to government figures. Figures from ReSAKSS suggest that **Zambia** has surpassed 10 per cent in several years. All figures suggest that spending in **Uganda** and **Kenya** is low.

Table 5: Budget allocations to agriculture

	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13
Burundi							
Burundi I – budget of Ministry of Agriculture and Livestock (MINAGRIE) ¹⁸²	4.9	6.4	2.5	5.0	10.9	..	..
Burundi II – Resakss ¹⁸³	4.3	5.8	7.7	10.3	..	..	..
Ghana							
Ghana I – All allocations to agriculture ¹⁸⁴	9.9	10.2	9.0	..	..	..	..
Ghana II – Resakss ¹⁸⁵	9.9	10.2	9.0	9.1	..	..	..
Ghana III – World Bank ¹⁸⁶ (actual spending)	9.1	9.9	10.3	16.0	11.2	..	..
Kenya							
Kenya I - All allocations to agriculture ¹⁸⁷	..	3.4	2.9	3.7	5.9	6.2	4.4
Kenya II – Resakss ¹⁸⁸	4.9	3.2	3.9	4.6			
Nigeria							
Nigeria I – allocation to Federal Government ¹⁸⁹	1.7	4.1	6.2	3.6	1.9	1.7	1.7
Nigeria II – Resakss ¹⁹⁰	5.2	4.5	5.3	5.7	..	..	..
Rwanda							
Rwanda I – All allocations to agriculture ¹⁹¹	..	..	..	..	6.7	10.02	..
Rwanda I – Resakss ¹⁹²	5.5	5.6	6.4	6.6	..	..	..

Uganda							
Uganda I - All allocations to agriculture (Government budget, March 2009)¹⁹³	3.8	4.3	3.8	4.4	4.6	4.8	4.9
Uganda II – All allocations to agriculture (Government budget, June 2012)¹⁹⁴	..	..	..	..	..	4.5	3.4
Uganda III – Resakss¹⁹⁵	5.0	3.2	3.8	3.9	..	..	..
Zambia							
Zambia I – Allocation to MACO and MOLD¹⁹⁶, according to Budget speeches¹⁹⁷	..	..	7.2	6.8	6.0	6.1	5.8
Zambia II – Resakss¹⁹⁸	13.2	12.5	9.3	10.2	..	..	..
Zambia III – all allocations to agriculture (Government budget 'Yellow Book')¹⁹⁹	8.8	5.8	8.2	7.3	6.7	..	..

Burundi

The Burundian government's annual budget allocation to the Ministry of Agriculture and Livestock (MINAGRIE) increased in 2011 to 10.9 per cent of the entire budget, a doubling over the previous year. Our analysis is that this was largely the result of significant and longstanding pressure from Parliament and civil society, which has made the government realise the importance of agriculture spending. The government's future spending plans also involve high levels of spending on agriculture.²⁰⁰

Ghana

Ghana has allocated 9-10 per cent of its national budget to agriculture in recent years, a relatively high amount. Actual spending on agriculture, as a proportion of total national expenditure, averaged 11.3 per cent in the five years 2007-11.²⁰¹ However, one recent study noted that in order to achieve annual agricultural growth of 6 per cent (the CAADP target), Ghana needed to devote around 14 per cent of government spending to agriculture, compared to the 8.5 per cent judged to be prevailing.²⁰² Investment in agriculture is critical for economic growth – studies show that for every marginal cedi invested in agriculture in Ghana, GH¢16.8 is returned.²⁰³ The government's Medium Term Agriculture Sector Investment Plan (METASIP) commits it to spending 'at least 10 per cent' of the budget on agriculture up to 2015.²⁰⁴ Agriculture sector spending is heavily dependent on donors, which funded 53 per cent of MOFA's (the Ministry of Food and Agriculture) entire budget in 2011, accounting for nearly all the funds allocated for investments as opposed to recurrent expenditures.²⁰⁵

Kenya

Kenya has allocated an average of 4.6 per cent of its national budget to agriculture in the five years 2009-13, less than half way to the Maputo target. The most recent Medium Term Expenditure Framework states that agriculture receives 'inadequate funding' and that expenditure 'is still below the level of resources required to achieve the goals of the sector'.²⁰⁶ In terms of future spending levels, the Medium Term Investment Plan states that Kenya is committed to increasing spending on agriculture to 8 per cent of the budget by 2020.²⁰⁷ Thus 17 years after making the 10 per cent commitment, the government will still not have achieved the target.

The International Food Policy Research Institute calculates that increasing the share of government spending to 10 per cent in Kenya, involving substantial investments in irrigation and research/extension, would lift 1.6 million people above the poverty line and grow agriculture by 5.3 per cent per year during 2006-15 (compared to around 3 per cent currently).²⁰⁸

Box 3: Low spending means few services - The case of William Mole Kasotot

'If our group could be assisted with a "money maker" – irrigation equipment, research and extension services, we will be able to bid farewell to hunger and malnutrition in this area'.

Farmers interviewed by ActionAid often lamented the government's failure to end hunger. Indeed, some farmers interviewed in Kenya believe that government policies are making matters worse, a view attributed to rising food prices and the low prices for agricultural produce and livestock paid by government to pastoralists. In the drought prone arid and semi-arid lands (ASALs), herders and farmers say hunger is increasing as men and their livestock migrate in search of pasture, leaving hungry women, children and the old behind. Farmers in the ASAL area of West Pokot district, Kongelai division, believe their capacity to become food sufficient is hampered by the lack of government services, especially extension support.

One farmer in the district, William Mole Kasotot, a 50 year old father of nine children in Simotwa village, started crop and vegetable farming in 1990. Before 1990, William, like most other farmers in the area, relied mostly on keeping local breeds of cows (zebu) and goats. He had 30 cows and 70 goats, but some had to be slaughtered for the family and others were sold. Many died due to the prolonged drought and famine that hit the community. William says: 'It rained here last towards the end of April and early May 2009. I planted maize seeds but when the crop was just one-meter high, the rains failed completely and the entire maize crop on my farm died'. During periods of famine and drought, William and other farmers are forced to rely on food aid and reduce the number of meals the family eats.

William also says: 'Since 1990 I have received no support in the form of extension, input subsidy, training or capacity building on any component of crop production from Government. All you see here [drawing attention to his plot of vegetables] is out of our own struggles to be able to feed ourselves. But this is not enough, if our group could be assisted with a "money maker", like irrigation equipment, research and extension services, we will be able to bid farewell to hunger and malnutrition in this area'. He adds: 'Whenever rains fail I produce kales, cow peas, pumpkin, onions, bananas and some sugarcane through irrigation using buckets to ferry water from the river. Since with irrigation I am able to produce food throughout the year, I sell a proportion of the vegetables to buy maize and meet other needs while the rest is consumed at home'.

Nigeria

Nigeria spends very little on agriculture. In the five years 2007-11, the Federal Government has allocated an average of just 3.5 per cent of the national budget to agriculture. The figures for the states are also low, varying from 2.0-5.9 per cent. Not only is spending low, it is also extremely erratic. Federal Government spending has ranged from 1.7 per cent to 6.2 per cent during 2007-11. The reason is largely Nigeria's dependence on oil, which has produced an historical trend of unstable government revenues and expenditures, since oil revenues follow the unpredictable fluctuations in world oil prices.

Nigeria's agriculture spending is clearly insufficient to address poverty. The International Food Policy Research Institute has estimated that the government would have to spend 18 per cent of its budget on agriculture by 2017 to reach 'accelerated agricultural growth' (around 9.5 per cent a year) in order to substantially reduce poverty.²⁰⁹

Rwanda

Rwanda allocated an average of 6.0 per cent of the national budget to agriculture during 2006-10.²¹⁰ In 2010/11, the Ministry of Agriculture (MINAGRI) was allocated 6.7 per cent of the government budget.²¹¹ PSTA II (The Strategic Plan for the Transformation of Agriculture) calls for agriculture to receive an average of only 6.9 per cent of the national budget over its five year plan period.²¹²

A 2010 study by the International Food Policy Research Institute – using figures at a time when the government was allocating 3-4 per cent to agriculture – said the government needed to allocate between 9 and 18 per cent to agriculture by 2015 to reach the CAADP target of 6 per cent annual growth.²¹³ Studies in Rwanda suggest that:

- One dollar of public investment in agricultural staples generates US\$3.6 of increased agricultural GDP.²¹⁴
- A 1 per cent growth in agricultural GDP leads to a 1.16 – 1.18 per cent reduction in national poverty.²¹⁵

Uganda

Uganda has been allocating just 3-5 per cent of its budget to agriculture in recent years. The Medium Term Expenditure Framework envisages an allocation to agriculture varying from 3.3–6.0 per cent of the national budget in the six years from 2011-2017. But the average allocation to agriculture to date has been just 4.1 per cent, less than half way to the Maputo target.²¹⁶

If Uganda were to achieve 6 per cent annual agricultural growth, an additional 2.9 million Ugandans would be lifted above the poverty line by 2015.²¹⁷ But to achieve this growth rate, the International Food Policy Research Institute estimated in a 2008 study that Uganda must spend at least 14 per cent of its budget on agriculture by 2015.²¹⁸ A 2009 government publication stated that it needed to spend 'at least 11.3 per cent' on agriculture and that resources must be invested more efficiently. Without improvements, spending would need to reach 20 per cent of the budget.²¹⁹ Uganda is clearly a long way off meeting these targets.



Women farmer monitors from Gogonyo - Palisa district petition their Members of Parliament to increased budget allocation to agriculture
PHOTO: ACTIONAID

Zambia

Zambia has allocated an average of 6.4 per cent of its budget to agriculture in the five years 2009-13, according to government figures (although Resakss gives higher figures). It is a proportion that has been falling, not rising. However, it should be noted that actual spending on agriculture is often higher than the budgeted amount due to over-spending on the fertilizer subsidy scheme (the Farmer Input Support Programme) and on strategic food reserves (the Food Reserve Agency).²²⁰ Nevertheless, the Zambian government has repeatedly broken its promises on agriculture spending. Zambia's Sixth National Development Plan (SNDP), 2011-15, of January 2011, states that agriculture is 'the priority sector in achieving sustainable economic growth and reducing poverty in Zambia' and concedes that the sector has received 'low investment'.²²¹ Yet the allocation to agriculture has not increased since the SNDP was agreed.

Studies suggest that if Zambia were to achieve the CAADP target of 6 per cent annual agricultural growth up to 2015, the proportion of people in poverty would fall by 6 per cent, lifting 780,000 people above the poverty line. Food security would also improve, increasing per capita cereal consumption from 81 kg to 93 kg.²²² Achieving 6 per cent growth means significantly increasing agriculture spending, alongside major efficiency improvements. A 2009 estimate is that Zambia needs to increase agriculture expenditure by 17-26 per cent per year to achieve the target. If Zambia had spent the middle point of these figures in 2010, it would have amounted to around 10 per cent of the national budget.²²³

Box 4: 'Agriculture-supportive' spending

The spending on agriculture analysed here does not include expenditure on areas that are sometimes called 'agriculture-supportive' (areas that are 'for' agriculture but not 'in' agriculture), such as rural education and social protection policies such as food aid. These policies can benefit farmers but are not usually counted as agriculture spending. When these areas of spending are factored in, government spending is much higher.

The FAO's project – Monitoring Food and Agricultural Policies (MAFAP) – includes such broad spending in its budget analysis. Using these broader criteria, MAFAP estimates that Uganda spent 11 per cent of its budget on food and agriculture in 2010/11 (compared to 4.6 per cent using the government figures cited above). Over half of this spending was 'agriculture-supportive', mainly on rural health and rural infrastructure.²²⁴ In Kenya, MAFAP's analysis is that food and agriculture spending averaged 6.3 per cent of the government budget during 2006-11 (compared to 4.6 per cent reported by government figures).²²⁵

2.2 How to raise more resources for agriculture

Governments have many options for increasing the resources they spend on agriculture.

One concerns *military spending*. Every year, **Zambia** spends more on defence than on agriculture. **Ghana** allocated twice as much to the Ministry of Defence as to the Ministry of Food and Agriculture in 2013 (although MOFA represents only part of the whole agriculture budget). Like Zambia, the country is not at war and faces no likely external military threat.²²⁶ **Uganda's** national budget allocation to security is more than double its allocation to agriculture for every year except one from 2011-16.²²⁷ **Nigeria's** allocation to defence is projected to be a massive four times larger than its allocation to agriculture and rural development in 2013.²²⁸

There are also various options concerning *tax*. One option is to *raise taxes on companies* and allocate a proportion of the increased revenues to agriculture. Both **Zambia** (copper) and **Ghana** (gold) are important mineral producers, but provide companies with low tax rates. Zambia could re-introduce the windfall tax (i.e. levied when mining company profits are excessive) on mining companies that was repealed in 2009. Had this windfall tax remained in force, hundreds of billions of Kwacha would already have accrued to the government.²²⁹ In Ghana, one estimate is that low mining tax rates cost the government US\$68 million every year in lost revenues.²³⁰ Ghana could also earmark to agriculture a proportion of the revenues likely to flow from its newly-discovered oil deposits. Annual government revenues from these could be up to US\$1.6 billion.²³¹



Former Minister for Karamoja chatting with smallholder women farmers from Napak district after the national dialogue on agriculture, in Uganda
PHOTO: ACTIONAID

Governments could also reduce, or abolish, the *massive tax exemptions* (such as corporate income tax holidays) they give to companies. Recent research by ActionAid and the Tax Justice Network Africa found that four countries in East Africa - **Kenya, Uganda, Tanzania** and **Rwanda** - lose up to US\$2.8 billion a year from all tax incentives and exemptions their governments provide.²³² This is much more than is spent on agriculture. The African Development Bank estimates that losses from tax incentives provided by the **Ugandan** government to companies and individuals are 'at least' 2 per cent of GDP.²³³ This amounts to more than Uganda's entire agriculture budget.

A further option is to clamp down on '*illicit financial flows*', mainly meaning tax evasion by transnational corporations, which cost Africa an average of US\$60 billion a year during 2005-10.²³⁴ One estimate is that Ghana lost revenues of €30-51 million per year during 2005-07 from false invoicing and transfer pricing by transnational corporations.²³⁵ Recent ActionAid research on the transnational brewing company, SABMiller, shows that the company's Accra Brewery has paid no corporate income in the past two years in Ghana, but has transferred millions of pounds to tax havens.²³⁶

Governments could also raise more revenues, and reduce inequality, by *taxing the rich more*. In **Kenya**, for example, a 2004 study showed that the wealthiest 10 per cent of Kenyans controlled 42 per cent of wealth and that the bottom 10 per cent accounted for less than 1 per cent of wealth – figures that if anything have diverged even more since then.²³⁷

Further options are to reduce the amount governments spend on general *public administration* and tackle revenue losses from corruption, which can also be significant in agriculture budgets (see section 3.4).

3. Improving the quality of agriculture spending

Increases in spending on agriculture need to be matched by improvements in the quality of that spending. Studies by the International Food Policy Research Institute suggest that blanket increases in expenditure do not generate large gains. Rather, it is only when agriculture spending promotes productive programmes that it produces results.²³⁸ Increases in the agriculture budget need to be made alongside improvements in the efficiency of ministries in the agriculture sector.

Our research identifies four main sets of problems with the way that Ministries of Agriculture currently work:

3.1 Capacity and coordination

Agriculture ministries often lack adequate capacity to implement policies, such as staff with appropriate skills or mechanisms to ensure coordination within and across departments. In **Burundi**, for example, the agriculture sector suffers from an absence of competent advisors, policy makers and researchers, while planning and coordination capacity is very weak. At the same time, few organisations are well-placed to monitor government policies and hold it accountable for its commitments. Capacity problems in **Zambia's** Ministry of Agriculture and Cooperatives²³⁹ include poor quality or non-existent data and knowledge systems that could improve planning or provide convincing arguments to the Minister of Finance to increase the agriculture budget, and insufficient capacity to undertake public expenditure reviews and policy analysis.²⁴⁰ Capacity at the district level in Zambia is also often weak and there are few monitoring indicators to assess the results of spending at the local level.²⁴¹

Larger countries with bigger agriculture ministries, such as **Uganda**, still suffer from inadequate staff training and poor quality of equipment (see Box 5).

Lack of capacity and poor coordination often results in the inability to spend (often already low) budgets. **Kenya's** disbursement rate for all agriculture spending averaged 80 per cent during 2009/10 – 2011/12,



Martha Mwangangi, 36 at a group farm in Mwingi, Kitui County, Kenya
PHOTO: ACTIONAID

Box 5: Is Uganda adequately addressing capacity constraints?

Lack of sufficient staff and equipment is one of the biggest challenges faced by Uganda's main agriculture department – the Ministry of Agriculture, Animal Industry and Food (MAAIF). The government's Agriculture Sector Development Strategy and Investment Plan (DSIP) commit it to increase the efficiency of the MAAIF and to ensure that its headquarters and District office are sufficiently equipped. The DSIP recognises that: 'Very little systematic training has taken place in recent years. Neither has there been much systematic supervision. There have been no programmes to promote career development and without them it is very hard for MAAIF to hold onto talented individuals or to ensure there is replenishment of the professionals who do leave.'²⁴²

To address these issues, the MAAIF intends to develop a capacity building programme that will capture skills and knowledge gaps and career development needs, identify the institutions in the sector with the most urgent capacity building needs and identify partners (service providers) to assist with capacity building.²⁴³

Yet three years into the DSIP, capacity remains a major problem. Out of a total of 683 posts in the MAAIF, only 47 per cent are filled and 6 per cent are approved for recruitment, meaning that even after recruitment is completed the MAAIF will be operating with only 53 per cent of the posts approved for implementation of the DSIP. These posts are not filled because there is insufficient budget to do so. Thus the lack of sufficient resources being allocated to agriculture is compounding the problem of lack of sufficient capacity and virtually ensuring that the commitments set out in the DSIP cannot be fully met.

according to government figures.²⁴⁵ The government blames this on delayed disbursements from donors, cumbersome international procurement procedures and lack of data on funds expended by donors on behalf of government²⁴⁶ but internal inefficiencies are also partly responsible.

Although **Nigeria's** budget allocation to agriculture is already very low, not all of it is spent. In the five years 2007-11, Kwara state spent an average of only 56 per cent of its agriculture budget, while in Ondo only 68 per cent of the budget was spent. In the case of the Federal Government, the problem differed. In this instance, actual spending was much higher than the budget, accounting for 172 per cent of the original budget allocated during 2007-11. The Federal Government has long spent money off-budget as a result of poor planning and weak budgetary control.²⁴⁷

In **Ghana**, 92 per cent of the budget allocation was spent during 2005-11.²⁴⁸ However, the evidence suggests that a considerable proportion of the investment funds (i.e. spending on operations, as opposed to recurrent costs) allocated to the Ministry of Food and Agriculture (MOFA) and other ministries remains unspent each year. There is a particular problem in the districts.²⁴⁹ In the 2011 budget speech, the government noted that 'unfortunately, a large part of the financial resources provided by development partners remain unutilised'.²⁵⁰ It put down this slow disbursement in donor funds to inadequate matching funds for projects, non-adherence to disbursement procedures, poor management and supervision of projects and ineffective reporting systems. The Ghanaian government says it is taking steps to address the disbursement problem by, for example, providing adequate counterpart funds, improving monitoring and providing training for staff on project management and procurement guidelines.²⁵¹

Box 6: Ghana's Ministry of Food and Agriculture

Ghana has a relatively efficient and skilled Ministry of Food and Agriculture which has developed impressive policy strategies. Yet a recent public expenditure review of MOFA highlights numerous internal challenges, including the need to adopt a more consultative and transparent management and leadership style, a lack of proper documentation and information sharing, the questionable reliability of data collected by MOFA and little emphasis on linking activities to outcomes. The study also notes that 'meetings and travel seem to take an inordinate share of the time of senior managers'.²⁵² MOFA officials said in personal interviews that many of these challenges are being addressed.²⁵³

3.2 Lack of resources for operations

Agriculture budgets often lack funds for operations (i.e. money spent on actual projects) because too much of the budget goes to recurrent costs such as salaries.

- In **Kenya**, salaries amounted to 27 per cent of total agriculture spending in 2010/11.²⁵⁴ In some agriculture sector ministries the proportion is much higher – a massive 52 per cent in the Ministry of Livestock Development during 2006/07–2008/09, for example.²⁵⁵ Within the Ministry of Agriculture there are an excessive number of administrative and support staff – 2,272 for just 5,316 technical staff.²⁵⁶
- In **Uganda**, around 23 per cent of the MAAIF budget went on administration costs in 2010/11.²⁵⁷
- In **Ghana**, around one third of MOFA's staff of 6,603 (in 2009) were administrative staff and secretaries.²⁵⁸ One MOFA official interviewed by ActionAid estimates that barely half of these staff are productive and are simply being kept in employment. In the 2011 budget allocation to MOFA of GH¢ 221 million, GH¢ 64 million (29 per cent) was for salaries and administration.²⁶⁰
- In **Zambia**, 25 per cent of the Ministry of Agriculture and Cooperatives' 2011 budget went to personal emoluments (mainly salaries) and recurrent departmental charges.²⁶¹ A government report notes that there is 'significant resource wastage and misapplication on personnel-related expenditure such as allowances at the expense of real investments'.²⁶²

The degree to which budgets are centralised, and spent largely at headquarters in capital cities, also varies strongly. **Zambia's** MACO budget is highly centralized. Around 85 per cent is allocated to headquarters in Lusaka, leaving only around 15 per cent to be spent by the provincial and district coordination offices around the country.²⁶³ By contrast, spending by **Ghana's** MOFA is significantly decentralised. Of its 2011 budget, the 10 regional agricultural development units were allocated 71 per cent of the budget. Most of this allocation goes to the regional directorates; the rest is allocated to the 170 individual districts.²⁶⁴

3.3 Mismatch between plan and spending

Countries such as **Zambia** and **Uganda**, in particular, often suffer from a mismatch between the priority areas identified in government policy plans and actual budget allocations (or disbursements). This means that budgets are not actually spent where governments say they will spend them. In **Uganda**, the MAAIF itself has described this as a ‘considerable mismatch’.²⁶⁵ Indeed, Uganda’s Agriculture Sector Development Strategy and Investment Plan (DSIP) have been significantly under-funded since its inception. In the 2010 DSIP strategy document, the budget was presented in two forms: the ‘ideal’ budget and the budget related to the Medium Term Expenditure Framework (MTEF). The ‘ideal budget’ totalled Shs 2.7 trillion over five years, and called for an allocation of Shs 457 billion for 2010/11. Yet the MTEF budget allocation in the first year of the DSIP was only Shs 342 billion – 75 per cent of the required amount.²⁶⁶

In **Zambia**, this mismatch makes for unpredictable policies and hinders planning by actors in the agricultural sector, not least farmers. A government mid-term review of the Fifth National Development Plan (the FNDP) refers to the ‘huge gulf between what was budgeted for in the FNDP and the actual expenditure, revealing clear indications that the Plan provided very little guidance to Government’s expenditure pattern’.²⁶⁷ Indeed, the Zambian government at times appears to speak with one voice to donors – telling them what they want to hear – and another to its citizens – giving them what it believes they want. For example, the FNDP stated that the government would ‘focus on providing public goods’ such as infrastructure, research and extension and pare back and then phase out spending on the two big subsidy programmes, the Farm Input Subsidy Programme and the Food Reserve Agency.²⁶⁸ Yet, ever since the FNDP began to be implemented, in 2006, public goods spending has been dwarfed by continued support to these subsidy programmes (which might work, but only if implemented well).

3.4 Corruption

Corruption is a problem that also besets agriculture sectors. In **Kenya**, the Ministry of Agriculture’s tagline (on its website) states that it is a ‘corruption free zone’.²⁶⁹ Yet a senior agriculture researcher in a leading public policy institute estimates that 20-30 per cent of the government’s agriculture budget goes missing.²⁷⁰ A senior civil servant told ActionAid researchers that there is ‘widespread pilferage’ compounding the ‘gross inefficiencies’ in the agriculture sector ministries.²⁷¹ The greatest avenues for corruption are during the procurement and supply of goods and services and at the point of service delivery.²⁷²

In **Uganda**, one MP estimates that perhaps 20 per cent of the agriculture budget goes missing.²⁷³ Other key informants estimate that perhaps even over half the budget is lost.²⁷⁴ A 2009 analysis of government agriculture projects by the Economic Policy Research Centre (EPRC) in Kampala revealed ‘leakages’ of project funds varying from 4 to 69 per cent.²⁷⁵ In the EPRC’s study of funds and inputs transferred from central government to eight districts around the country, less than 10 per cent of livestock intended for use in the districts were actually provided. Four districts spent nearly all the funds officially allocated to them, but three districts spent less than 30 per cent.²⁷⁶

Corruption is also widely believed to be pervasive across **Zambia’s** agriculture budget.²⁷⁷ One reason for cutting the agriculture budget in the past was that there was so much leakage of funds. As the NGO umbrella group, Civil Society for Poverty Reduction, notes in its annual budget analysis, simply increasing resources to poverty reduction programmes, including agriculture, will not by itself translate into improved services due to such leakage of funds. Thus increasing investments in agriculture must be accompanied by reduced corruption and increased efficiencies in the agriculture and other ministries.

4. Supporting women farmers

African agriculture is dominated by women who constitute most farmers and produce and manage most of the continent’s food (see Table 2). Despite this fact, women farmers have been largely ignored by governments. In agriculture budgets, women are largely invisible; some projects benefit women farmers but there are almost no budget lines specifically targeting them.²⁷⁹

Major investments are needed in women farmers, but not only for equity reasons. It is estimated that even if women simply had the same access to productive resources such as land and seed as men, they could increase yields on their farms by 25-30 per cent; this would raise agricultural output in developing countries by 2.5-4.0 per cent and reduce the number of hungry people in the world by 12–17 per cent.²⁸⁰

Table 6: Role of women in 7 African countries

	Importance of women in farming
Burundi	Women account for 55 per cent of the workforce ²⁸¹ and do 70 per cent of farm work. ²⁸²
Ghana	Women constitute over half of the agricultural labour force and produce around 70 per cent of the country’s food. ²⁸³
Kenya	Women account for 75 per cent of the labour force in small-scale agriculture, manage 40 per cent of small farms and play the major role in food preparation and storage. ²⁸⁴
Nigeria	Women constitute 60–80 per cent of the agricultural labour force and are responsible for carrying out 50 per cent of animal husbandry related activities and 60 per cent of food processing. ²⁸⁶
Rwanda	Women contribute up to 70 per cent of agricultural labour ²⁸⁷ and do 80 per cent of the sowing, 65 per cent of food processing, 61 per cent of hoeing and 72 per cent of the storage and transportation of produce. ²⁸⁸
Uganda	Women constitute 55 per cent of farmers. ²⁸⁹ They head 26 per cent of households in rural Uganda and do 85 per cent of the planting and weeding, 55 per cent of land preparation and 98 per cent of the food processing. ²⁹⁰
Zambia	Women comprise around 65 per cent of smallholder farmers. ²⁹¹ They are the main producers of food and manage, either independently or jointly, around 60 per cent of the land under maize production. ²⁹²

Women farmers face much greater challenges in farming than men (See Box 7). Crucially, many agriculture policies need to be different to reach women, since the needs of women farmers often differ from those of men. In one survey in **Uganda**, for example, male farmers said the biggest barriers to increasing farm production were transport and lack of access to markets and credit. But women mentioned the time needed to look after their families, prepare food and work on their husbands’ gardens.²⁹³ Thus the policy implications for supporting men and women farmers can be completely different (See Box 7).

Most importantly, ActionAid believes that women need to be explicitly targeted in extension services, subsidy programmes, credit schemes and agricultural research - otherwise, these programmes will tend to benefit men only.

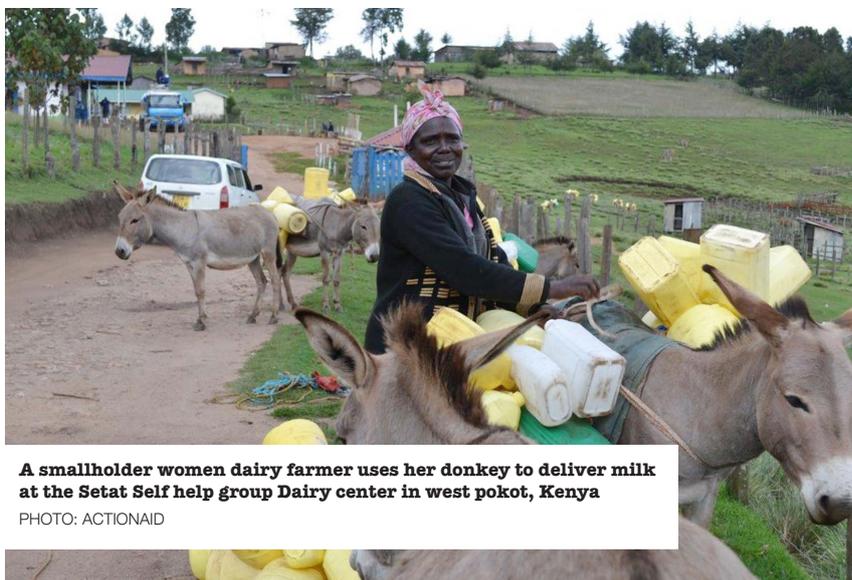
Box 7: Greater challenges for women farmers

Women farmers face more obstacles than men, and often different ones.²⁹⁴ Women farmers tend to have:

- Little or no access to credit, which is often constrained by a lack of collateral (usually land), being seen as too high-risk or being excluded from cooperatives.
- Smaller and less fertile land holdings than men, while actual rights over land are often restricted by national laws and socio-cultural structures.
- Less access to extension services, which tend to be tailored to men and commercial crops rather than staples principally grown by women; only around 15 per cent of the world's extension officers are women, much less in some individual countries.
- A greater domestic workload than men – involving caring for children, cooking and cleaning and long hours collecting water and fuel – which is growing as environmental degradation intensifies.
- Little access to appropriate technologies. Women in particular tend to use traditional hand-held hoes, while ploughs and irrigation equipment designed for small farmers is often suited more to men and too heavy or otherwise inappropriate for women
- Less access to local markets to sell their produce due to time constraints, little access to market information or lack of transport.

Women's role as the primary care-givers to children is one of the major differences with the role of male farmers but far from the only one. Other key differences include:

- Women's tendency to grow staple food crops more than commercial cash crops.
- Differences in physical attributes which make it difficult for women to use heavier farm implements.
- Women's dominance of certain functions on the farm, such as planting, harvesting or post-harvest processing.



A smallholder women dairy farmer uses her donkey to deliver milk at the Setat Self help group Dairy center in west pokot, Kenya

PHOTO: ACTIONAID

Box 8: Different priorities for government spending identified by farmers in Ghana

ActionAid conducted focus groups in six villages in Northern and Upper East Regions where first a mixed group and then a women-only group were asked what they thought their three priority needs were. The top three responses (with the number of mentions in brackets) were:

Mixed group	Women group
Access to tractors (6)	Access to credit/finance (5)
Access to credit/finance (4)	Access to processing equipment (2)
Access to fertilizer/timely delivery of inputs (4)	Access to tractors (2)

For the mixed group, which was dominated by men, access to tractors was the key priority, mentioned by farmers in all six villages. For women, access to credit was the top priority.

A review of our seven African governments’ agriculture budgets and policies shows that women are targeted poorly or not at all, and/or that gender commitments remain largely on paper only.

4.1 Women farmers in Burundi’s agriculture budget and policy ASDAASDS

On paper, the government has a good commitment to promoting the interests of women. The Growth and Poverty Reduction Strategic Framework (GPRSF) states:

‘Women’s participation in the development process is considered a key element of all development and poverty reduction projects, and Burundi is no exception in this regard. Women’s participation in the country’s economic and social development process will take place at all levels. Thus, no strategy will be developed without explicitly addressing gender issues, so as to guarantee the full participation of women in decision making, the choice of priority actions, and, more specifically, their implementation.’²⁹⁶

This commitment is, however, not being implemented in practice. The GPRSF does not mention women farmers (except in passing and related to access to land) and in the section on results that have been achieved for ‘gender advancement’, no mention of agriculture is made.²⁹⁷

Women in Burundi are widely discriminated against, notably concerning ownership of land whereby customary law recognises women as having ‘use rights’ over land, but not as heirs. Such social norms are so entrenched that women in rural communities tend to view ownership of material assets, such as land, as being exclusive to men.²⁹⁸ Many attempts made in parliament by women to change this situation have failed. Access to services such rural finance, extension and inputs such as fertilizer are lower for women

than men, although few statistics are available. Women have more difficulties in accessing extension services than men (often due to the timing and location of meetings which can conflict with housework or childcare) and in accessing inputs (often due to household finances being controlled by men, but also because there is no specific targeting of women in subsidy programmes).

If women farmers were more directly supported, Burundi's farm productivity would likely be much greater. People in rural areas would be better off and national food security would improve. Burundi needs to effect a deep change in the social status of women by changing the law to enable them to own farmland, and then actively encourage women to take advantage of it. Women farmers could also be targeted in the input subsidy programme and the establishment of women farmers' organisations could be supported. Women could also be targeted as 'progressive farmers' (i.e. farmers who accept and apply the innovations introduced by the extension services).

4.2 Women farmers in Ghana's agriculture budget and policy

There appear to be no budget lines specifically targeting women farmers in the Ministry of Food and Agriculture's (MOFA) budget apart from the allocation to the Women in Agriculture Department (WIAD). While a specific department for women is welcome, WIAD's budget is very small. Of MOFA's GH¢ 221 million budget allocation in 2011, WIAD was to receive GH¢ 867,762 – just 0.4 per cent.²⁹⁹

The government has taken some steps to promote gender mainstreaming in MOFA, but the Gender and Agricultural Development Strategy (GADS), developed in the late 1990s, has been largely unimplemented. WIAD is the only one of 12 directorates in MOFA headed by a woman, but the senior extension staff in Accra is all male.³⁰⁰

The Medium Term Agriculture Sector Investment Plan states that 'gender equity will be emphasized in all activities'. But almost no details are given on how this will be implemented and there are no indications that women farmers will be especially targeted. A CAADP review of the Medium Term Agriculture Sector Investment Plan notes that it does not make explicit the mechanisms to promote gender integration at all levels. In reality, women farmers appear to be barely consulted in MOFA planning. 'We are the lone voice in the desert' is how one WIAD official puts it.³⁰³

Ghanaian women farmers face similar barriers to extension services, credit and other services as women elsewhere in Africa:

- For every 100 Ghanaian men accessing credit, only 47 women do so.³⁰⁴
- Only 10 per cent of Ghanaian women farmers own land compared to 23 per cent of men and their average value of land holdings is three times lower.³⁰⁵

MOFA's failure to recognise adequately the gender of the farmers it is supporting is holding back food production and poverty reduction in Ghana. Government policy, and spending, must more adequately recognise women's triple role – on the farm, in the household and in the community. The government must broaden its efforts to support women's farm production and processing activities, especially to increase access to simple labour-saving technologies.

4.3 Women farmers in Kenya's agriculture budget and policy

ActionAid's fieldwork in three districts of western Kenya – West Pokot, Greater Trans Nzoia and Greater Kakamega – found that only 5 per cent of women farmers receive extension services, less than 2 per cent have access to credit and 14 per cent benefit from the government's input subsidy programme. One reason for these alarmingly low figures is government policy. The only mention of women in the Ministry of Agriculture's Strategic Plan for 2008–12, for example, was a 'mainstreaming gender' budget line for 2008-12, which was allocated just Kshs 1 million, amounting to 0.007 per cent of ministry spending.³⁰⁶

The government says it is taking some steps to mainstream gender in agriculture policy. The Agricultural Sector Development Strategy, for example, states that it will:

'Develop a gender policy for the agricultural sector to ensure women's empowerment and mainstreaming of needs and concerns of women, men, girls and boys in all sectors'.³⁰⁷

The government envisages addressing in this strategy such issues such as women's heavy workloads and limited access to productive resources, credit, inputs and technology.³⁰⁸ The Medium-Term Investment Plan for 2010-15 also states that the government 'will ensure articulation of powerful indicators to track progress toward gender equality in resource allocation and associated impacts'.³⁰⁹

There is a clear danger that this commitment to gender mainstreaming will remain fine words. There is, however, some evidence that the government is increasing its efforts to support women farmers. The World Bank-supported Agricultural Productivity and Agribusiness Project has a good focus on women, at least on paper. It proposes to mainstream gender in its support to Kenya's research and extension services and to analyse women's and men's different roles.³¹⁰ Similarly, the National Agriculture and Livestock Extension Programme (NALEP) is meant to ensure that women constitute at least 25 per cent of the members of Focal Area Development Committees (FADC) – the grassroots institutions that are meant to spearhead development activities in a focal area on behalf of the community. The government says that women actually constitute around 35 per cent of the FADC membership.³¹¹ However, a report for the Swedish government development agency, SIDA, found that the 25 per cent minimum quota was not reached in any of the locations visited by the project team. This quota, while welcome, is still very low given that three-quarters of farmers are women.

Box 9: Regina Jackson and the lack of government support

Regina Jackson, a woman farmer aged 35, lives in Akiriamet village of West Pokot district with her husband and four children, all of them girls. Regina is a member of Simatwa farmers group and farms just half an acre of land, producing vegetables such as kales, spinach, *managu*, cow peas, tomatoes and onions which the family eats, while selling small amounts to local schools.

Farming in the area is mainly subsistence-based since drought, plot size and lack of knowledge and skills on good crop husbandry are major challenges. Regina and other farmers receive few services from government, and struggle on their own to put at least one meal a day on the table for their families. Regina says that the last time the area registered high yields was in 1998. Thereafter, the rains became increasingly scarce to support food and livestock production. She and her husband had to sell their goats to cope with the situation, but once the money was spent they remained hungry. So Regina and her husband dug a borehole not far from the local river to begin a vegetable irrigation project. To obtain start-up capital for the project Regina sold eggs and poultry, which enabled her to buy inputs such as vegetable seedlings/seeds.

Regina says: 'I plant my vegetables through irrigation four times in a year. And through sale of my vegetables I can today raise up to Ksh 100 a day and I can afford to donate money to a fundraising project in our area. Something I was not able to do before. My biggest problem now is the back-breaking exercise of watering the vegetables using 'buckets' in the morning and evening. If I can get a water pump, pipes, rubber and other irrigation equipment, I can produce more vegetables for my household and sale in schools. I hope that one day Government will come and avail its services of extension, trainings and on-farm demonstrations on better crop husbandry methods to us', she says. Such government support would provide a major boost to farmers like Regina and end cycles of hunger, but it is largely lacking.



Targeting women farmers increasing food security:
Mrs Okweny feeding her poultry- Kapujan, katakwi district, Uganda
PHOTO: ACTIONAID

4.4 Women farmers in Nigeria's agriculture budget and policy

Despite women farmers being the primary actors in Nigerian agriculture, government policy appears to provide them with little support. Most government poverty alleviation policies, including those beyond agriculture, lack special provisions for women.³¹³ The National Agricultural Investment Plan, 2011-2014 mentions the need for programmes for 'special target groups' such as women (along with youth, the elderly and the retired) but does not specify what these might be.³¹⁴

The most prominent government programme is Women in Agriculture (WIA), initiated in 1989, which is housed in the Agricultural Development Programme of the Ministry of Agriculture and works in the 36 states and the Federal Capital Territory. The programme was designed to ensure that female extension workers were present at every level of operation from the state to the community.³¹⁵ However, there is an inadequate supply of WIA extension agents and thus a low ratio of extension staff to farm families. In addition, the majority of WIA extension staff are not agriculture school graduates and thus inadequately trained in agriculture.³¹⁶

Despite the WIA, extension services focus on increasing the productivity of cash crops by providing male farmers with information access to inputs and services.³¹⁷ In six states of Nigeria analysed by ActionAid, there are 432 Block Extension agents (who are female), compared to 2,726 Village Extension Agents (who are men) – thus only 16 per cent are women. This compares to 70 per cent of the agricultural workforce being women. The high ratio of male to female staff is likely to have implications for the gender of farmers that receive extension services, especially in northern Nigeria where social norms limit women's ability to interact with males. Indeed, the critical point is that women rarely receive extension services. One study shows that 30 per cent of extension agents in Jigawa, Taraba and Yobe report having had no contact with women farmers in the previous 12 months.³¹⁸

4.5 Women farmers in Rwanda's agriculture budget and policy

On paper, Rwanda's approach to gender equality and women farmers is among the most impressive in Africa. The Strategic Plan for the Transformation of Agriculture (PSTA II) mentions women farmers in various places and calls for gender equality in agriculture. The government is also committed to gender-responsive budgeting (across government). Beyond agriculture, Rwanda has made major progress in promoting gender equality, with the majority of MPs being women and with many good laws, on paper, emphasizing gender equality such as property ownership.

There is, however, still a considerable way to go for women farmers to see the full benefits of such policies. Only 15 per cent of women farmers received fertilizers through the government subsidy programme, while those who grow crops other than maize do not have access to the subsidy at all. Access to extension services is mixed. Some 41 per cent of farmers interviewed who have animals have been visited by a veterinary officer but over half (54 per cent) had not been visited by a sector agronomist and only a third are visited at least once a month. However, around 65 per cent of women farmers consulted in our research have access to improved maize seeds and in some cases bean seeds, of which around half receive the seeds from the government (22 per cent get their seeds from agro-dealers and the rest from their cooperatives and NGOs).

Models of the likely impacts of government policy under PSTA I, adopted in 2005, showed that incomes were projected to rise faster among male-headed households than women-headed households, and for households producing export crops rather than food crops³¹⁹ and would widen income gaps between the two – highlighting a bias in spending and policy.

4.6 Women farmers in Uganda's agriculture budget and policy

There are no noticeable agriculture budget lines supporting women farmers specifically and it is unclear how much the government is spending on gender mainstreaming. The Agriculture Sector Development Strategy and Investment Plan, which is the roadmap for agricultural policy, makes no recommendation to focus agricultural policy on supporting women farmers in particular, mentioning blandly that cross-cutting issues such as gender 'will be taken into account' in policy formulation and that 'agricultural interventions will be balanced across the different regions, agricultural zones and across genders'.³²¹

However, Uganda has taken some steps to enable women to benefit more from agricultural policy. Formal government policy requires all accounting officers to show how they intend to address gender and equity issues in their sectors.³²² Some strategy documents highlight the importance of ensuring women benefit from interventions and that gender concerns should be routinely addressed in planning and policy.³²³ The main research body, the National Agricultural Research Organisation (NARO), has established a Gender Task Force and 'most of the technologies developed are done with women in mind', a 2006 review notes.³²⁴ NARO has been developing time-saving technologies such as lightweight animal-drawn ploughs and hand-pushed carts to fetch water³²⁵, but there is little evidence that these reach significant numbers of farmers, who continue to rely on hand hoes.

Women own only 7 per cent of all productive land in Uganda³²⁶ and only 17 per cent of women own registered land.³²⁷ Lack of ownership or control over land discourages farmers from diversifying into higher-value crops and investing in land improvements. Women farmers are also widely discriminated against in access to extension services. They have a high participation in farmers' groups sponsored by the National Agriculture Advisory Services (NAADS) but since NAADS reaches a small number of farmers, the overwhelming majority of women farmers lack access to extension services. Neither does the provision of inputs to farmers under NAADS target women specifically.

Only 9 per cent of all credit in Uganda goes to women.²²⁸ As in other countries, commercial banks regard agriculture as high risk. Women are considered to be particularly risky since most do not practice commercial agriculture and are therefore not considered creditworthy. When women do access loans from microfinance institutions (MFIs), they tend to be very small amounts that are inadequate for investment, yet still have to be serviced on a weekly basis. Some MFIs require spouses to co-sign on loan forms, limiting women's decision-making capacity over use of the loan.²²⁹

4.7 Women farmers in Zambia's agriculture budget and policy

Zambia's agriculture budget gives no indication that women comprise the majority of farmers. Indeed, women farmers are not the explicit focus of any of the roughly 5,000 budget lines in the 250-page budget of the Ministry of Agriculture and Cooperatives (MACO) (now the Ministry of Agriculture and Livestock) contained in the 'Yellow Book' that outlines the annual government budget. The only mentions of gender are various small budget lines concerning HIV/AIDS awareness training, gender mainstreaming and spending on International Women's Day. Neither do women farmers receive explicit mention in Zambia's Sixth National Development Plan for 2011-15, although the document states that women will receive 'special attention' in programmes to support adaptation to climate change.³³⁰

More positively, MACO seeks to ensure that 30 per cent of its workforce is female and MACO officials say that this is achieved in the extension service.³³¹ Government policy is that vulnerable groups (which include women, those with disabilities and people living with AIDS) should receive 30 per cent of land being re-allocated. In 2008, women received 19 per cent of all new land titles.³³²

The government has on paper long been committed to 'ensuring gender equity in the provision of effective services' to farmers.³³³ But this is not realised in practice. Interviews with senior staff in MACO confirm that officials have no active plan to target women farmers in their policies, nor do they know how to do so.³³⁴ This does not mean that women do not benefit from some agricultural policies – they do, but probably to a small extent.³³⁵ However, although the Farm Input Subsidy programme does not target women farmers specifically, a World Bank review of the 2007/08 programme found that 37 per cent of beneficiaries were women.³³⁶

The government recognises on paper that there are 'huge disparities' between men and women as regards socio-economic well-being and access to productive assets.³³⁷ Women farmers face particular barriers to accessing land (due to cultural and legal discrimination), credit (due to lack of collateral, such as land ownership) and markets (due to lower participation in farmers groups and less access to transport, for example). Extension services in Zambia are mainly directed to those who own land (i.e. men) and rarely identify women as the target audience. Local officials often make little effort to share information with women and prioritise reaching men. Also, extension services tend to focus more on cash crops (grown mainly by men) than food crops (grown mainly by women) such as nuts, sorghum, millet, cowpeas and cassava.³³⁸

Zambia's failure to target agriculture spending on women causes massive production losses. According to a World Bank study, if women in Zambia benefitted from the same capital investments in farm inputs, including land, as men, output in Zambia could increase by up to 15 per cent.³³⁹

Box 10: Gender mainstreaming in Zambia

There have been some attempts in Ministry of Agriculture and Cooperatives to promote gender mainstreaming. MACO has, for example, appointed Gender Focal Points in each department of the Ministry who are members of a Gender Committee. However, efforts to budget for gender activities in MACO tend to fail and requests from Departmental Directors for gender mainstreaming activities are routinely refused.³⁴⁰ Moreover, MACO generally fails to collect and publish reliable gender-disaggregated data. When departments are allocated financing for gender-related activities, there is often weak budget execution.³⁴¹

In the 2011 national budget, the Gender in Development Division in the Cabinet Office – whose mandate is to coordinate and monitor implementation of the National Gender Policy – was allocated a paltry ZK 17 billion. None of its budget lines in the Yellow Book mentions agriculture. It is no surprise that the mid-term review of the Fifth National Development Plan concluded that gender-responsive development has remained 'elusive' in Zambia and tasked all government ministries to implement comprehensive gender training programmes.³⁴² It is unclear whether MACO has undertaken this. Gender mainstreaming remains a paper commitment only, perhaps since there is no Act of Parliament to make gender mainstreaming mandatory.³⁴³

5. Improving extension services

Farming advisory and training (or ‘extension’) services can be vital in providing and sharing information on improving farm productivity and food security. Farmers can access training or information – often from other farmers in participatory programmes - on the best farming techniques, on higher-yielding crop varieties or on what crops are likely to produce most profit next season. Studies by the International Food Policy Research Institute conclude that there are high rates of return to public investments in extension services³⁴⁴ and that consequently ‘extension investments are a good buy’.³⁴⁵

Yet, instead of being seen as a ‘good buy’, many African governments have largely said ‘goodbye’ to extension services. They were severely cut back, under donor pressure, in the public spending cuts of the 1990s and in many cases have never recovered. In several countries, such as **Kenya, Uganda** and **Rwanda**, donor pressure has led governments to outsource or part-privatise their extension services, cutting back on public investments and encouraging private companies or NGOs to provide advisory services. Now, farmers often need to pay for extension services, which tends to exclude the poorest. The result is that most farmers in Africa now never see extension officers. Those who do have extension support, see officers only infrequently (See Table 3).

Table 7: Percentage of farmers with access to extension services

Ethiopia	23 per cent (27 per cent of men; 20 per cent of women) ³⁴⁶
Ghana	12 per cent of male-headed households 2 per cent of female-headed households ³⁴⁷
Malawi	13 per cent ³⁴⁸ (15 per cent of male-headed households; 8 per cent of female-headed households ³⁴⁹)
Nigeria	1.3 per cent ³⁵⁰
Rwanda	15 per cent ³⁵¹
Tanzania	10-16 per cent ³⁵²
Uganda	14-17 per cent ³⁵³
Zambia	23 per cent (of which 11 *per cent ‘rarely’) ³⁵⁴

Government spending on extension services varies by country (see Table 4). Low spenders on extension (relative to other spending areas) include **Nigeria, Rwanda, Zambia** and **Burundi** whereas **Ghana, Uganda** and **Kenya** are relatively high spenders.

Table 8: Proportion of agriculture budget allocated to extension services

Burundi	7.6 per cent of government contribution to agriculture budget (i.e., excluding donors) (2011). ³⁵⁵
Ghana	Unclear, but may be 50-80 per cent of MOFA budget. ³⁵⁶
Kenya	Around 25 per cent ³⁵⁷
Nigeria	0.6 per cent of Federal Government budget (2007-11). State spending is also low: 1.2per cent in Ondo and 1.3per cent in Bauchi. ³⁵⁸
Rwanda	0.5 per cent of MINAGRI budget (2010/11) ³⁵⁹ 1.9per cent of Agriculture Sector Investment Plan (2009/10 – 2011/12). ³⁶⁰
Uganda	50 per cent (2012/13) ³⁶¹
Zambia	Around 5 per cent. ³⁶²

Box 11: The case for investing in extension services

As recently argued by the UN High-Level Panel of Experts on Food Security and Nutrition, ‘national research and extension systems need full attention and investments from governments and the donor community’.³⁶³ Evidence from Nigeria is that the higher the extension agent/farmer ratio, the more effective the extension agent’s contact with farmers becomes and the more successful the extension delivery.³⁶⁴ Moreover, studies suggest that farmers who have contact with extension agents achieve higher yields. One study of cocoa production in Ondo state in Nigeria found that farmers receiving extension advice had 122 per cent higher yields compared to farmers without access to such services.³⁶⁵ There is a similar experience in other countries. In **Ethiopia**, poverty dropped by 9.8 per cent just as a result of one agricultural extension visit³⁶⁶ while **Uganda** experienced a reduction in poverty and malnutrition among children because of an increase in extension visits³⁶⁷.

None of the countries under review can be said to have effective extension services; rather these are widely recognised as of poor quality. Thus improving the quality and focus of extension services is vital. Extension services in most countries have concentrated on increasing farm production for male farmers who are better-off (and often growing cash crops). Instead, what is needed is a much broader service that encompasses other key aspects of farming, including marketing and sustainable agriculture approaches, and which specifically targets women and poorer farmers. Promoting agro-ecological approaches to farming is increasingly vital in light of the need to adapt to climate change – currently, extension services are poorly focused on this. Targeting women farmers should involve training more women to become extension officers and ensuring that services are delivered in more appropriate ways.

5.1 Low and high spenders

The lack of adequate spending on extension services – and the resulting lack of access by farmers – is highlighted in the case of **Nigeria**. Available budget figures suggest that the Federal Government allocated an average of just 0.6 per cent of its agriculture budget to extension during 2007-11.³⁶⁸ Thus, it is perhaps not surprising that a miniscule 1.3 per cent of Nigerian farmers have access to extension services and that services are regarded as of poor quality.³⁶⁹ The National Agricultural Investment Plan for 2011-14 aims to achieve an extension worker/farmer ratio of 1:500 by 2020, but this seems purely rhetorical given the lack of actual spending.³⁷⁰ The Plan recognises that ‘the existing extension services are grossly inadequate’.³⁷¹ However, the government’s Medium-Term Agriculture Sector Strategy for 2010-12 allocates only N15.2 billion to extension and research services – amounting to just 3.6 per cent of the total agriculture budget for 2012.³⁷²

Various studies show a range of problems with the quality of staff and extension services in Nigeria, especially for women farmers. These include poor logistics support for field staff, use of poorly trained personnel at local level, ineffective agricultural research-extension linkages and a lack of farmer participation in programme development.³⁷³ Low level of use of new information technologies, poor communication and low staff morale are also major problems. Staff skills are rarely dynamic enough to respond adequately to new challenges in the areas of social organisation, post-harvest, natural resources management and marketing.³⁷⁴

In effect, farmers have to pay for extension services in Nigeria. Most extension agents report that their most important mode of interaction with farmers is in small farmer group settings, but membership fees are required for farmers to join those groups.³⁷⁵ Furthermore, a recent study found that most extension agents had ‘relegated their advisory role to second place after their role in distributing inputs through the fertilizer subsidy programme.’³⁷⁶

Box 12: Nigeria - communities’ experience of extension services

Extension agents are known as ‘Mallami Gona’. While most of the groups affirmed their awareness of them, most claimed never to have been visited but only to have heard about extension services over the radio. There was a general perception among groups that extension agents would not respond to their call if the groups approached them. Some farmers questioned whether it was worth extension services existing at all, since they did not benefit from them. Today, ‘we don’t even see the need for them, when we don’t even have access to fertilizer. If you ask me, they are “cheaters”’, one of them said.

There were some exceptions like Adavi local government area (LGA) groups in Kogi State. Here, some women members claimed to have received services from (female) extension agents, receiving advice on how to grow beans and to improve soil through the use of lime. In Bogoro LGA in Bauchi State, two of the communities said they had experienced extension services in the form of demonstration and incubation farms and were taught two-way fertilizer application and the use of insecticide. Also in Bauchi State, the Lomi-Fulani Community groups in Kirifi LGA claimed to have access to extension services such as demonstration farms, and were provided with advice on how to improve their farming.

In the Federal Capital Territory, the male groups claimed to have interacted with extension agents but the groups expressed dissatisfaction with extension services. For example, Paspas Youth Farmers Association complained that the extension agents lack commitment and that 'they are fond of tricking us'.

The Allah Yabakwo Farmers group complained that the extension agent often comes when they have all gone to the farm, that the agents are often changed and that they don't act on farmers' complaints. The women groups in the FCT claimed to have never seen any women extension agents and even queried whether women could become extension agents.

Most of the groups believe that the government should educate smallholder farmers, and especially smallholder women farmers, on the importance of extension services and on how to identify the agents and access their services. One farmer said: 'We expect extension agents to do the following: visit our farms regularly, help us with new seeds and farming ideas, assist us get farm equipment like a tractor, and identify the actual farmers tilling the land to the government. But because they don't work with us well, they don't know much about us'.

They expressed their frustration with their inability to access extension services and suggested that the government should recruit youths within the communities and train them to serve as extension agents, properly monitor the activities of extension agents, organise community meetings on agricultural issues and link registered farmers' associations directly to the input storehouses.

Zambia is also a low spender on extension services, devoting only around 5 per cent of agriculture expenditure to this area.³⁷⁷ Consequently, as the government recognises in the Sixth National Development Plan 2011-15, extension services are 'inadequate'³⁷⁸ and Ministry of Agriculture officials concede that 'quality is not as good as it should be'.³⁷⁹ Extension services have not contributed to significant improvements in crop yields for most crops, especially maize. One reason for the poor performance of extension services is that half the extension budget during 2000-08 went on salaries, leaving relatively few resources for operations.³⁸⁰ The extension service is also overwhelmingly focused on administering the fertilizer subsidy programme and on cash crops.

Box 13: Extension services in Zambia

Farmers in Kalomo district of Zambia interviewed by ActionAid lament the fact that hiring livestock veterinary vet specialists is too expensive. 'We have the animals but we cannot access the vet services', one farmer said. 'Government must go back to the old days where they used to provide vet services for the public.' There are many good quality staff in the Zambian extension service, notably District Agricultural Coordinators, including in remote rural areas. However, they are not being used to their greatest effect owing to lack of resources and also because of overly top-down, centralised planning. Local and district officers are not able to demand what they need in a bottom up process that connects to farmers; instead, they are largely presented with policies and budgets from on-high.

Although the government talks of diversification, only limited support is provided to other crops and there is no coherent strategy to promote sustainable agriculture. There is little technical training for farmers to see farming as a business or economic empowerment – critical issues that could wean people off the fertilizer subsidy.

In **Burundi**, the government has recently increased the number of extension agents and there are now 2,803 – around 20 per cent of whom are women³⁸¹ - mainly recruited since 2006. With 1.5 million farms, each agent therefore covers an average of 535 farms.³⁸² However, extension services in Burundi are generally of poor quality.³⁸³ They remain too *dirigiste* (top-down and directive) rather than promoting the participation of farmers and responding to the needs the farmers themselves identify, and they have few funds at local level. There are also few linkages between research services and extension, meaning that farmers are not provided with the outcomes of research. Extension agents are often poorly motivated and trained, and there is currently little attempt to reach women farmers.³⁸⁴ More investments across the board are needed.

In contrast to Nigeria, Zambia and Burundi, **Ghana** is a relatively high spender on extension services. It is hard to establish exactly how much the Ghanaian government allocates to extension services since these are provided not only by the Ministry of Food and Agriculture's extension department but also by all of MOFA's regional directorates and other departments, as well as by the Ghana Cocoa Board. We estimate that as much as 50-80 per cent of MOFA's budget may be spent on providing advice, training and capacity building to farmers. Around half of MOFA's staff – 3,000 people - are extension officers.³⁸⁵

Yet despite this spending, extension services reach only around 12 per cent of male-headed households and a minuscule 2 per cent of female-headed households in Ghana³⁸⁶ - all of which are likely to be better-off farmers. The service has been a victim of a ban on recruitment of public sector employees whereby only those positions that become vacant after staff leave can be filled. Many extension staff lack adequate means of mobility, such as motorbikes, and salaries are low, making it difficult to attract talented staff.

Smallholder farmers interviewed by ActionAid identify a range of knowledge gaps that could be addressed by the extension service to help improve their farm production (See box 14).

Uganda is also a relatively high spender on extension. Similar to **Kenya**, extension services in Uganda have been subject to huge debate and policy change over many years, with World Bank funding playing a key role. **Uganda's** extension service has changed from a government-run service to an attempt, begun in 2001 through the National Agriculture Advisory Services (NAADS), to introduce a partly-privatised system of 'demand-driven' services provided by private sector suppliers, including NGOs, in order to promote the commercialisation of agriculture.³⁸⁸ In recent years, however, the government, recognising the poor quality of the services provided by NAADS, restructured the service to ensure that government officers would again play the main role in service provision, alongside private sector providers. At the same time, the government began providing inputs (such as livestock) at supposedly lower prices to farmers as part of the NAADS package. The NAADS approach requires farmers to organise themselves in groups who select which 'enterprises' (i.e. crops or projects) they will focus on and who then articulate their demand for advisory services to extension officers.

Box 14: Ghanaian farmers' views of extension services

The farmers consulted in our fieldwork have greater access to extension services than most farmers in Ghana, partly due to existing connections to MOFA or to services provided by NGOs. However, the Director of Agriculture for Tamale Municipality, in the north of Ghana, says that the ratio of extension officers to farmers is just 1: 2,000 for the municipality.³⁸⁷ The groups interviewed identify a large range of knowledge and information gaps that could be addressed by the extension service to help them in their farming. These include knowledge of:

- New varieties of maize.
- Preservation of beans without the use of chemicals.
- Credit and tractors services available in the community.
- Sustainable agriculture techniques, including composting.
- Other farming approaches such as contour bounding, tree planting to act as wind breaks, appropriate sowing times.

Some farmers, such as women farmers in Nangodi village in Upper East Region, noted the need not just for one-off advice but refresher sessions and ideally continuous visits by extension officers. Unfortunately, the current state of the extension service means that farmers are losing out on these vital knowledge inputs.

A 2010 report by ActionAid found a very mixed picture of Uganda's extension services.³⁸⁹ On the one hand, there was evidence that NAADS has had some positive impacts. During six years of implementation after 2001, 5,000 agricultural advisory services were delivered by private providers, covering 70 different enterprises, and 15,000 'technology demonstration sites' were set up. Most farmers organised in NAADS groups had adopted improved crop varieties and some studies suggest they had achieved yields 27 per cent higher than in non-NAADS groups, though other studies suggest yields are no higher in NAADS groups than in non-NAADS groups.³⁹⁰ There was some evidence of high participation of women in NAADS, who typically constituted around 60 per cent of farmers.³⁹¹

On the other hand, the report, which also involved fieldwork among farmers in Pallisa district in eastern Kenya, found that overall NAADS was clearly not delivering to a sufficient number of farmers. Less than one in five farmers received extension services – a proportion which had declined since NAADS was introduced. Moreover, the poorest farmers were excluded, partly due to the costs of registering. For these reasons, there were suggestions by the UN's Food and Agriculture Organisation, that Uganda's part-privatised extension service was a violation of the 'right to food'.³⁹² More recent studies of NAADS highlight ongoing problems with the service (see box 15).

Uganda's Agriculture Sector Development Strategy and Investment Plan (DSIP) commit the government to improving extension services by increasing farmers' access to information, knowledge and technology. The DSIP recognises a number of significant challenges and failings with the current extension services, such as inadequate staff numbers and technical capacity, lack of accountability and corruption, the lack of sufficient links to research and technology, and rigid procurement processes.³⁹⁵ The DSIP has resulted in significant investments in the extension service, which are resulting in considerable activities, yet our recent research has found it difficult to pin down concrete improvements.

Box 15: Recent studies of NAADS in Uganda

An analysis by Makerere University notes that ‘whereas NAADS funding has grown exponentially, agricultural sector growth has on average declined’ and concluded that ‘there are no significant differences between NAADS and non-NAADS farmers in terms of the area cultivated, output and yield of maize, groundnuts and rice’.³⁹³

A 2011 study of NAADS by the International Food Policy Research Institute found that the farmers participating in NAADS groups generally found the training offered very useful or useful. However, it also found that ‘direct participation did not have any statistically significant effect on adoption of new crop and livestock enterprises.... except in the case of recommended planting and spacing practices, where it was associated with greater use’. It concluded that it was ‘difficult to make definitive conclusions regarding the direct and, particularly, the indirect impact of the NAADS program’.³⁹⁴

Despite considerable investments, ActionAid’s recent research shows that NAADS still suffers from basic problems – notably the lack of adequate numbers of skilled extension workers and the lack of sufficient operational budgets at local level. Access to extension services remains low. According to a November 2012 report by the MAAIF, the average extension worker to farmer ratio is 1:3,189. It adds that this ratio is ‘miserable’.³⁹⁶ Previous MAAIF figures showed that around 17 per cent of farming households were visited by extension workers (680,000 out of 3.9 million).³⁹⁷ Some estimates were lower, at around 14 per cent.³⁹⁸ In Kumi District, the District Agricultural Officer estimates that 10-15 per cent of farmers receive extension advice.³⁹⁹ The MP for Yumbe District estimates that 20 per cent receive advice in her District.⁴⁰⁰

6. Improving agricultural research

Investing in agricultural research and development (ARD) can be vital for imparting knowledge and technology to farmers. ARD can develop improved seed varieties, help promote better sustainable agriculture practices to increase yields or develop and disseminate small-scale farming equipment to save labour time. Studies suggest that investments in ARD offer great potential for enhancing productivity:

- In **Africa** as a whole, for every one per cent increase in yields resulting from investments in ARD, two million Africans can be lifted out of poverty.⁴⁰¹
- In **Kenya**, for every million Shillings spent on ARD and extension services combined, an additional 103 people can be lifted above the poverty line.⁴⁰²
- In **Nigeria**, a 50 per cent increase in the ARD budget could lead to a substantial reduction of poverty, if focused on maize and yams in the central part of the country and cassava and yams in the south.⁴⁰³
- In **Uganda** investments in ARD can improve productivity substantially – for each marginal shilling invested, 12 shillings can be returned.⁴⁰⁴

It was for these reasons that African governments committed in 2003 to double their annual spending on agricultural research within five years.⁴⁰⁵ Unfortunately, however, this commitment is long forgotten. Many governments now spend little on agricultural research, often only a small proportion of already low agriculture budgets.

Table 9: Proportion of agriculture budgets allocated to agricultural research

Burundi	8.6 per cent of the government's contribution to the agriculture budget (2011). ⁴⁰⁶
Ghana	Hard to establish, possibly 15 – 22 per cent. ⁴⁰⁷
Kenya	15per cent (2011/12). ⁴⁰⁸
Nigeria	28 per cent of the Federal Government allocation (2013). ⁴⁰⁹
Rwanda	4.6 per cent of MINAGRI budget (2010/11) ⁴¹⁰ 1.5 per cent of ASIP (2009-12) ⁴¹¹
Uganda	22 per cent (2012/13) ⁴¹²
Zambia	1.6 per cent of MACO budget (2011) ⁴¹³

A few African countries have a considerable infrastructure of ARD institutions. Ghana, for example, has 29 agencies, mainly government bodies, involved in agricultural research, 15 of which are higher education. Ghana's Council for Scientific and Industrial Research, the main body responsible for ARD, consists of over a dozen institutes specialised in crops such as cocoa and oil palm. The country has over 500 full time ARD research staff, 17 per cent of whom are women. Most research is focused on crops, with cassava, cocoa, maize and rice the most heavily researched. Nigeria has over 80 government and high education institutes engaged in research and over 2,000 researchers. This contrasts with countries at the other end of the spectrum, such as Burundi, which in 2008 (the latest available comparable figures), employed just 98 agricultural researchers and had only two researchers in the principal agricultural research institute, ISABU, with PhDs.

ARD investments in Africa have clearly had some successes. **Uganda's** National Agricultural Research Organisation (NARO) claims to have developed over 200 improved seed varieties for cereals such as maize, legumes and root crops, and to have disseminated over 70 strategies for the control of poultry and livestock diseases. In **Ghana**, the Crops Research Institute showcased 12 improved rice, maize and cassava varieties in 2010 that had taken four years to develop.⁴¹⁸

6.1 Poor links to farmers

However, as with spending on extension services, the considerable spending on ARD has not generally translated into significant across-the-board increases in farm productivity. The overwhelming reason for this is that ARD has been too divorced from the real needs of farmers. Much government spending on ARD involves programmes that are top-down, failing to consult farmers on the crops or technologies to be developed.

In **Kenya**, a government Public Expenditure Review notes that 'there is little influence by farmers on research priorities', even on those programmes for which farmer groups actually pay.⁴¹⁹ Other core problems include ineffective delivery of research findings through the extension system, poor accountability and a limited scope to retain researchers due to poor career opportunities.⁴²⁰ In **Ghana**, a core problem is poor dissemination of research to farmers. The government recognises that there has been a 'top-down approach to research', low uptake among farmers and low levels of funding, and has committed itself to increasing funding to ARD.⁴²¹ Research and extension linkage committees (RELCs) at the district level are meant to create linkages between research and extension yet often do not seem to work. A recent study by the International Food Policy Research Institute found that although the Ministry of Food and Agriculture's technical directorates are responsible for assessing technologies for promotion through the extension system, no periodic assessment of these technologies is conducted, meaning that farmers are relying on old and inappropriate information. The study concluded that 'technology development and assessment needs to be a continuous process that ensures a supply of productivity-enhancing technologies that are profitable for farmers'. It also concluded that 'the extension staff do not appear to receive adequate direction as to what crops to focus on and what technologies to promote'.⁴²²

Similar problems beset **Nigeria**. Although Nigeria has produced over 200 technologies since 1997, the participation of farmers in these has been weak. One recent survey found that 25 per cent of researchers had no interaction with farmers and 51 per cent had no interaction with extension agents.⁴²³ The government recognises that research services are 'poor'.⁴²⁴ ARD in Nigeria faces numerous challenges, including the lack of stable, predictable and adequate funds to the research institutes, high research staff turnover and weak linkages between the various institutes.⁴²⁵

There are several priorities for improving ARD in Africa. First, there is an urgent need to democratise agricultural research and enable broad farmer participation in the design and implementation of programmes. Second, there is a need to identify areas of priority for research. These are likely to include areas such as promoting sustainable agriculture (agro-ecological approaches) in the light of climate change, to explicitly support women farmers (especially in developing affordable labour-saving technologies) and to promote public seed breeding (rather than the current focus on the private patenting of seeds and their monopolisation by private corporations). As argued by the UN's High-Level Panel of Experts on Food Security and Nutrition:

'Public investment in breeding programmes and support for local seed systems that allow the diffusion of locally adapted genetic material, which farmers would have the right to freely save, exchange and market, is a good example of the need for public investment in research'.⁴²⁶

7. Re-focusing on sustainable agriculture

Smallholder farmers in Africa need to improve their productivity, but also need to adapt their farming to cope with the increasing impact of climate change. Sustainable agriculture practices (also known as agro-ecological approaches) offer the prospect of achieving both. Critical approaches include soil conservation, using animal and green manure, agro-forestry and intercropping, integrated pest management and water harvesting.⁴²⁷ Scaling up community-based disaster preparedness, food reserves and social protection schemes can also be vital to reduce vulnerability and build people's capacity to cope when weather shocks strike.⁴²⁸

Increasing evidence suggests that sustainable agriculture produces good yields. A comprehensive meta-study examined 286 such projects in 57 countries and found an average yield increase of 79 per cent.⁴²⁹ Research commissioned by the UK government reviewed 40 sustainable agriculture projects in Africa during the 2000s – involving practices such as agro-forestry, soil conservation and integrated pest management – and showed that yields more than doubled over 3-10 years.⁴³⁰ The FAO's landmark report on organic agriculture of May 2007 outlined a large number of benefits from organic farming compared to conventional agriculture, stating that 'organic agriculture has the potential to secure a global food supply, just as conventional agriculture today, but with reduced environmental impacts'. It noted that large-scale conversion to organic farming in Africa could increase yields by 50 per cent.⁴³¹

African governments need to massively increase their investments in sustainable agriculture, especially in agricultural research and extension services, since sustainable agriculture is often knowledge-intensive. A recent FAO review of the barriers to adoption of one important category of smallholder investment - sustainable land management - concluded that increased public investment in managing collective resources such as pastures and waterways was needed. Following this recommendation would generate high returns to farmers and the environment over the long run.⁴³²

According to the UN Special Rapporteur on the Right to Food:

'Agro-ecological practices require the supply of public goods such as extension services, storage facilities, rural infrastructure (roads, electricity, information and communication technologies) and therefore access to regional and local markets, access to credit and insurance against weather-related risks, agricultural research and development, education, and support to farmer's organizations and cooperatives. While this requires funding, the investment can be significantly more sustainable than the provision of private goods, such as fertilizers or pesticides that farmers can only afford so long as they are subsidized'.⁴³⁴

Some African governments are increasingly investing in the promotion of sustainable agriculture. In **Malawi**, for example, maize agro-forestry is shown to have wide benefits for smallholder farmers (see Box 16). Similarly, the Shinyanga Soil Conservation Programme in **Tanzania** has rehabilitated large areas of land in the Western provinces of Shinyanga and Tabora using agro-forestry, benefitting tens of thousands of smallholders.

Box 16: Sustainable agriculture successes in Malawi and Tanzania

Malawi launched an Agro-forestry Food Security Programme in 2007 managed by the Ministry of Agriculture together with the World Agro-forestry Centre, the Malawian Farmers' Association and a number of NGOs. It provides tree seeds, nursery materials, and training for a range of agro-forestry species, including fertilizer trees. By mid-2009, over 120,000 farmers had received training and tree materials from the programme. Support from the Government of Ireland has enabled the programme to expand nationally to 40 per cent of Malawi's districts, involving at least 200,000 families or around 1.3 million of the poorest people.⁴³⁴ The programme implements agro-forestry systems, using nitrogen-fixing trees, to ensure sustained growth in maize production in preparation for the medium-term situation when fertilizer subsidies may have to be scaled back or withdrawn. Research shows that this results in increased yields from 1 tonne per hectare to 2–3, even if farmers cannot afford commercial nitrogen fertilizers, and that with an application of a quarter-dose of mineral fertilizer, maize yields may surpass 4 tonnes per hectare.⁴³⁵

In **Tanzania** is the Shinyanga Soil Conservation Programme, known by its Swahili acronym, HASHI. It is a widely acclaimed project run and funded mainly by the Tanzanian government.⁴³⁶ By 2004, 18 years into the project, at least 350,000 hectares of *ngitili* (the Sukuma term for enclosures) had been restored or created in 833 villages, encompassing a population of 2.8 million. Benefits of the restoration include higher household incomes, better diets and greater livelihood security for families in the region. The Shinyanga region, just south of Lake Victoria, had previously seen its abundant woodland stripped away over decades, first to eradicate the disease-carrying tsetse fly, then to create cropland and make space for a growing population. Studies suggest that the striking success of the project stems from the rich ecological knowledge and strong traditional institutions of the agro-pastoralist Sukuma people who live in the region.⁴³⁷ But success is also due to its being deeply rooted in the administrative structures of Tanzania's central and local governments. Throughout the project, staff from the Forestry and Beekeeping Division in the Ministry of Natural Resources and Tourism worked closely with local government staff, researchers from the World Agro-forestry Centre and the region's entire farming population. The project encouraged village governments and traditional institutions to work together to restore and manage the *ngitili*.⁴³⁸

7.1 Lack of priority to sustainable agriculture

Although most African governments are promoting sustainable agriculture to some extent, most are still *prioritising* conventional high-input approaches to agriculture, such as increasing the use of chemical fertilizer, often combined with chemical pesticides and hybrid (and sometimes GM) seeds. High-input conventional agricultural methods, while still embraced by some farmers, can be expensive for poor farmers. Some smallholder farmers and farmer's organizations raise concerns that these inputs can pollute the soil and water, diminishing soil quality. One additional concern is the potential for poor farmers to become that reliant on expensive seeds and thus dependant on either the transnational corporations that produce the seeds or on continued governmental support to offset the cost. Despite these critiques, many governments believe the 'Green Revolution' vision that conventional agriculture can increase Africa's low farm productivity. Public financing for conventional agriculture should not come at the exclusion of public financing for low-input climate resilient sustainable agriculture methods. All public financing for agriculture should reflect the needs and priorities of smallholder farmers themselves. Smallholder farmers must be involved in the creation and implementation of programs and processes across the agriculture value chain.

In **Ghana**, for example, the government is promoting farming using chemical fertilizers and pesticides much more than promoting sustainable agriculture that reduces or eliminates the need for such chemicals. The government's input subsidy programme – which mainly provides subsidised chemical fertilizer to farmers – accounted for a massive 79 per cent of Ghana's actual spending (as opposed to budget allocation) on agriculture during 2008-11.⁴³⁹

By contrast, government support to organic farming, for example, is low level and reaches few farmers. The three volumes of documents outlining the flagship agriculture strategy – the METASIP - amounting to over 350 pages, make only one mention of promoting organic farming ('...encourage organic production of yams for export market'⁴⁴⁰). Some government support is given to, for example, the Environmental Protection Agency to train farmers in organic pest control, but these activities appear to be low level and underfunded, reaching few farmers.⁴⁴¹ However, for farmers with small plots, there is a strong case for promoting intensive organic farming that enhances the soil and preserves the environment. Ghana's extension system is currently ill-equipped to impart knowledge and technologies on sustainable agriculture. Our fieldwork finds that many farmers have never been trained in the use of compost, for example, but do want such training to improve their farming. Indeed, many farmers interviewed by ActionAid noted the increased yield resulting from composting. In Nagodi, Upper East Region, for example, farmers said that an acre of maize grown without fertilizer might yield one 50 kg bag whereas with composting, the same land would yield 1.5 to 3 bags.

Box 17: Mahama Yamig's story

Mahama Yamig is a 45 year old widow who looks after her 4 children in the village of Nangodi, located in Talensi/Nabdam district of Upper East Region. Mahama grows maize, groundnuts and millet on her three acre plot of land and is able to sell some of her produce in local markets, earning her GH¢ 20-25 each day. Mahama says she is able to feed her family for only around 7 months a year from her own production. After receiving training from a local NGO on composting and applying manure, she explains the benefits this increase in knowledge has brought:

'We used to just burn the remaining stalks from last years' crop. Now I go to the farm, gather the stalks from the previous season and we store them so that they decompose, compost them then spread them on the field. Then when it rains we sow. If there are tractors available I'd try to get a tractor to plough my field as it saves so much work, but if not I'd hope to be able to get hold of a bullock.

In terms of how much we produce, the composting has really helped a lot. We used to produce 2 bags of groundnuts, now we produce six. My maize has grown from 1 bag to 5 bags. It can mean the difference between us having enough food, sending the children to school or not. The increased yield enables my youngest children to go to school. In a year of good harvests now we will eat from the farm from one end of the year to the other. But in the past, with poor yields we might have only 7 months of food from the farm.

Before we used the composting we were suffering, sometimes we would only have 5 months worth of food from the farm. The training was really helpful to us. The more of this sort of support we get the better. Before there was not enough food for the family but since we have been using these practices we have had enough food. We also use fertilizer when it is available – any help to make us more productive. Sometimes there isn't enough compost to cover the whole farm, so we use fertilizer to top-up.

If I had to choose between fertilizer and compost I would choose compost. When you apply compost – if there are poor rains or drought – you may still grow and get some yield as the compost holds moisture in the soil. But with fertilizer the soil will just dry out and the crop may fail. But there is not always enough compost.'

In **Zambia**, the Sixth National Development Plan states that 'government will continue to promote increased use of sustainable farming practices, including conservation farming, agro-forestry, climate change adaptation and mitigation'.⁴⁴² Conservation farming – defined as minimizing soil disturbance, maximizing soil cover and diversifying cropping patterns – is being encouraged by the government and supported by some donors, such as Norway. Zambia has over 110,000 ha of land under conservation agriculture; a relatively large amount.⁴⁴³ Conservation farming has been adopted by around 270,000 farmers on portions of their land.⁴⁴⁴

Despite these efforts by the government to promote sustainable agriculture and adaptation to climate change, its actual spending on this area is miniscule – probably less than 1 per cent of the agriculture budget. This pales in comparison to the government's support for fertilizer through the Farm Input Subsidy Programme (FISP), which provides cheap chemical fertilizer to farmers and which accounted for over a quarter of the government's budget allocation to agriculture in 2013. Maize mono-cropping (planting maize in the same field year after year), combined with the use of acidifying fertilizer and conventional tillage can oxidise organic matter, reduce the water holding capacity of soils and reduce soil fertility. Nitrogen-based fertilizers, as used in the FISP, can also pollute the underground water table and kill beneficial pests such as bees that can control other pests and are important in the reproduction life cycle of plants.⁴⁴⁶

There are a variety of sustainable agriculture approaches with good prospects in Zambia, including using termite soil, animal dung and agro-forestry. Some studies suggest that the use of termite soil – which is rich in calcium, phosphorus and organic matter - can provide maize yields that are 33 per cent higher than by using chemical fertilizers.⁴⁴⁷

Uganda and **Kenya**, are prioritizing research on genetically modified (GM) seeds. Kenya's Agricultural Research Institute (KARI) is developing GM drought-resistant maize to provide seed for farmers in five African countries with technology provided by, Monsanto.⁴⁴⁸ KARI's Strategic Plan identifies 'biotechnology and genetic resources' as one of six priority themes that will receive Kshs 3.7 billion funding over the five years, a tenth of KARI's expenditure, and more than KARI's allocation to natural resources management. It is unclear how much of this will go to GM research specifically, but the plan notes that 'biotechnology provides unprecedented opportunities' to promote a number of technologies including genetic modification, and that KARI will continue to work with 'large seed companies as clients' as well as NGOs and others.⁴⁴⁹ The intention by KARI to work with civil society is encouraging, and the hope would be that this engagement will open the opportunity for smallholder farmers to clearly define and articulate their priorities regarding seeds, be they GM or not. Increased transparency and accountability of KARI expenditure would also help smallholders to engage in the process and influence KARI's priorities.

In **Uganda**, the government recognises the importance of sustainable land management, for example, but the Development Strategy and Investment Plan for Agriculture (DSIP) - the government's roadmap for agricultural strategy - proposes allocating only 3.8 per cent of the 'ideal' DSIP budget to this area.⁴⁵⁰ At the same time, ActionAid's research has discovered that Uganda has a more advanced, and much better funded, GM research programme than the government has been inclined to publicise.⁴⁵¹ Work to introduce GM bananas into Uganda has received some media and academic attention. But GM research is also taking place on cassava, maize, sweet potatoes and cotton. When ActionAid undertook research in 2009, a senior civil servant working on this programme said that the budget was around US\$500,000 a year, and was mainly funded by the Rockefeller, Gates and Gatsby Foundations, as well as the government. The body working on GM - the National Laboratories Research Unit - had the largest budget of any unit in NARO, amounting to US\$815 million for 2009/10, according to government figures.⁴⁵² It also had a staff of over 30; this compared to around four staff in the Bio-Control Unit of NARO working on organic farming.⁴⁵³

Box 18: Addressing climate change?

Promoting sustainable agriculture is ever-urgent in light of climate change. Likely impacts are in some cases stark:

- **Ghana** faces likely sea level rises in the south alongside desertification in the north. The Environmental Protection Agency predicts that average temperatures will rise and rainfall will decrease in all agro-ecological zones of the country.⁴⁵⁴ The government notes that 69 per cent of Ghana's land surface is prone to severe erosion, at a cost of 2 per cent of GDP.⁴⁵⁵
- **Kenya's** National Climate Change Response Strategy notes that 'the evidence of climate change in Kenya is unmistakable': rainfall has become unpredictable and irregular, extreme weather is now the norm, and the maximum temperature has risen since the early 1960s by 0.2 – 1.3 degrees centigrade.⁴⁵⁶ A World Bank analysis predicts that global warming will have a 'substantial impact' on Kenyan farmers' net crop revenue. By 2030, temperature rises will mean a 21 per cent loss (US\$54 per hectare) in medium and low potential zones, although high potential areas will gain by 1 per cent.⁴⁵⁷
- **Zambia's** smallholder farmers are especially vulnerable to climate change, dependent as they are on rain-fed farming. Food shortages experienced at times since the early 1990s are largely the result of droughts. Extreme weather events are on the increase: between 2000 and 2007, for example, there were two drought years, two flood years and only two normal condition years. In addition to direct casualties from floods, these events have caused huge production losses for farmers in some areas. Meteorological studies indicate that rainfall patterns have changed significantly since the late 1980s and that there are longer or shorter rainy season periods in the northern or southern parts of the country. In the north longer rainfalls often causes maize to rot in the fields whereas in the south the shortage of rain is often insufficient for most maize varieties except those maturing early, which mainly have lower yields.⁴⁵⁸ A study for the International Food Policy Research Institute calculates that reduced availability of water for agriculture induced by climate change will cost Zambia US\$4.3 billion over a ten year period and will keep 300,000 below the poverty line. The most severe impacts will be in the southern and central regions of the country.⁴⁵⁹

But the governments under analysis have a mixed record on actual spending to help farmers adapt to climate change. **Ghana's** Medium Term Agriculture Sector Investment Plan states that addressing climate impacts must be integrated into agriculture sector activities, including assistance to farmers with methods to adapt to climate change. It also calls for the introduction of drought/flood-tolerant crops, investment in infrastructure to facilitate the development of adaptive agricultural systems and capacity building programmes for extension officers on climate-related issues.⁴⁶⁰

However, a CAADP review of the METASIP notes that climate change 'is not adequately addressed in the plan' and that the government needs to indicate a plan of action to manage climate change, making some recommendations on how it might do this.⁴⁶¹

The **Zambian** government, while recognising the need to address climate change, appears to be investing little in adaptation. Climate change receives scant mention in the budget. It has been reported in the Zambia media that in 2010 the government allocated ZK 5 billion to agriculture and climate change issues.⁴⁶² This is a higher figure than is noticeable in the government budget, but even if correct, it amounts to just 0.4 per cent of agriculture sector spending. The mid-term review of the FNDP stated that Zambia 'still lacks a coordinated and institutionalised response to environment and climate change issues'.⁴⁶³

However, the government has established a climate change facilitation unit in the Ministry of Environment and Tourism and a climate change focal point in MACO.⁴⁶⁴ ZARI is conducting some research on agro-forestry and on helping farmers to adapt to climate change, but is unclear how much and likely to be small.⁴⁶⁵ A senior government extension official has said extension officers do disseminate information to farmers on climate change.⁴⁶⁶

8. Providing agricultural credit

Access to credit is often critical for smallholder farmers. Without access to loans at low interest rates, farmers are often unable to invest in future production, expand their farming or risk diversification into new crops. In ActionAid’s research in Ghana, for example, women farmers identified access to credit as their number one priority. Small loans at reasonable interest rates can finance important investments in businesses and equipment – notably processing equipment – that can make huge differences to farm production, marketing and income.

Yet in most African countries, governments either fail to invest sufficient resources in providing credit to farmers, or, despite considerable expenditure, they still do not manage to reach sufficient numbers of farmers. NGOs and informal lending fill some of the gap, but there is still a major shortfall. The result is a massive gap in funding for agriculture that is locking millions of farmers into poverty.

Table 10: Proportion of farmers with access to credit

Ghana	Around 16 per cent. ⁴⁶⁷
Kenya	7 per cent, and less than 2 per cent of women farmers (in three districts surveyed by ActionAid). ⁴⁶⁸
Nigeria	Around 24 per cent has access to informal financial services. ⁴⁶⁹
Rwanda	Around 3 per cent. ⁴⁷⁰
Uganda	Around 9 per cent. ⁴⁷¹

Box 19: The case for subsidised credit

In the past, governments tended to subsidise credit programmes to help larger number of farmers access rural finance. Many programmes were, however, cut back – alongside spending cuts to extension services and other public investments – under Structural Adjustment Programmes encouraged by donors. Subsidised credit programmes remain unfavourably regarded by donors and, where they exist, tend to be at best tolerated rather than championed. Donors see credit as a private good not a public good, preferring private banks and markets to lend to poor farmers (which invariably never happens). This is despite the successful use of government-subsidised credit, and often insurance, programmes in the past in many countries.⁴⁷² The UN’s High-Level Panel of Experts on Food Security and Nutrition has recently noted:

‘The state and the financial institutions (banks, but also pension funds and insurance companies) should study the possibility that the latter dedicate a well-defined part of their lending capacity to smallholders. By offering public guarantees to private financial institutions in smallholders’ investment, governments or public financing institutions can encourage private financial institutions to develop financial services adequate for small-sized investment while sharing their burden to finance them.’⁴⁷³

This view is echoed by Ha-Joon Chang of Cambridge University in the UK, who argues that:

‘experiences show that it is crucial for the government to be significantly involved in providing agricultural credit. The simple fact is that without some subsidy elements and/or mandatory lending to small-scale farmers, private sector financial institutions are not going to extend enough credit to them... Subsidized credit does not guarantee agricultural success; however, agricultural success without it is impossible to achieve’.⁴⁷⁴

Chang also argues that another policy that can be crucial to farmers - insurance - ‘is unlikely to work without some government help’. Again, there are successful examples of state-subsidised agricultural insurance in now developed countries and some developing countries, like Chile.⁴⁷⁵

It is true that some government credit subsidy programmes in the past were inefficiently managed and made losses. Yet the presence of inefficiencies does not mean that entire strategies need be scrapped, especially when an alternative – private sector delivery – does not materialise. Governments can play a role in increasing farmers’ access to credit by, for example, backing loan guarantee schemes, running state-owned banks (provided they are efficient and accountable) or having shareholdings in, and providing capital for, banks run on commercial lines. Unfortunately, however, most African governments currently spend little helping to ensure that their farmers have access to credit. In those countries that do spend more significant amounts, inefficiencies remain and need be addressed.

To access credit currently, most farmers rely on friends and relatives or small savings and loans clubs, often supported by NGOs. These can be vital, but are unlikely to reach large numbers of farmers. Rural women are especially disadvantaged – their access to credit is hindered by the lack of collateral (i.e. ownership of land), lack of information regarding how to access credit from banks, and banks’ perception of agriculture as high risk.⁴⁷⁶ Other barriers include high interest rates and the seasonal nature of farming, which does not fit the fixed repayment periods of short-term loans.

In most African countries, banks currently provide only a tiny proportion of their loans to agriculture. In **Ghana**, banks distribute only 4 per cent of credit to the agriculture sector⁴⁷⁷ and even the Agricultural Development Bank - the leading bank for agricultural financing in the country – earmarks only 30 per cent of its credit to agriculture.⁴⁷⁸ In Nigeria, only around 2.5 per cent of commercial bank loans and advances are directed at agriculture.⁴⁷⁹ The Deposit Money Banks lend only 1-3 per cent of their credit to agriculture. Equally, microfinance banks’ provision of credit to the agricultural sector is also low, at 5-10 per cent of all their lending.⁴⁸⁰

8.1 Government spending on credit

Government spending on the provision of credit varies from country to country. According to a recent FAO report, *Uganda* has no policy measures for improving access to credit for poor farmers.⁴⁸¹ By contrast, the *Kenyan* government supports several credit programmes, such as the Agricultural Finance Corporation - the government's main institution for providing agricultural credit - and the Women Enterprise Fund - launched by the government in 2007 and managed by the Ministry of Gender, Children and Social Development as a source of finance for women who cannot easily access the formal financial sector. Also important are the *Kilimo Biashara* scheme - launched in 2008 as part of the input subsidy programme - and the *Njaa Marufuku Kenya (NMK)* scheme, which was initiated in 2005 and supports community-driven agricultural development initiatives targeting the poor. The NMK promotes increased productivity, improvements in nutrition and provides small grants for scaling up agricultural activities.

Our research finds that farmers with NMK loans generally welcome them, but their biggest concern relates to the corruption that pervades such government schemes. One group of women farmers in Greater Kakamega district, which has benefited from an NMK grant, received only Kshs 115,000 instead of the required Kshs 120,000. The farmers suspect that the remainder was pocketed. Other groups also express concerns with the extension officers running the programme. It was alleged that some consume up to a third of any grant through frequent and at times unnecessary visits to the beneficiary farms - and that the motivation for such visits was the Kshs 500 officers are entitled to per visit.

The small number of farmers who do get credit in Kenya tend to do so from commodity-based providers (such as the Kenya Tea Development Agency) and informal money lenders. The Ministry of Agriculture's Strategic Plan for 2008-12 stated that 'access to bank credit by farmers is still a major challenge despite the fact that Kenya has a relatively well developed banking system'. It recognised that 'inadequate credit to finance inputs and capital investment is a main cause [of] low productivity in agriculture' and indeed that it is 'impossible for most farmers to access credit'. But the 2008/09 budget allocated just Kshs 110 million to enhancing access to credit, just 0.8 per cent of the Ministry of Agriculture's budget.⁴⁸²

Box 20: ActionAid's fieldwork in western Kenya - farmers' access, or lack of it, to credit

In the three districts in Western Kenya visited by ActionAid, only 6.9 per cent of farmers overall, and just 1.7 per cent of women, had ever accessed agricultural credit. It was only farmers in the 'high potential' districts of Greater Trans Nzoia and Greater Kakamega who had ever taken out loans. Not a single farmer had done so in the ASAL district of West Pokot.

Various reasons are given for not taking out loans. Key reasons are that many farmers have less than the five acres required to access an AFC loan and that most, especially women, do not have title deeds to their land and thus cannot satisfy banks' collateral requirements. Other farmers do not know where to access such loans, while others refer to overly high interest rate payments. Many

fear that by taking on a loan they might lose their land if they cannot repay it. In Kwanza constituency of Greater Trans Nzoia district, where only one out of 13 farmers interviewed had taken out a loan (from a private micro finance enterprise), some farmers fear that they cannot afford to start paying back interest even before their crops have matured; they suggest that banks should allow farmers some grace period until their crops are harvested and sold before they start repaying loans.

Focus group discussions with farmers in Greater Trans Nzoia and Greater Kakamega districts revealed a number of problems with the *Kilimo Biashara* programme. Farmers in one focus group said they could not meet the Equity Bank's requirements to access such credit, such as the demand to possess a log book and land title deeds – documents most farmers said they did not have – and to show receipts for the last three years of sale of maize to the National Cereals and Produce Board. Equally, although the cost of one acre of maize production per season is around Kshs 27,000, Equity Bank only lends small farmers up to Kshs 10,000 per season. This is payable at 10 per cent interest but with additional hidden charges to the farmer, such as a credit appraisal cost charged at 3 per cent and life insurance charged at 0.275 per cent, meaning that farmers pay 13.275 per cent interest in total.

In **Nigeria**, it is unclear precisely how much the government spends on supporting loans to farmers, due to the opacity of the government budget. A 2008 analysis by the International Food Policy Research Institute claimed that as much as US\$200 million in loans were being made by various subsidised credit support schemes, meaning that the government's resource allocation to agricultural finance might be quite extensive.⁴⁸³ However, although the government has clearly been making some efforts to provide affordable credit, with three government parastatals delivering financial services in the agriculture sector, it is clear that the schemes reach few farmers. The government's National Agricultural Investment Plan 2011-14 notes that one of the challenges faced by Nigeria agriculture is 'financial market weaknesses which may be attributed to inadequate and poorly targeted credit'.⁴⁸⁴

Box 21: Nigeria - communities' experience with rural credit

ActionAid's fieldwork involved visiting 50 communities and interacting with more than 100 farmers' groups, most of whom were women farmers' groups, in the six selected states and the Federal Capital Territory. Most groups were aware of government agricultural credit facilities, but said they had not accessed any credit from them. The groups' major sources of information included radio, TV, relatives, and friends. They sourced funds from individual private lenders and through saving informal schemes operated by their groups. For example, groups in Funakaye local government area (LGA) in Gombe State said that for the past year they had been benefiting from an agricultural loan provided by a private organisation. They attributed their inability to access government-backed loan schemes to low levels of education and not having close links with prominent government officials. They expressed a desire to access affordable government credit schemes, but also scepticism since they said that on several occasions they have committed funds as counterpart funds, but neither received credit nor a refund of their money. They feared that government officials use their authority to extort money from them. Similarly, groups in Kirifi LGA in Bauchi State complained of how they

contributed N200,000 for an agricultural loan in 2008, but at the time of our interview were yet to receive the money. One group member said: 'We believe that the politicians are "cornering" the loan meant for us'. The groups also wondered if applying for agricultural credit is a good idea considering the financial charges that come with it, which they said they couldn't afford. Groups in Adavi LGA in Kogi State have rejected agricultural loans from the Bank of Agriculture Nigeria because they were required to make an initial deposit of 10 per cent of the amount being requested.

Most farmers in **Rwanda** are bypassed not only by commercial and national development banks, but also by formal micro-credit institutions. Access to loans is constrained by a lack of collateral and/or credit history, high interest rates, fear of defaulting and financial sector bureaucracy. In addition to their own sources, farmers rely on incomes of friends and relatives, remittances and informal money lenders. While micro-finance institutions have recently taken financial services to previously un-bankable clients by developing innovative instruments, they have so far largely failed to reach poorer rural areas and/or smallholder farmers whose livelihoods are characterised by highly seasonal investments, high risks, and low returns. Farmers who do borrow tend to take small loans of less than RwF 100,000. Only around a fifth of farmers borrow between RwF 100,000-500,000 and only 6 per cent borrow up to RwF 1 million.

The Rwandan government says it is committed to improving access to credit and aims under the Strategic Plan for the Transformation of Agriculture (PSTA II) to increase the proportion of bank lending to agriculture to 20 per cent by 2020.⁴⁸⁵ Government policy involves some subsidised credit lines, loan guarantees and index-based weather insurance.⁴⁸⁶ The Rural Agricultural Financing Sector Strategy (RAFSS) sets out different mechanisms and capacity requirements for increasing access to finance within different agricultural value chains in Rwanda. To address the reluctance of the financial institutions to lend to agriculture, the government has created special facilities like the Rural Investment Facility 2 (RIF2) and the Agriculture Guarantee Fund (KARI). RIF 2 aims at increasing access to medium and long term loans for investors in the agriculture sector while AGF aims at reducing the lender's risk in case of insufficient collateral. RIF 2 is a US\$10 million grant programme that leverages loans provided by financial institutions to potential beneficiaries as investment loans and not as a working capital. The facility provides a 15-25 per cent grant of the value of the loan depending on the size and type of loan. Loans are available for primary agriculture production, agricultural processing and agricultural services.

The government in **Ghana** recognises that there is 'ineffective agricultural finance' in the country, but only limited steps are being taken to address the situation.⁴⁸⁷ In 2010, GH¢ 4 million in agricultural credit was disbursed under government programmes; an insufficient amount to address the demand from farmers.⁴⁸⁸ The problem is not a lack of banks. There are well over 100 banks in Ghana with the largest providers of formal financial services being the rural and community banks (RCBs) established by the government in the 1970s. The RCBs are small institutions which are owned by shareholders resident in local communities; with 584 service outlets, the RCBs now have 680,000 borrowers, providing small loans and savings facilities mainly to farmers and micro-entrepreneurs.⁴⁸⁹

In **Burundi**, farmers' current lack of access to credit is also a major obstacle to developing the sector. The government budget has not financed agricultural credit for many years while private banks have been reluctant to lend to agriculture. The government has recently approved a fund for agricultural micro-credit worth an initial Buf 2 billion, for which it will provide loan guarantees.⁴⁹⁰ Such a fund is certainly needed since only around 1 per cent of credit in Burundi goes to agriculture.⁴⁹¹ The key will be to ensure that the fund has sufficient capital to reach large numbers of farmers, including women, and that it is transparently and efficiently managed.

9. Transforming participation and transparency

Smallholder farmers in Africa are insufficiently involved in the design and implementation of agriculture budgets and policy. This gives rise to poor service delivery. Many African governments have improved mechanisms to consult with farmers in recent years, but there is still insufficient attention given to what smallholder farmers themselves declare they need and to designing policies that reflect those needs. Government attempts to involve stakeholders in policy design are often superficial, especially when it comes to reaching out to women farmers. Moreover, farmers' organisations and movements are often ignored or bypassed in policy-making. This means that policies affecting the lives of millions of farmers are largely formed over their heads, without their substantial input and with a lack of grassroots support.⁴⁹²

Smallholder farmers are rarely represented in national farmers' associations or local government.⁴⁹³ Promoting 'inclusive participation' by farmers and other stakeholders in agriculture is one of the stated founding principles of the CAADP programme, to which most African governments are signatories and which tries to align agriculture policies across Africa.⁴⁹⁴ CAADP's 2010 report, *Highlighting the Successes*, claimed that there had been significant participation of non-state actors in CAADP's agricultural policies at the continental and national levels. However, it concluded that:

'There is only limited evidence that stakeholder participation in CAADP implementation is generating the required representativeness and the desired substantive contributions to policy design and implementation, particularly from non-state actors'.⁴⁹⁵

Indeed, analysis suggests that consultation with, and participation of, the local private sector and civil society in agriculture policy making processes under CAADP is still very limited.⁴⁹⁴ Ownership of CAADP extends mainly to high political and bureaucratic circles. Though national stakeholder fora have been established in, for example, **Kenya** and **Ghana** with a broad spectrum of representation, typically decision making remains top-down with little or no grassroots participation. The Forum for Agricultural Research in Africa has facilitated stakeholder consultations to assess key policies but farmers' organisations are rarely part of such processes. Thus research programmes continue to suffer from numerous problems, notably weak links to extension services and poor adaptation of agricultural technologies to local conditions and traditional knowledge. There are few opportunities for farmers, especially women farmers, to bring their concerns into the policy-making arena. The biggest barriers can be defined as a lack of transparency and top-down decision making.

9.1 The lack of budget transparency

Transparency in government budgets is vital to ensure the best use of resources, prevent corruption and help citizens to hold the government to account for its spending. A lack of budget transparency means that farmers do not know what resources or services to expect or that they are entitled to. Yet few governments around the world have transparent budgets. According to the Open Budget Index, 74 out of 94 countries surveyed fail to meet basic standards of transparency and accountability while 40 countries fail to provide any meaningful budget information at all and only 7 provide extensive information.⁴⁹⁷ The following table contains analysis by the Open Budget Index on the degree to which citizens are provided with information on the national budgets by governments.

Table 11: Government budget openness

	Extent of information provided by the government on the national budget and financial activities during the course of the financial year	Degree to which it is possible to hold the government accountable for its management of the public's money.
Burundi	n/a	n/a
Ghana	some	challenging
Kenya	some	challenging
Nigeria	scant	challenging
Rwanda	scant	challenging
Uganda	significant	possible
Zambia	some, albeit incomplete	difficult

Source: Open Budget Index, <http://internationalbudget.org/what-we-do/open-budget-survey/country-info/>

Data on agriculture budgets specifically is more readily available in some countries than others. In **Ghana** and **Uganda**, the public has considerable access to data and officials are relatively open to providing it. All the governments under review publish general budgets online, but the degree of detail varies: few publish detailed agriculture budgets online. At the other extreme is **Nigeria**, where it is extremely hard to get even basic data on agriculture spending. Even finding out an overall amount of expenditure is problematic. Published budget reports do not allow for a straightforward assessment of the level of resource allocation to agriculture's core functions such as research, extension, and input supply. As the International Food Policy Research Institute notes:

'Consolidated and up-to-date expenditure data are not readily available within the Ministry of Agriculture, not even for its own use. And if the Federal Ministry of Agriculture does make use of this information, it is hard to see how authorities can undertake empirically based policy analysis, program planning, and impact assessment. The lack of reliable data and information not only prevents ministry officials from tracking and monitoring spending; an additional undesirable consequence is that when so little information is publicly available, government accountability is easily undermined and the risk of corruption increases. Clearly there is an urgent need to improve internal systems for tracking, recording, and disseminating information about public spending in the agriculture sector'.⁴⁹⁸

In our research in Nigeria, most officials of government agencies were reluctant and in many cases refused to provide data requested, claiming not to be authorised to do so, even when formal letters of request were sent. The government bureaucracy also contributed to limiting access to information because it took so much time tracing some request letters. The Federal Ministry of Agriculture failed to provide information requested after several visits. Thus agriculture expenditure data were sourced from the Budget Office of the Federal Ministry of Finance and the Central Bank of Nigeria. The states of Kogi, Delta, and Bauchi provide very few expenditure figures, whereas the states of Kwara, Gombe and Ondo at least provide some data. Only Ondo State makes efforts to disaggregate the budget figures. Other states present their budgets in consolidated form, meaning that it is difficult to scrutinise different spending areas.

9.2 Top-down policy making

A transformation is required in the way that smallholder farmers are viewed – especially women farmers. They are often seen simply as producers of food for the nation, as achievers of production quotas, or a political constituency whose votes can be bought through short-term projects. A particular problem is that policies tend to be imposed in a top-down fashion, with insufficient attention to local needs and regional differences. Such processes are counter-productive since they ignore the wealth of small farmers' existing knowledge on vital issues such as how to control pests, how to cope with climate change or what crops to grow when.

In **Kenya**, for example, there are few real opportunities for farmers – especially poorer farmers, and even more especially women farmers - to influence agriculture budgets or policy. No farmer interviewed in ActionAid's fieldwork in three districts had participated in policy-making or budget tracking at the local level. Farmers say they have no idea how much money is available to local authorities to spend on agricultural activities. Analysis by Kenya's Institute for Public Policy Research and Analysis shows that there is only limited farmer participation in the government's overall annual budget process. Line ministries prepare Public Expenditure Reviews that inform the budget, but 'they hardly publish this information for public consumption'. Parliamentary oversight over budget formulation is weak and surveys reveal that over half of Kenyans are not even aware of District Development Committees that coordinate development activities at sub-national level.⁴⁹⁹ The main group representing farmers – the Kenya National Farmers' Union – has increasing influence over government policy, but this is still limited and does not principally represent smallholder farmers. Compounding a top-down decision making process is the long-standing general problem of patronage politics, whereby Presidential and Cabinet policy and funding has often favoured farmers in certain agro-ecological areas, rather than being explicitly pro-poor.⁵⁰⁰ Overall, government policies have been biased towards high potential agricultural areas resulting in wide regional differences in access to infrastructure and agricultural services.⁵⁰¹



Smallholder women farmers at a budget analysis simulation session in Rwanda.

PHOTO: ACTIONAID

Box 22: Participation of women farmers in country budgeting in Kenya and Uganda

ActionAid consulted smallholder women farmers in four counties of **Kenya** - Baringo, West Pokot, Kakamega and Migori - asking them about their understanding of, and participation in, the agricultural planning and budgeting process.

Most farmers interviewed did not know that it was their right to participate in budget planning, as provided for in the Constitution. Those who had an idea did not have details, such as dates, on participation in the budget process. Some farmers proposed the need to place notices for meetings in easily accessible areas. Others suggested that officials should encourage farmers and professional institutions to organise themselves and give inputs into the budgeting process. County level budgeting was lauded as a way to enhance citizen participation as county governments are closer to the community than the national government. But most farmers did not know how to go about giving their input in such processes. Those living in remote areas thought that budgeting was the exclusive preserve of county government officials.

Both the ministry officials and farmers consulted agreed that the opportunities for community participation in agriculture were insufficient. In Kakamega country, for example, farmers said that agricultural planning and budgeting was a top down affair with little involvement of organised groups and the community. They said that the perception of agricultural officers was that there was no need to consult the community on plans and budgets since their understanding of such matters was very low.

In **Uganda**, ActionAid's interviews with farmers in Katakwi District showed that local leaders and technocrats at the sub-county and district level call farmers to planning meetings, but mostly the budgets have already been crafted and there is little opportunity for input by the communities. Some farmers referred to this process as 'rubber stamping'. 'We attend some of these meetings but you find that our views that we present in these meetings are not taken forward and implemented...', one farmer in Katakwi district said. Another commented: 'Usually they make their budgets from there and then just call us to attend meetings where they just read for us what they have drafted in a meeting'.

The perceived lack of participation was mainly in regard to the NAADS programs – which are the main agricultural programs in the district. Only a small minority of farmers said they could influence budgeting processes. In addition to lack of effective participation in the planning and budgeting processes, the smallholder farmers felt that there was a lack of feedback on budget performance, particularly on whether the budgets approved were implemented.

The limited participation by farmers was attributed partly to lack of information about budget meetings. In many cases farmers reported knowing about meetings on the day of the meeting, making attendance difficult. Local leaders sometimes invite a few people to attend planning meetings at the sub-county headquarters, but only very rarely are women invited. Most of the district and sub-county officials interviewed said that women tended to be sidelined during the planning process, some even arguing that women have less to contribute and should be represented by their husbands.

CSOs report much more active engagement in planning processes. During the planning and budgeting meetings at the districts, the umbrella organisations are invited to send members to these meetings. However, CSOs said that there was little feedback on the outcomes of the planning and budget meetings, meaning that the process was more a formality than active engagement.

In **Zambia**, the NGO, Civil Society for Poverty Reduction notes that although there is formally space for citizen participation in the budget, the government makes little effort to ensure this and that civil society voices are very infrequently taken on board.⁵⁰² Zambia's legal framework provides for only very limited ways in which parliament and citizens can influence the draft budget figures once presented – a major democratic deficit.⁵⁰³ Zambia's weak decentralization means there are few formal structures in place to consult with local communities.⁵⁰⁴ There is no formal, structured role for small farmers to engage in government policy-making and most Provincial Development Coordinating Committees and District Development Coordinating Committees are not functioning optimally, making it difficult for farmers and CSOs to participate in decision-making processes at regional and national level.⁵⁰⁵

In **Nigeria**, agriculture policy-making has long suffered from both a lack of transparency and lack of participation by farmers. These two endemic problems are linked and reinforce each other. The lack of openness on the part of the authorities discourages participation, while farmers are largely unaware of many of the agriculture policies promoted in their name. However, the government does make some attempts to involve stakeholders in policy design. For example, the National Agricultural Investment Plan states that the planning process was 'based on a series of focus group discussions involving stakeholders from farmer associations, community based organizations, non-governmental organisations, private sector representatives, women groups, research organizations and institutions, democracy groups, government ministries, departments and agencies, up to local, state and federal legislators'.⁵⁰⁶

Yet such attempts to promote participation are largely superficial, especially when it comes to reaching out to women farmers. The smallholder women and men farm cooperatives consulted in ActionAid's research were unanimous in saying they were neglected by policy makers on agricultural issues affecting them and that local government representatives never consult them. 'Instead we hear things on radio and TV', one farmer complained, reflecting the general views of others. When asked what they understand a budget to be, most groups claimed to hear about it on the radio, but could not articulate how budgetary processes work and directly affect them. Farmer cooperatives doubt their ability to engage with politicians and government officials in local government because of the influence and power the latter have.

10. Recommendations

Governments should consider the following measures:

Agriculture spending

- In those cases where the 10 per cent target has not been met, governments are urged to allocate at least 10 per cent of their national budgets to agriculture.
- Establish a timetable for reaching this commitment. The African Union should adopt a timeline for reaching this commitment during the 2014 Year of Agriculture and Food Security.
- Examine ways to find the extra resources needed for agriculture (for example, by reducing military spending, increasing taxes and reducing illegal capital flight).

Quality of spending

- Make Ministries in the agriculture sector more accountable for results, rather than outputs and call on Ministries to demonstrate how they will address current internal inefficiencies.
- Invest more in adequate staff training and capacity building in the agriculture sector and improve coordination between and among Ministries by learning from best practice elsewhere.
- Review and address the policy-making and capacity gaps that prevent governments from spending their budgetary allocations.
- On corruption, ensure that the agriculture sector is subject to reviews and investigations by anti-corruption bodies. Subject supplementary funding for government departments to full parliamentary scrutiny. Increase the role of farmer cooperatives and civil society in monitoring agriculture spending at national and district level.

Women farmers

- Reorient agriculture spending and policy to focus on women farmers by dedicating specific budget lines to them, and by better targeting women in extension services and in credit, research and other programmes.
 - *Extension services* need to be overhauled to better support women farmers.
 - *Agricultural research* programmes need to be reviewed to include such measures as promoting the productivity of crops grown by women, to invest more in labour-saving devices and to involve women in research design and dissemination.
 - *Credit schemes* need to be reformed to target larger numbers of women farmers.
 - *Input subsidy programmes*, where these are appropriate, need to have better targeting to ensure that women have at least equal access.
 - *Gender-disaggregated data* needs to be produced or enhanced to support women and to monitor the effectiveness of policies.
- Greater steps should be taken to ensure that women are treated equally under the law and in practice, especially on land ownership.

Box 23: Review policy towards women farmers

Governments should conduct a review of how they will reorient spending to focus on the majority of food and agricultural producers in the country, including issues such as:

- Providing extension services more appropriate to women, in places where they can access information, on the crops grown by them, in formats that are appropriate.
- Providing market facilities and market information for crops grown by women.
- Involving women in research that develops crop varieties and technologies appropriate to them.
- Targeting more women to become members of existing or new cooperatives.
- Providing women heads of household with equal access to premium land.
- Providing incentives for micro-finance institutions to lend more to women.

Focusing on women farmers means addressing issues such as:

- The growing burden of unpaid work must be addressed. Improved investments in infrastructure along with greater investments in labour-saving technologies are needed to address the increasing hours women spend collecting water and fuel as environmental degradation intensifies. Expanding early childhood education or paying welfare benefits directly to mothers would have dual benefits for women and for children themselves.
- Agricultural research must focus on developing improved varieties of the crops grown by women, including those hitherto largely ignored, and involve women in research design, for example through participatory plant breeding, so they can set research priorities.
- Extension services must be targeted specifically at women (untargeted services will benefit men) and involve their participation. This should include training more female extension officers, but also training male officers to meet the needs of women farmers and equip them with communication skills and transport to reach often remote women farmers.
- Women need more secure tenure and increased access to land. Governments must redistribute land to women. In addition they must eliminate all policies and practices that discriminate against women in matters of land rights. Where law reforms have been passed, these need to be effectively implemented.
- Governments must ensure that rural women can access financial services, including credit at levels, and interest rates, that are affordable to smallholder women farmers. With sufficient investment in financial innovation, it is possible to overcome the barriers that women commonly face in accessing credit due to lack of land title.
- Women farmers and farm workers must be involved in the design of all such programmes and services.

Extension services

- In countries where there is low spending, increase resources to extension services. They should focus on reaching as many farmers as possible and be driven by the imperative to increase food security.
- Make significant investments in training extension agents, including women, to ensure that advice and training is provided on the issues that matter to smallholder farmers. These services must cease being top-down and involve the participation of farmers in the design of programmes to ensure they are based on real needs. They must also be provided to poor farmers for free.

Agricultural research

- Reorient agricultural research services to ensure these are driven by the imperative to increase food security and crop productivity, are relevant for women farmers and are focused on supporting sustainable agriculture.
- Cease top-down approaches and develop mechanisms to ensure the broad participation of farmers' groups in research design and implementation.

Sustainable agriculture

- Step up investments in sustainable agriculture and develop a national strategy for encouraging larger number of farmers to practice farming approaches that reduce dependence on chemical inputs.

Agricultural credit

- Review existing credit schemes to understand and remedy why they are still not reaching sufficient numbers of farmers, especially women farmers.
- Introduce or improve government-backed credit subsidy schemes to ensure that: large numbers of farmers have access to small loans at low interest rates; that farmers are aware of such schemes; that the schemes have sufficient capital; and that they are transparently and efficiently managed.

Participation and transparency

- Summon the political will to fundamentally transform the agriculture policy-making culture to make it transparent and participatory. Improve internal systems to track and disseminate information about public agriculture spending and to collect and disseminate detailed data.
- Ensure during the annual budgeting process the systematic participation of farmers' organisations and civil society groups in the design and implementation of agriculture budgets at national and regional/district levels.
- Champion farmers' organisations and movements and work with them to uphold farmers' rights.

References

1. 'FAO Director-General urges increase in agricultural investments', 15 March 2011, <http://www.fao.org/news/story/en/item/52745/icode/>
2. FAO, *The State of Food and Agriculture 2012: Investing in Agriculture*, p.26
3. FAO, *The State of Food and Agriculture 2012: Investing in Agriculture*, p.26
4. Ministry of Finance, Planning and Economic Development, *The Background to the Budget, 2012/13 Fiscal Year*, June 2012, Table 36
5. Ngozi Okonjo-Iweala, *Overview of the 2013 Budget*, 7 March 2013, www.budgetoffice.gov.ng
6. ActionAid/Tax Justice Network Africa, *Tax Competition in East Africa: A Race to the Bottom?*, April 2012
7. Global Financial Integrity, *Illicit Financial Flows from Developing Countries, 2001-10*, December 2012, p.6
8. Republic of Kenya, *Medium Term Expenditure Framework 2013/14 – 2015/16*, October 2012, p.9
9. Republic of Kenya, *Medium Term Expenditure Framework 2011/12 – 2013/14*, January 2011, p.ix
10. State and Federal Government Annual Budgets 2007–2011; State and Federal Government Ministries of Finance; and Account General Report of Gombe and Kwara State
11. In Kenya, salaries amounted to 27 per cent of total agriculture spending in 2010/11 (Republic of Kenya, *Medium Term Expenditure Framework 2011/12 – 2013/14*, January 2011, p.41). In Uganda, around 23 per cent of the MAAIF budget went on administration costs in 2010/11 (FAO, MAFAP, *Review of Food and Agricultural Policies in Uganda 2005-2011*, February 2013, p.154). In Zambia, 25 per cent of the Ministry of Agriculture and Cooperatives' 2011 budget went to personal emoluments (ie, mainly salaries) and recurrent departmental charges. (Antony Chapoto, 'What is the 2011 National Budget for Zambian Agriculture', Presentation, 19 October 2010, p.18)
12. Interview with MP, Kampala, February 2013
13. <http://www.kilimo.go.ke/>; accessed 21 April 2011
14. Interview in Nairobi, November 2009
15. Dickson Khainga et al, 'Governance in Public Expenditure Management: Key Issues and Challenges in Kenya', *Discussion Paper 77*, 2007, pp.14-15
16. See, for example, ActionAid, *Fertile Ground: How governments and donors can halve hunger by supporting small farmers*, April 2010
17. Republic of Burundi, *Poverty Reduction Strategy Paper*, September 2006, p.38
18. IFAD, Republic of Burundi: Country Strategic Opportunities Programme, September 2008, p.1
19. SEND, 'Putting words into action: Strategic financing of smallholder agricultural development for food security and poverty reduction', undated
20. Patrick Alila and Rosemary Atieno, 'Agricultural Policy in Kenya: Issues and Processes: Paper for the Future Agricultures Consortium', IDS/University of Nairobi, July 2006, pp.4, 12
21. 'Nigeria: Women in Agriculture', in World Bank, *Sharing Experiences—Examples of Participating Approaches, The Participation Sourcebook*, 2003, <http://www.worldbank.org/wbi/publications.htm>
22. Federal Republic of Nigeria, *National Gender Policy*, 2006, http://www.aacoalition.org/national_policy_women.htm
23. AfDB, Rwanda Gender Assessment: Progress Towards Improving Women's Economic Status, 2008, p.20, <http://www.afdb.org/en/countries/east-africa/rwanda/>
24. AfDB, Rwanda Gender Assessment: Progress Towards Improving Women's Economic Status, 2008, p.21, <http://www.afdb.org/en/countries/east-africa/rwanda/>
25. MAAIF, *Statistical Abstract 2011*, p.vii; MAAIF, *Agriculture Sector Development Strategy and Investment Plan, 2010/11 – 2014/15*, July 2010, p.30
26. Forum for Women and Democracy (FOWODE), *Gender Policy Brief for Uganda's Agriculture Sector*, 2012, pp.4-8
27. Republic of Zambia, *Sixth National Development Plan, 2011-15*, January 2011, p.108
28. African Development Bank, Republic of Zambia: Multi-Sector Country Gender Profile, April 2006, p.10
29. FAO, *The State of Food and Agriculture 2010-11*, p.5. If women farmers in Kenya had the same access to farm inputs and education as men food yields could increase by 22 per cent and the GDP growth rate would have doubled in 2004 from 4.3 per cent to 8.3 per cent. It is estimated that in Ghana if women had equal access to land and fertilizer as men, farm profits per hectare would double and that in Burkina Faso and Tanzania, provision of equal inputs and education to women as men could increase business incomes by 20 per cent. IFAD, FAO and World Bank, *Gender in Agriculture sourcebook*, 2009, p.522; 'Women in agriculture: The critical food producers', 15 October 2008, www.fao.org

30. Tewodaj Moques et al, *The Impacts of Public Investment In and For Agriculture: Synthesis of the Existing Evidence*, IFPRI, October 2012, p.18, 42, 10. In Uganda, for example, a study of public spending on extension found that the benefit/cost ratio ranged from 1.3 to 2.7 (reflecting different ways of estimating the benefits). This translates to an internal rate of return of 8-36 per cent.
31. Kamiljon Akramov, 'Decentralisation, agricultural services and determinants on input use in Nigeria', Nigeria strategy support program, Brief No.16, p.2, www.resakss.org
32. A 2005 survey found that 77per cent of farmers 'never' saw an extension worker, 5per cent did so 'very often', 7per cent 'often' and 11per cent 'rarely'. http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2009/07/14/000333037_20090714002021/Rendered/PDF/487740ESW0P1021C0Disclosed071131091.pdf, p.5
33. Republic of Burundi, Budgetary Laws 2009, 2010, 2011
34. Interviews with MOFA officials and academics, Accra, March 2011
35. Republic of Kenya, *Medium Term Expenditure Framework 2011/12 – 2013/14*, January 2011, p.39-40. Figures here show Kshs 5.9 billion allocated to agriculture extension under Crop Development and Management, Kshs 529 million to advisory and extension services under Cooperative Development and Management, and Kshs 906 million to livestock extension and capacity building under Livestock Resources Management and Development
36. Calculated from the Annual Budget of the States and the Federal Government
37. Government of Rwanda, *Agriculture Sector Investment Plan*, 2009-12, Annex 3
38. Proportion allocated to NAADS in 2012/13 budget. Republic of Uganda, *Background to the Budget, 2013/14*, June 2013, Table 36
39. This is the budget allocation to Agricultural Services & Technology Development (K60.8 billion) – which includes spending on ARD and extension - out of total agriculture budget listed in this table of ZK 1,182 billion; *Green Paper 2008-10* at http://www.mofnp.gov.zm/index.php?option=com_docman&task=cat_view&gid=66&Itemid=122, p.17. Jones Govereh et al note that in recent years, the government has devoted just 4 per cent to extension and agricultural research combined, and that 75 per cent of that 4 per cent goes on salaries. 'Trends in agricultural and poverty indicators in Zambia', *Resakss policy brief*, June 2007, p.3.
40. James Thurlow et al, 'Agricultural Growth and Investment Options for Poverty Reduction in Zambia', *ReSAKSS Working Paper no. 19*, November 2008, p.53
41. NEPAD, Comprehensive Africa Agriculture Development Programme, November 2002, Section 5.7
42. Republic of Burundi, Budgetary Laws 2009, 2010, 2011
43. As with some other budget items, pinning down exact levels of expenditure on ARD is not easy in Ghana. Official sources indicate that the government allocated around 15 per cent of agricultural sector spending to ARD during 2007-09, amounting to an average of GH¢ 81 million a year. (MOFEP, 2010, source given to authors). Yet other sources estimate an allocation of around 22 per cent of the budget. (Babatunde Omilola, Comprehensive monitoring and evaluation report for the Comprehensive African Agriculture Development Programme, April 2010, p.12, www.resakss.org). However, very different figures are provided by Agricultural Science and Technology Indicators (ASTI) – a trusted global source of data managed by IFPRI - which estimates that Ghana spent GH¢ 352 million in 2008 (at 2005 prices), which represents a large increase over previous years. (ASTI, 'Ghana: Recent Developments in Agricultural Research', *Country Note*, June 2010)
44. Figures are for the budget allocation to 6 research institutes (KARI, KEFRI, KMFRI, KESREF, TRFK and CRF). Republic of Kenya, *Medium Term Expenditure Framework 2013/14 – 2015/16*, October 2012, pp.51-2
45. These are figures for the allocations to various Nigerian research institutes. *2013 Budget Proposal*, Agriculture and Rural development, www.budgetoffice.gov.ng
46. Annex II – 1, <http://www.minecofin.gov.rw/ministry/key/budget>, accessed March 2012
47. Government of Rwanda, *Agriculture Sector Investment Plan*, 2009-12, Annex 3
48. Proportion allocated to NARO in 2012/13 budget. Republic of Uganda, *Background to the Budget, 2013/14*, June 2013, Table 36
49. This is the allocation to the country's principal research institute, the Zambia Agriculture Research Institute (ZARI), and its 10 agricultural research stations in 2011 (excluding fisheries and livestock research). Republic of Zambia, *Estimates of Revenue and Expenditure for the year 2011* (The Yellow Book)
50. MAAIF, Development strategy and investment plan, 2009/10-2013/14, Second Draft, July 2009, p.48
51. Government of Ghana, Medium Term Agriculture Sector Investment Plan, 2011-2015, September 2010, p.48
52. Catherine Ragasa, 'Strengthening the Innovation Capacity of Nigerian Agricultural Research organisations', *IFPRI Discussion Paper*, December 2010, p.61
53. See, for example, ActionAid, Fed Up: Now's the time to invest in agro-ecology, June 2012; ActionAid, Asia at the Crossroads: Prioritising conventional farming or sustainable agriculture?, February 2012; UN Human Rights Council, Report Submitted by the Special Rapporteur on the Right to Food, Olivier de Schutter, 20 December 2010; Oxfam, Growing a Better Future: Food justice in a resource-constrained world, July 2011; Christian Aid, Healthy Harvests: The benefits of sustainable agriculture in Africa and Asia, September 2011
54. Jules Pretty, 'Agroecological Approaches to Agricultural Development', Background Paper for the World Development Report 2008, 2008, p.3
55. UN Special Rapporteur on the Right to Food, *AgroEcology and the Right to Food*, December 2010, para 20

56. World Agro-Forestry Centre, A Rural Revival in Tanzania: How Agro-forestry is helping farmers to restore the woodlands in Shinyanga Region, 2010, www.worldagroforestry.org/downloads/publications/PDFs/B16751.PDF
57. World Bank, Basic Agricultural Public Expenditure Diagnostic Review, Final Draft, April 2013, p.xii
58. C.Okojie ed al, 'Institutional Environment and Access to Microfinance by Self-employed Women in the Rural Areas of Edo State', *NSSP Brief No. 14*, IFPRI, 2010
59. SEND-West Africa, *Investing in Smallholder Agriculture for Optimal Result: The ultimate policy choice for Ghana*, 2010, p.42. A study of farmers in the three Northern regions found that access to credit was 11 per cent in Upper East, 14 per cent in Northern Region and 19 per cent in Upper West; Wilhemina Quaye, 'Food security situation in northern Ghana, coping strategies and related constraints', *African Journal of Agricultural Research*, Vol.3, May 2008, p.338.
60. ActionAid field research undertaken in West Pokot, Greater Trans Nzoia and Greater Kakamega.
61. Idris Badiru, 'Review of Small Farmer Access to Agricultural Credit in Nigeria', *NSSP, Policy Note No.25*, IFPRI, undated, p.2
62. AfDB, Rwanda Gender Assessment: Progress Towards Improving Women's Economic Status, 2008, p.20, <http://www.afdb.org/en/countries/east-africa/rwanda/>
63. MAAIF, Statistical Abstract 2011, p.vii
64. FAO, MAFAP, Review of Food and Agricultural Policies in Uganda 2005-2011, February 2013, p.158
65. UN, High-Level Panel of Experts on Food Security and Nutrition, *Investing in Smallholder Agriculture for Food Security*, June 2013, p.12
66. CAADP, *Highlighting the Successes*, November 2010, p.23
67. See Aprovez, *Agricultural Research in Africa: Why CAADP should follow IAASTD*, May 2012, pp.13-14
68. 'FAO Director-General urges increase in agricultural investments', 15 March 2011, <http://www.fao.org/news/story/en/item/52745/icode/>
69. FAO, State of Food Insecurity in the World 2013, p.42
70. Republic of Burundi, *Poverty Reduction Strategy Paper*, September 2006, p.38
71. IFAD, Republic of Burundi: Country Strategic Opportunities Programme, September 2008, p.1
72. FAO, State of Food Insecurity in the World 2011, p.44
73. IFAD, Republic of Burundi: Country Strategic Opportunities Programme, September 2008, p.3
74. World Bank, *Agro-Pastoral Productivity and Markets Development Project*, Project Appraisal Document, 6 April 2010, p.1
75. Republic of Burundi, *Poverty Reduction Strategy Paper*, September 2006
76. UNECA, An Overview of the Food Security Situation in Eastern Africa, 2010, p.
77. Netherlands Embassy Office Bujumbura-Burundi, 'Multi-annual Strategic Plan 2012-2015', 2011.<http://www.rijksoverheid.nl/bestanden/documenten-en-publicaties/jaarplannen/2012/02/15/meerjarige-strategische-plannen-burundi/meerjarige-strategische-plannen-burundi.pdf>
78. Ghana Statistical Service, '2010 Population and Housing Census', February 2011; MOFA, *Agriculture in Ghana: Facts and Figures 2009*, April 2010, p.7
79. Ghana Statistical Service, *Ghana Living Standards Survey*, September 2008, p.vii ; Government of Ghana, *Medium Term Agriculture Sector Investment Plan*, 2011-2015, September 2010, p.13
80. MOFA, *Agriculture in Ghana: Facts and Figures 2009*, April 2010, p.8
81. African Development Fund, *Ghana Country Gender Profile*, October 2008, p.17
82. MOFEP, *Budget Statement and Economic Policy for 2011*, p.19, www.mofep.gov.gh; 'Agriculture for Development in Ghana: New opportunities and challenges', Resakss Issue Brief, August 2009, p.1
83. SEND, 'Putting words into action: Strategic financing of smallholder agricultural development for food security and poverty reduction', undated
84. African Development Fund, *Ghana Country Gender Profile*, October 2008, p.3
85. These are, however, figures from the late 1990s. MOFA, *Gender and Agricultural Development Strategy*, undated, section 1.4
86. These are, however, figures from the late 1990s. MOFA, *Gender and Agricultural Development Strategy*, undated, section 1.4
87. Republic of Ghana, Ghana: Review of Ongoing Agricultural Development Efforts, undated, p.2, www.resakss.org
88. MOFA, *Agriculture in Ghana: Facts and Figures 2009*, April 2010, p.12
89. Shashhidhara Kolavilli at al, 'Do CAADP Processes Make a Difference to Country Commitments to Develop Agriculture?: The Case of Ghana', *IFPRI Discussion Paper*, July 2010, p.4

90. Government of Ghana, Medium Term Agriculture Sector Investment Plan, 2011-2015, September 2010, p.23
91. FAO, State of Food Insecurity in the World 2010, p.52
92. 'Agriculture for Development in Ghana: New opportunities and challenges', *Resakss Issue Brief*, August 2009, p.1
93. FAO, State of Food Insecurity in the World 2010, p.52; <http://www.fao.org/countries/55528/en/gha/>; Government of Ghana, Medium Term Agriculture Sector Investment Plan, 2011-2015, September 2010, p.13
94. Government of Ghana, Medium Term Agriculture Sector Investment Plan, 2011-2015, September 2010, p.13
95. Wilhemina Quaye, 'Food security situation in northern Ghana, coping strategies and related constraints', *African Journal of Agricultural Research*, Vol.3, May 2008, p.339
96. 'Government to support traditional areas to produce local crops', GNA, 8 November 2010
97. 'Agriculture for Development in Ghana: New opportunities and challenges', *Resakss Issue Brief*, August 2009, p.3
98. Republic of Ghana, Ghana: Strategic Options and Sources for Agricultural growth, Poverty Reduction and Food Security, undated, p.2, [www-resakss.org](http://www.resakss.org)
99. Government of Ghana, Medium Term Agriculture Sector Investment Plan, 2011-2015, September 2010, p.15
100. This includes pastoralism. Ministry of Agriculture, Strategic Plan 2008-2012, para 1.1; Patrick Allia and Rosemary Atieno, 'Agricultural Policy in Kenya: Issues and Processes: Paper for the Future Agricultures Consortium', IDS/University of Nairobi, July 2006, p.3; James Thurlow et al, 'Rural Investments to Accelerate Growth and Poverty Reduction in Kenya', *IFPRI Discussion Paper 00723*, October 2007, p.6
101. Patrick Allia and Rosemary Atieno, 'Agricultural Policy in Kenya: Issues and Processes: Paper for the Future Agricultures Consortium', IDS/University of Nairobi, July 2006, pp.4, 12
102. Republic of Kenya, Medium Term Expenditure Framework 2011/12 – 2013/14, January 2011, p.viii
103. Government of Kenya, *Medium-Term Investment Plan*, 2010-2015, undated, p.14
104. Government of Kenya, *Medium-Term Investment Plan*, 2010-2015, undated, p.23; Patrick Allia and Rosemary Atieno, 'Agricultural Policy in Kenya: Issues and Processes: Paper for the Future Agricultures Consortium', IDS/University of Nairobi, July 2006, p.11
105. Government of Kenya, Central Bureau of Statistics-Geographical Dimensions of Well Being, Volume II, 2005; IFAD, 'Rural poverty in Kenya', <http://www.ruralpovertyportal.org/web/guest/country/home/tags/kenya>
106. FAO, State of Food Insecurity in the World 2010, p.15
107. Government of Kenya, *Medium-Term Investment Plan*, 2010-2015, undated, p.14
108. Government of Kenya, *Medium-Term Investment Plan*, 2010-2015, undated, p.19
109. Government of Kenya, *Medium-Term Investment Plan*, 2010-2015, undated, p.32
110. Government of Kenya, *Medium-Term Investment Plan*, 2010-2015, undated, p.21
111. Ministry of Planning, National Development and Vision 2030, *Public Expenditure Review: Policy for Prosperity 2010*, p.130
112. World Bank, Project Appraisal Document: Commercial Agriculture Development Project, 18 December 2008, p.28; Federal Republic of Nigeria, National Agricultural Investment Plan 2011-14, September 2010, p.21
113. 'Nigeria: Women in Agriculture', in World Bank, *Sharing Experiences—Examples of Participating Approaches, The Participation Sourcebook*, 2003, <http://www.worldbank.org/wbi/publications.htm>
114. Federal Republic of Nigeria, *National Gender Policy*, 2006, http://www.aacoalition.org/national_policy_women.htm
115. USAID/Nigeria, 'Strategy 2010-2013', p.10, <http://nigeria.usaid.gov/>
116. Rekha Mehra and Mary Hill Rojas, *Women, Food Security and Agriculture in a Global Marketplace: A Significant Shift*, International Center for Research on Women, Washington D.C., 2008
117. Christiana Okojie, 'Decentralisation and Public Service Delivery in Nigeria', *NSSP Background Paper 4*, IFPRI, September 2009, p.38
118. World Economic Outlook, April 2012
119. Federal Republic of Nigeria, *National Agricultural Investment Plan 2011-14*, September 2010, p.18
120. Lenis Sawada Liverpool-Tasie, 'A review of Literature on Agricultural Productivity, Social Capital and Food Security in Nigeria', *NSSP Working Paper 27*, October 2011, p.8
121. Lenis Sawada Liverpool-Tasie, 'A review of Literature on Agricultural Productivity, Social Capital and Food Security in Nigeria', *NSSP Working Paper 27*, October 2011, p.28
122. Christiana Okojie, 'Decentralisation and Public Service Delivery in Nigeria', *NSSP Background Paper 4*, IFPRI, September 2009, p.37

123. Federal Republic of Nigeria, *National Agricultural Investment Plan 2011-14*, September 2010, p.18
124. Federal Republic of Nigeria, *National Agricultural Investment Plan 2011-14*, September 2010, p.21
125. Federal Republic of Nigeria, *National Agricultural Investment Plan 2011-14*, September 2010, pp.21-2
126. Lenis Sawada Liverpool-Tasie, 'A review of Literature on Agricultural Productivity, Social Capital and Food Security in Nigeria', *NSSP Working Paper 27*, October 2011, p.13
127. Federal Republic of Nigeria, *Strategic Options and Sources for Agricultural Growth, Poverty Reduction and Food Security*, undated, www.resakss.org
128. Ephraim Nkonya et al, 'Options for Enhancing Agricultural Productivity in Nigeria', *NSSP Background Paper 11*, IFPRI, January 2010, p.1
129. Ephraim Nkonya et al, 'Options for Enhancing Agricultural Productivity in Nigeria', *NSSP Background Paper 11*, IFPRI, January 2010, p.1
130. Federal Republic of Nigeria, *National Agricultural Investment Plan 2011-14*, September 2010, p.15
131. AfDB, *Rwanda Gender Assessment: Progress Towards Improving Women's Economic Status*, 2008, p.20, <http://www.afdb.org/en/countries/east-africa/rwanda/>
132. AfDB, *Rwanda Gender Assessment: Progress Towards Improving Women's Economic Status*, 2008, p.21, <http://www.afdb.org/en/countries/east-africa/rwanda/>
133. 29 per cent of the total rural population, according to IFAD (IFAD, Rural Poverty Portal: <http://www.ruralpovertyportal.org/web/guest/country/home/tags/rwanda>) or a quarter of all households, according to the government (Government of Rwanda, *Strategic Plan for the Transformation of Agriculture in Rwanda (PSTA II)*, Final report, February 2009, p.33)
134. At an average birth rate of 4.81 children born per woman.
135. Ministry of Lands, Environment, Forestry, Water and Mines, 'Rwanda Ecosystem Rehabilitation and Poverty Eradication Programme, Draft concept note', Kigali, January 30, 2008, p. 1.
136. MAAIF, *Agriculture Sector Development Strategy and Investment Plan, 2010/11 – 2014/15*, July 2010, p.xiii
137. World Bank, *Uganda: Promoting Inclusive Growth – Transforming farms, human capital and economic geography*, February 2012, p.24
138. MAAIF, *Agriculture Sector Development Strategy and Investment Plan, 2010/11 – 2014/15*, July 2010, p.6
139. MAAIF, *Agriculture Sector Development Strategy and Investment Plan, 2010/11 – 2014/15*, July 2010, p.27
140. MAAIF, *Statistical Abstract 2011*, p.vii; MAAIF, *Agriculture Sector Development Strategy and Investment Plan, 2010/11 – 2014/15*, July 2010, p.30
141. Forum for Women and Democracy (FOWODE), *Gender Policy Brief for Uganda's Agriculture Sector*, 2012, pp.4-8
142. Ministry of Finance, Planning and Economic Development, *Poverty Status Report*, May 2012, p.ix
143. MAAIF, *Agriculture Sector Development Strategy and Investment Plan, 2010/11 – 2014/15*, July 2010, p.xiii
144. Uganda Strategy Support Program, *Rural-Urban Transformation in Uganda*, May 2011, p.15
145. MAAIF, *Agriculture Sector Development Strategy and Investment Plan, 2010/11 – 2014/15*, July 2010, p.i
146. Ministry of Finance, Planning and Economic Development, *The Background to the Budget, 2012/13 Fiscal Year*, June 2012, p.101
147. MAAIF, *Proposed Plan to Operationalise the Non-ATAAS Component of the Agriculture Sector Development Strategy and Investment Plan*, November 2012, p.11
148. MAAIF, *Statistical Abstract 2011*, p.1
149. MAAIF, *Agriculture Sector Performance: The Second Joint Agriculture Sector Annual Review*, November 2012, p.11
150. World Bank, *Uganda: Promoting Inclusive Growth – Transforming farms, human capital and economic geography*, February 2012, pp.28-9
151. MAAIF, *Agriculture Sector Development Strategy and Investment Plan, 2010/11 – 2014/15*, July 2010, p.i
152. MAAIF, *Agriculture Sector Development Strategy and Investment Plan, 2010/11 – 2014/15*, July 2010, pxiv
153. Jones Govereh et al, 'Trends and Spatial Distribution of Public Agricultural Spending in Zambia: Implications for Agricultural Productivity Growth', *ReSAKSS Working Paper No.26*, February 2009, p.9
154. Estimates of the number of farming households in Zambia vary from 1.1 to 1.5 million.
155. http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2009/07/14/000333037_20090714002021/Rendered/PDF/487740ESWOP1021C0Disclosed071131091.pdf, p.3; James Thurlow et al, 'Agricultural Growth and Investment Options for Poverty Reduction in Zambia', *ReSAKSS Working Paper no.19*, November 2008, p.8
156. Jones Govereh et al, 'Trends and Spatial Distribution of Public Agricultural Spending in Zambia: Implications for Agricultural Productivity Growth', *ReSAKSS Working Paper No.26*, February 2009, p.9

157. Republic of Zambia, *Sixth National Development Plan, 2011-15*, January 2011, p.108
158. African Development Bank, Republic of Zambia: Multi-Sector Country Gender Profile, April 2006, p.10
159. <http://www.fao.org/docrep/008/j5511e/j5511e00.HTM>, section 6.2
160. T.Jayne et al, 'Access to Land and Poverty Reduction in Rural Zambia: Connecting the Policy issues', Food Security Research project, September 2009, p.4
161. James Thurlow et al, 'Agricultural Growth and Investment Options for Poverty Reduction in Zambia', *ReSAKSS Working Paper no.19*, November 2008, p.11
162. Antony Chapoto, 'What is the 2011 National Budget for Zambian Agriculture', Presentation, 19 October 2010, p.32
163. Republic of Zambia, Mid-Term Review: Fifth National Development Plan, 2006-2010, October 2009, p.53
164. Antony Chapoto, 'What is the 2011 National Budget for Zambian Agriculture', Presentation, 19 October 2010, p.4
165. 'Six Percent Agricultural Growth Promotes Poverty Reduction in Zambia', *ReSAKSS Issue Brief, No.17*, October 2009, p.1
166. Republic of Zambia, Mid-Term Review: Fifth National Development Plan, 2006-2010, October 2009, p.40
167. FAO, State of Food Insecurity in the World 2010, p.52
168. Jones Govereh et al, 'Trends and Spatial Distribution of Public Agricultural Spending in Zambia: Implications for Agricultural Productivity Growth', *ReSAKSS Working Paper No.26*, February 2009, p.21
169. Jones Govereh et al, 'Trends and Spatial Distribution of Public Agricultural Spending in Zambia: Implications for Agricultural Productivity Growth', *ReSAKSS Working Paper No.26*, February 2009, p.9
170. Republic of Zambia, Mid-Term Review: Fifth National Development Plan, 2006-2010, October 2009, p.40
171. Republic of Zambia, Mid-Term Review: Fifth National Development Plan, 2006-2010, October 2009, p.53
172. Republic of Zambia, *Sixth National Development Plan, 2011-15*, January 2011, p.23. Emphasis added
173. FAO, The State of Food and Agriculture 2012: Investing in Agriculture, p.26
174. In 2007, governments in sub-Saharan Africa spent allocated 4.4 per cent of their budgets to agriculture and 5.8 per cent to defence. Tewodaj Moques et al, *The Impacts of Public Investment In and For Agriculture: Synthesis of the Existing Evidence*, IFPRI, October 2012, p.13
175. FAO, The State of Food and Agriculture 2012, p.24
176. FAO, The State of Food Insecurity in the World 2012, p.28
177. FAO, The State of Food and Agriculture 2012, p.58
178. Cited in Kevin Cleaver, 'Scaling Up Agriculture, Rural Development and Nutrition', IFPRI, *Focus 19, Brief 2*, June 2012, p.1
179. UNEP, Towards a Green Economy: Pathways to Sustainable Development and Poverty Eradication, 2011, p.36
180. UN, Office of the High Commissioner for Human Rights, Mandate of the Special Rapporteur to the Right to Food, *Mission to the People's Republic of China from 15 to 23 December 2010*, 23 December 2010, p.2.
181. Dang Kim Son et al, 'Policy Reform and the Transformation of Vietnamese Agriculture', in FAO, *Rapid Growth of Selected Asian Economies*, 2006, p.16.
182. Revenue Court Law laying down the budget of the Republic of Burundi, from 2004 – 2011. In addition to MINAGRIE, three other ministries – those of Environment, Justice and Education – also contribute to agriculture spending, though it has not been possible to ascertain precisely how much
183. Resakss, '2012 Agricultural Expenditure Data', <http://www.resakss.org/region/africa-wide/growth-options>
184. Agriculture spending is spread across various government ministries and departments. These figures include allocations to: the MOFA, the Forestry Commission in the Ministry of Land and Natural Resources, a dozen agriculture-related research institutes in the Council for Scientific Research, the Ghana Cocoa Board, debt servicing related to agriculture and Presidential Special Initiatives (in the Office of the President. The figures come from a table provided by the Ministry of Finance and Economic Planning but our research has not been able to produce similar, disaggregated figures for later budgets since it is unclear where some of the comparable budget lines lie. The budget allocation to MOFA itself, and other Ministries, is given in budget speeches and other documents, but is misleading by itself.
185. Resakss, '2012 Agricultural Expenditure Data', <http://www.resakss.org/region/africa-wide/growth-options>
186. World Bank, Basic Agricultural Public Expenditure Diagnostic Review, Final Draft, April 2013, p.35
187. Refers to spending on 'Agriculture and Rural Development', meaning 6 ministries: those of Agriculture, Livestock Development, Fisheries Development, Cooperative Development and Marketing, Lands, and Forestry & Wildlife, Republic of Kenya, *Budget Policy Statement*, April 2013 and April 2012, www.finance.go.ke; Republic of Kenya, *Medium Term Expenditure Framework 2011/12 – 2013/14*, January 2011, p.ix
188. Resakss, '2012 Agricultural Expenditure Data', <http://www.resakss.org/region/africa-wide/growth-options>

189. State and Federal Government Annual Budgets, 2007–2011. These figures are for 'Agriculture and Rural Development', which do not include Lands & Housing, Environment or Water Resources They do not include allocations to the states of Nigeria, which are also low.
190. Resakss, '2012 Agricultural Expenditure Data', <http://www.resakss.org/region/africa-wide/growth-options>
191. FRW 60.9 billion out of FRW 984 billion. Annex II – 1, <http://www.minecofin.gov.rw/ministry/key/budget> accessed March 2012
192. Resakss, '2012 Agricultural Expenditure Data', <http://www.resakss.org/region/africa-wide/growth-options>
193. Figures include spending on the entire agriculture sector, including MAAIF, NAADS, NARO, Dairy Development Authority, Uganda Cotton development Organisation and Uganda Coffee Development Authority. Government of Uganda, Ministry of Finance, Planning and Economic Development, *National Budget Framework Paper, FY 2009/10 – FY 2013/2014*, March 2009
194. Figures include spending on the entire agriculture sector, including MAAIF, NAADS, NARO, Dairy Development Authority, Uganda Cotton development Organisation and Uganda Coffee Development Authority. Ministry of Finance, Planning and Economic Development, *The Background to the Budget, 2012/13 Fiscal Year*, June 2012, Table 36
195. Resakss, '2012 Agricultural Expenditure Data', <http://www.resakss.org/region/africa-wide/growth-options>
196. The Ministry of Agriculture and Cooperatives (MACO) and the Ministry of Livestock Development (MOLD) were recently merged into the Ministry of Agriculture and Livestock (MAL). Our analysis in this report refers to MACO since it was mainly undertaken before the merger
197. Budget Speeches, years 2009-12, www.mofnp.gov.zm. These are allocations to 'agriculture, forestry and fishing' and appear to include allocations to the Ministry of Agriculture and Cooperatives and the Ministry of Livestock and Fisheries Development, but do not appear to include allocations from other ministries
198. Resakss, '2012 Agricultural Expenditure Data', <http://www.resakss.org/region/africa-wide/growth-options>
199. This includes allocations to MACO and MOLD plus small allocations from other Ministries. Republic of Zambia, *Fifth National Development Plan, 2006-2010*, December 2006, p.8; Republic of Zambia, *Estimates of Revenue and Expenditure for the year 2010, and Estimates of Revenue and Expenditure for the year 2011* (The Yellow Book)
200. Desire Nimubona, 'Burundi government to boost agriculture budget, Renouveau says', 12 January 2012, www.bloomberg.com
201. World Bank, Basic Agricultural Public Expenditure Diagnostic Review, Final Draft, April 2013, p.35
202. Republic of Ghana, Ghana: Long-Term Funding for Agricultural Growth, Poverty Reduction and Food Security, undated, p3, www.resakss.org
203. Republic of Ghana, Ghana: Long-Term Funding for Agricultural Growth, Poverty Reduction and Food Security, undated, p3, www.resakss.org
204. Government of Ghana, Medium Term Agriculture Sector Investment Plan, 2011-2015, September 2010, p.v
205. Ministry of Finance, 2011 Appropriation: Summary of Expenditure by Function, Economic Item and Funding, www.mofep.gov.gh
206. Republic of Kenya, Medium Term Expenditure Framework 2013/14 – 2015/16, October 2012, pp.8, 12
207. Government of Kenya, *Medium-Term Investment Plan, 2010-2015*, undated, p.48
208. James Thurlow et al, 'Rural Investments to Accelerate Growth and Poverty Reduction in Kenya', *IFPRI Discussion Paper 00723*, October 2007, pp.26, 28
209. Xinshen Diao et al, 'Agricultural Growth and Investment Options for Poverty Reduction in Nigeria', *IFPRI Discussion Paper*, February 2010, p.49
210. Resakss, '2012 Agricultural Expenditure Data', <http://www.resakss.org/region/africa-wide/growth-options>
211. FRW 60.9 billion out of FRW 984 billion. Annex II – 1, <http://www.minecofin.gov.rw/ministry/key/budget> , accessed March 2012
212. Government of Rwanda, Strategic Plan for the Transformation of Agriculture in Rwanda (PSTA II), Final report, February 2009, p.6
213. IFPRI, Agricultural Growth and Investment Options for Poverty Reduction in Rwanda, 2010, p.58, <http://www.ifpri.org/publication/agricultural-growth-and-investment-options-poverty-reduction-rwanda-0>
214. IFPRI, Agricultural Growth and Investment Options for Poverty Reduction in Rwanda, 2010, p.xiii, <http://www.ifpri.org/publication/agricultural-growth-and-investment-options-poverty-reduction-rwanda-0>
215. Government of Rwanda/NEPAD, Rwanda: Long-Term Funding for Agricultural Growth, Poverty Reduction and Food Security, undated, p.1, www.resakss.org
216. Ministry of Finance, Planning and Economic Development, *The Background to the Budget, 2012/13 Fiscal Year*, June 2012, Table 36
217. Samuel Benin et al, 'Agricultural growth and investment options for poverty reduction in Uganda', *IFPRI discussion paper 00790*, September 2008, p.17
218. Samuel Benin et al, 'Agricultural growth and investment options for poverty reduction in Uganda', *IFPRI discussion paper 00790*, September 2008, pp.38-9
219. MAAIF/CAADP, Uganda: Long-term funding for agricultural growth, poverty reduction and food and nutrition security, October 2009, p.1

220. In 2008, for example, the allocation to the agriculture sector was ZK 539 billion but disbursements were ZK 793 billion, amounting to 7 per cent of the budget Ministry of Finance and National Planning, *Economic Report 2008*, p.48
221. Republic of Zambia, *Sixth National Development Plan, 2011-15*, January 2011, p.23
222. 'Six Percent Agricultural Growth Promotes Poverty Reduction in Zambia', *ReSAKSS Issue Brief, No.17*, October 2009, p.1
223. 'Six Percent Agricultural Growth Promotes Poverty Reduction in Zambia', *ReSAKSS Issue Brief, No.17*, October 2009, p.2
224. FAO, MAFAP, Review of Food and Agricultural Policies in Uganda 2005-2011, February 2013, pp.146-9
225. FAO, MAFAP, Review of Food and Agricultural Policies in Kenya 2005-2011, February 2013, p.43
226. Budget Speech, 5 March 2013, www.mofep.gov.gh
227. Ministry of Finance, Planning and Economic Development, *The Background to the Budget, 2012/13 Fiscal Year*, June 2012, Table 36
228. Ngozi Okonjo-Iweala, *Overview of the 2013 Budget*, 7 March 2013, www.budgetoffice.gov.ng
229. Saviour Mwambwa et al, *A Fool's Paradise?: Zambia's Mining Tax Regime*, Centre for Trade Policy and Development, December 2010
230. The Minerals and Mining Act of 2006 allows royalties to be charged on a sliding scale of between 3 and 6 per cent, but no company has ever paid more than 3 per cent. This has led to considerable lost revenues. See Christian Aid et al, *Breaking the Curse: How Transparent Taxation and Fair Taxes can turn Africa's Mineral Wealth into Development*, March 2009, pp.ix, 29
231. Wilson Pritchard, *Taxation and Development in Ghana: Finance, Equity and Accountability*, April 2009, p.9
232. ActionAid/Tax Justice Network Africa, *Tax Competition in East Africa: A Race to the Bottom?*, April 2012
233. African Development Bank, *Domestic Resource Mobilisation for Poverty Reduction in East Africa: Uganda Case Study*, November 2010, p.20. See ActionAid/Tax Justice Network Africa, *Tax Competition in East Africa: A Race to the bottom? – Tax incentives and revenue losses in Uganda*, April 2012, p.iv
234. Global Financial Integrity, *Illicit Financial Flows from Developing Countries, 2001-10*, December 2012, p.6
235. Wilson Pritchard, *Taxation and Development in Ghana: Finance, Equity and Accountability*, April 2009, p.29
236. ActionAid, *Calling Time: Why SAB Miller Should Stop Dodging Taxes in Africa*, November 2010
237. Society for International Development, *Pulling Apart: Facts and Figures on Inequality in Kenya, 2004*, p.v
238. Tewodaj Moques et al, *The Impacts of Public Investment In and For Agriculture: Synthesis of the Existing Evidence*, IFPRI, October 2012, p.25
239. MACO has recently merged with the Ministry of Livestock Development to become the Ministry of Agriculture and Livestock (MAL)
240. Jones Govereh et al, 'Trends and Spatial Distribution of Public Agricultural Spending in Zambia: Implications for Agricultural Productivity Growth', *ReSAKSS Working Paper No.26*, February 2009, p.12
241. Federico Bonaglia, *Zambia: Sustaining Agricultural Diversification*, OECD, 2008, p.30
242. MAAIF, *Agriculture Sector Development Strategy and Investment Plan, 2010/11 – 2014/15*, July 2010, p.91
243. MAAIF, *Agriculture Sector Development Strategy and Investment Plan, 2010/11 – 2014/15*, July 2010, p.91
244. MAAIF, *Proposed Plan to Operationalise the Non-ATAAS Component of the Agriculture Sector Development Strategy and Investment Plan*, November 2012, pp.44-5
245. Republic of Kenya, *Medium Term Expenditure Framework 2013/14 – 2015/16*, October 2012, p.9
246. Republic of Kenya, *Medium Term Expenditure Framework 2011/12 – 2013/14*, January 2011, p.ix
247. State and Federal Government Annual Budgets 2007–2011; State and Federal Government Ministries of Finance; and Account General Report of Gombe and Kwara State
248. World Bank, *Basic Agricultural Public Expenditure Diagnostic Review, Final Draft*, April 2013, p.xii
249. Shashidhara Kolavilli et al, 'Institutional and Public Expenditure Review of Ghana's Ministry of Food and Agriculture', *IFPRI Discussion Paper*, August 2010
250. Budget speech for the 2011 financial year, 18 November 2010, p.48, www.mofep.gov.gh
251. Budget speech for the 2011 financial year, 18 November 2010, p.48, www.mofep.gov.gh
252. Shashidhara Kolavilli et al, 'Institutional and Public Expenditure Review of Ghana's Ministry of Food and Agriculture', *IFPRI Discussion Paper*, August 2010, p.24
253. Interviews with MOFA officials, Accra, March 2011
254. Republic of Kenya, *Medium Term Expenditure Framework 2011/12 – 2013/14*, January 2011, p.41

255. Ministry of Planning, National Development and Vision 2030, *Public Expenditure Review: Policy for Prosperity 2010*, p.148
256. Ministry of Planning, National Development and Vision 2030, *Public Expenditure Review: Policy for Prosperity 2010*, p.148
257. FAO, MAFAP, Review of Food and Agricultural Policies in Uganda 2005-2011, February 2013, p.154
258. MOFA, Agriculture in Ghana: Facts and Figures 2009, April 2010, p.25
259. Interview with MOFA official, Accra, March 2011
260. Ministry of Finance, 2011 Appropriation: Summary of Expenditure by Function, Economic Item and Funding, www.mofep.gov.gh
261. Antony Chapoto, 'What is the 2011 National Budget for Zambian Agriculture', Presentation, 19 October 2010, p.18
262. Republic of Zambia, Mid-Term Review: Fifth National Development Plan, 2006-2010, October 2009, p.54
263. MACO's budget allocation to the PACOs and DACOs for all provinces amounted to ZK 220 billion in 2009, ZK 107.6 billion in 2010 and ZK 141 billion in 2011 – an average of 15 per cent of the MACO budget. Republic of Zambia, *Estimates of Revenue and Expenditure for the year 2010 and 2011* (The Yellow Book)
264. Ministry of Finance, 2011 Appropriation: Summary of Expenditure by Function, Economic Item and Funding, www.mofep.gov.gh
265. MAAIF/CAADP, Uganda: Review of ongoing agricultural development efforts, October 2009, p.5; MAAIF, Development strategy and investment plan, 2009/10-2013/14, Second Draft, July 2009, p.47
266. MAAIF, Agriculture Sector Development Strategy and Investment Plan, 2010/11 – 2014/15, July 2010, p.xvii
267. Republic of Zambia, Mid-Term Review: Fifth National Development Plan, 2006-2010, October 2009, p.48
268. Republic of Zambia, *Fifth National Development Plan, 2006-2010*, December 2006, p.47
269. <http://www.kilimo.go.ke/> ; accessed 21 April 2011
270. Interview in Nairobi, November 2009
271. Interview in Nairobi, November 2009
272. Dickson Khainga et al, 'Governance in Public Expenditure Management: Key Issues and Challenges in Kenya', *Discussion Paper 77*, 2007, pp.14-15
273. Interview with MP, Kampala, February 2013
274. Interview with a leading farmers' association, Kampala, February 2013
275. Economic Policy Research Centre, Agriculture Sector Public Expenditure Review – Phase three, June 2009, pp.7-8
276. Nyende Magidu, Public expenditure tracking study report on agriculture sector, EPRC, March 2009, pp.18-19
277. Interviews in Lusaka, January 2011
278. CSPR, Budget Execution and Service Delivery Barometer, January to June 2010, p.23
279. See, for example, ActionAid, Fertile Ground: How governments and donors can halve hunger by supporting small farmers, April 2010
280. FAO, *The State of Food and Agriculture 2010-11*, p.5. If women farmers in Kenya had the same access to farm inputs and education as men food yields could increase by 22 per cent and the GDP growth rate would have doubled in 2004 from 4.3 per cent to 8.3 per cent. It is estimated that in Ghana if women had equal access to land and fertilizer as men, farm profits per hectare would double and that in Burkina Faso and Tanzania, provision of equal inputs and education to women as men could increase business incomes by 20 per cent. IFAD, FAO and World Bank, *Gender in Agriculture sourcebook*, 2009, p.522; 'Women in agriculture: The critical food producers', 15 October 2008, www.fao.org
281. Republic of Burundi, *Poverty Reduction Strategy Paper*, September 2006, p.38
282. IFAD, Republic of Burundi: Country Strategic Opportunities Programme, September 2008, p.1
283. SEND, 'Putting words into action: Strategic financing of smallholder agricultural development for food security and poverty reduction', undated
284. Patrick Allila and Rosemary Atieno, 'Agricultural Policy in Kenya: Issues and Processes: Paper for the Future Agricultures Consortium', IDS/University of Nairobi, July 2006, pp.4, 12
285. 'Nigeria: Women in Agriculture', in World Bank, *Sharing Experiences—Examples of Participating Approaches, The Participation Sourcebook*, 2003, www.worldbank.org/wbi/publications.htm
286. Federal Republic of Nigeria, National Gender Policy, 2006, http://www.aacoalition.org/national_policy_women.htm
287. AfDB, *Rwanda Gender Assessment: Progress Towards Improving Women's Economic Status*, 2008, p.20, <http://www.afdb.org/en/countries/east-africa/rwanda/>
288. AfDB, *Rwanda Gender Assessment: Progress Towards Improving Women's Economic Status*, 2008, p.21, <http://www.afdb.org/en/countries/east-africa/rwanda/>

289. MAAIF, Statistical Abstract 2011, p.vii; MAAIF, Agriculture Sector Development Strategy and Investment Plan, 2010/11 – 2014/15, July 2010, p.30
290. Forum for Women and Democracy (FOWODE), *Gender Policy Brief for Uganda's Agriculture Sector*, 2012, pp.4-8
291. Republic of Zambia, *Sixth National Development Plan*, 2011-15, January 2011, p.108
292. African Development Bank, Republic of Zambia: Multi-Sector Country Gender Profile, April 2006, p.10
293. Marzia Fontana and Cristina Paciello, Gender Dimensions of Rural and Agricultural Employment: Differentiated Pathways out of Poverty – A Global Perspective, Institute of Development Studies, March 2009, p.34
294. The following section draws on: Centre for Land, Economy and Rights of Women, *Mainstreaming gender in agricultural programmes within the context of NEPAD's strategy on agriculture and rural development*, Nairobi, 2006, pp.iii-vii; IFAD, FAO and World Bank, *Gender in Agriculture Sourcebook*, 2009
295. Oxford Policy Management, Evaluation report: *The plan for the modernisation of agriculture*, September 2005, p.42; Carmen Deere and Cheryl Doss, 'Gender and the distribution of wealth in developing countries', Research paper No.2006/15, UNU-WIDER, October 2006, p.14
296. Republic of Burundi, *Poverty Reduction Strategy Paper*, September 2006, p.38
297. Republic of Burundi, Growth and Poverty Reduction Strategy Framework: Performance and Impact Assessment, October 2010, p.36
298. IFAD, 'Improving Women's Access to Agricultural Land in Burundi', undated, www.ifad.org
299. Ministry of Finance, 2011 Appropriation: Summary of Expenditure by Function, Economic Item and Funding, www.mofep.gov.gh
300. Interview with MOFA official, Accra, March 2011
301. Government of Ghana, Medium Term Agriculture Sector Investment Plan, 2011-2015, September 2010, p.24
302. CAADP, CAADP Post Compact Review: Ghana – Technical Review Report, June 2010, p.25
303. Interview with MOFA official, Accra, March 2011
304. UNECA, Women and Access to Land and Credit: Discussions and Key Findings of the African Gender Development Index in Selected African Countries, June 2007, p.17, www.uneca.org
305. SEND, 'Putting words into action: Strategic financing of smallholder agricultural development for food security and poverty reduction', undated
306. Government of Kenya, Ministry of Agriculture, *Strategic Plan, 2008-2012*, p.67
307. Government of Kenya, Agriculture Sector Development Strategy, 2010-2020, 2010, p.81
308. Cathy Farnworth and Marceline Obuya, Gender Aware Approaches in Agricultural Programmes – Kenya Country Report, SIDA, 2010, p.16
309. Government of Kenya, *Medium-Term Investment Plan, 2010-2015*, undated, p.28
310. World Bank, Project Appraisal Document for the Kenya Agricultural Productivity and Agribusiness Project, 15 May 2009, pp.45-6
311. Ministry of Planning, National Development and Vision 2030, *Public Expenditure Review: Policy for Prosperity 2010*, p.149
312. Cathy Farnworth and Marceline Obuya, Gender Aware Approaches in Agricultural Programmes – Kenya Country Report, SIDA, 2010, p.13
313. Olubunmi Ajani, 'Gender Dimensions of Agriculture, Poverty, Nutrition and Food Security in Nigeria', NSSP, *Brief No.5*, IFPRI, undated, p.2
314. Federal Republic of Nigeria, *National Agricultural Investment Plan, 2011-2014*, September 2010, pp.18, 30
315. S.Odebode, 'Gender Issues in Agricultural Extension and Rural Development in Nigeria', 2008, pp.141–142
316. Y.Ogunlela and A.Mukthar, 'Gender Issues in Agriculture and Rural Development in Nigeria: The Role of Women', *Humanity and Social Science Journal* 4 (1), pp.19-30, IDOSI, 2009
317. Christiana Okojie, 'Decentralisation and Public Service Delivery in Nigeria', *NSSP Background Paper 4*, IFPRI, September 2009, p.23
318. Afua Banful et al, 'Constraints to Fertilizer Use in Nigeria', *IFPRI Discussion Paper*, July 2010, pp.7-8
319. Government of Rwanda/NEPAD, Rwanda: Strategic Options and Sources for Agricultural Growth, Poverty Reduction and Food Security, undated, p.3, www.resakks.org
320. As a 2008 report for Unifem notes, although the Ugandan government has practiced gender-responsible budgeting since 1999 and has established various mechanisms for mainstreaming gender, 'many of these good intentions have not been translated into practice largely due to inadequate resources allocated to implement the gender commitments'. Nite Tanzam, *Integrating gender-responsive budgeting into the aid effectiveness agenda*, Unifem, October 2008, p.viii
321. MAAIF, Agriculture Sector Development Strategy and Investment Plan, 2010/11 – 2014/15, July 2010, pp, 76, 13
322. Civil Society Budget Advocacy Group, Does the budget address key poverty reduction priorities?, May 2007, p.7

323. Oxford Policy Management, *Evaluation report: The plan for the modernisation of agriculture*, September 2005, p.40
324. PMA Poverty and gender sub-committee, Proposed undertakings for the financial year 2007/08 for the PMA joint annual review of 2006, October 2006, p.10
325. PMA Poverty and gender sub-committee, Proposed undertakings for the financial year 2007/08 for the PMA joint annual review of 2006, October 2006, p.11
326. Oxford Policy Management, *Evaluation report: The plan for the modernisation of agriculture*, September 2005, p.42; Carmen Deere and Cheryl Doss, 'Gender and the distribution of wealth in developing countries', Research paper No.2006/15, UNU-WIDER, October 2006, p.14
327. Republic of Uganda, *National Development Plan 2010/11-2014/15*, Draft version of 8 November 2009, p.43
328. Morrison Rwakakamba, 'Farmers positions on delivery of rural finance and prosperity for all', *Farmers magazine*, UNFFE, undated [2009], p.9
329. PMA Steering committee, *PMA Gender Mainstreaming Guidelines*, undated, p.15
330. Republic of Zambia, *Sixth National Development Plan, 2006-2010*, January 2011, p.108
331. Interview with MACO officials, Lusaka, January 2011; Cathy Farnworth and Monica Munachonga, 'Gender Approaches in Agricultural Programmes - Zambia Country Report', *UTV Working Paper 2010*, p.11
332. Republic of Zambia, *Mid-Term Review: Fifth National Development Plan, 2006-2010*, October 2009, p.103
333. Republic of Zambia, *Fifth National Development Plan, 2006-2010*, December 2006, p.48
334. Interview with MACO officials, Lusaka, January 2011
335. In September 2010, for example, it was reported that the government had procured 150 hammer mills and Family Drip Irrigation Systems for women's groups. 'State buys agro tools for women's groups', *Times of Zambia*, 1 September 2010
336. World Bank, Zambia: Impact Assessment of the Fertilizer Support Program, 9 June 2010, p.33
337. Republic of Zambia, *Mid-Term Review: Fifth National Development Plan, 2006-2010*, October 2009, p.103
338. African Development Bank, Republic of Zambia: Multi-Sector Country Gender Profile, April 2006
339. World Bank, FAO and IFAD, *Gender in Agriculture Sourcebook*, 2010, p.3
340. Cathy Farnworth and Monica Munachonga, 'Gender Approaches in Agricultural Programmes- Zambia Country Report', *UTV Working Paper 2010*, p.22
341. Economics Association of Zambia, 'Zambia Public Expenditure Review: Agriculture', Presentation, 2 December 2010
342. Republic of Zambia, *Mid-Term Review: Fifth National Development Plan, 2006-2010*, October 2009, p.105
343. Cathy Farnworth and Monica Munachonga, 'Gender Approaches in Agricultural Programmes- Zambia Country Report', *UTV Working Paper 2010*, p.22
344. Tewodaj Moques et al, *The Impacts of Public Investment In and For Agriculture: Synthesis of the Existing Evidence*, IFPRI, October 2012, p.18
345. Tewodaj Moques et al, *The Impacts of Public Investment In and For Agriculture: Synthesis of the Existing Evidence*, IFPRI, October 2012, pp.42, 10. In Uganda, for example, a study of public spending on extension found that the benefit/cost ratio ranged from 1.3 to 2.7 (reflecting different ways of estimating the benefits). This translates to an internal rate of return of 8-36 per cent.
346. www.ifpri.org/sites/default/files/publications/esspdp07.pdf , p.16
347. <http://gcardblog.files.wordpress.com/2010/03/engendering-agricultural-research.pdf>, p.23
348. Government of Malawi, *The Agriculture Sector Wide Approach*, March 2009, p.26
349. http://www.future-agricultures.org/pdfper cent20files/Ag_Malawi.pdf, p.22
350. Kamiljon Akramov, 'Decentralisation, agricultural services and determinants on input use in Nigeria', Nigeria strategy support program, Brief No.16, p.2, www.resakss.org
351. AfDB, *Rwanda Gender Assessment: Progress Towards Improving Women's Economic Status, 2008*, p.20, <http://www.afdb.org/en/countries/east-africa/rwanda/>
352. Source is World Bank aid project stating that 10per cent of farmers received extension services in 2006 and 16per cent in 2007; however this is those farmers participating in this (large) project. http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2009/06/04/00034955_20090604053222/Rendered/PDF/485490PGD0P114101Official0Use0Only1.pdf, p.138
353. MAAIF figures are that around 17 per cent of farming households are visited by extension workers (680,000 out of 3.9 million). (MAAIF, *Statistical Abstract 2011*, p.vii). Some estimates are lower, at around 14 per cent. (Morrison Rwakakamba, 'Uganda Budget: What Gain for Farmers?', <http://www.africanexecutive.com/modules/magazine/articles.php?article=6627>)
354. A 2005 survey found that 77per cent of farmers 'never' saw an extension worker, 5per cent did so 'very often', 7per cent 'often' and 11per cent 'rarely'. http://www.wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2009/07/14/000333037_20090714002021/Rendered/PDF/487740ESW0P1021C0Disclosed071131091.pdf , p.5

355. Republic of Burundi, Budgetary Laws 2009, 2010, 2011
356. Interviews with MOFA officials and academics, Accra, March 2011
357. Republic of Kenya, *Medium Term Expenditure Framework 2011/12 – 2013/14*, January 2011, p.39-40. Figures here show Kshs 5.9 billion allocated to agriculture extension under Crop Development and Management, Kshs 529 million to advisory and extension services under Cooperative Development and Management, and Kshs 906 million to livestock extension and capacity building under Livestock Resources Management and Development
358. Calculated from the Annual Budget of the States and the Federal Government
359. FRW 295 million out of FRW 60.9 billion. Annex II – 1, <http://www.minecofin.gov.rw/ministry/key/budget>, accessed March 2012
360. Government of Rwanda, *Agriculture Sector Investment Plan, 2009-12*, Annex 3
361. Proportion allocated to NAADS in 2012/13 budget. Republic of Uganda, *Background to the Budget, 2013/14*, June 2013, Table 36
362. This is the budget allocation to Agricultural Services & Technology Development (K60.8 billion) – which includes spending on ARD and extension – out of total agriculture budget listed in this table of ZK 1,182 billion; *Green Paper 2008-10* at http://www.mofnp.gov.zm/index.php?option=com_docman&task=cat_view&gid=66&Itemid=122, p.17. Jones Govereh et al note that in recent year, the government has devoted just 4 per cent to extension and agricultural research combined, and that 75 per cent of that 4 per cent goes on salaries. 'Trends in agricultural and poverty indicators in Zambia', Resakss policy brief, June 2007, p.3.
363. UN, High-Level Panel of Experts on Food Security and Nutrition, *Investing in Smallholder Agriculture for Food Security*, June 2013, p.81
364. Agricultural Performance Assessment Report of 2009 and 2010 – Wet Season, Nigeria
365. Cited in Tewodaj Mogues, 'Agricultural Public Spending in Nigeria', *IFPRI Discussion Paper*, September 2008, p.45
366. Stefan Dercon et al, 'The Impact of Agricultural Extension and Roads on Poverty and Consumption Growth in Fifteen Ethiopian Villages', *IFPRI Discussion Paper*, 2008
367. E.Nkonya et al, 'Strategies for Sustainable Land Management and Poverty Reduction in Uganda', *IFPRI Research Report No. 133*, 2004
368. Calculated from the Annual Budget of the States and the Federal Government
369. Xinshen Diao et al, 'Agricultural Growth and Investment Options for Poverty Reduction in Nigeria', *IFPRI Discussion Paper*, February 2010, p.52
370. Federal Republic of Nigeria, *National Agricultural Investment Plan 2011-14*, September 2010, p.15
371. Federal Republic of Nigeria, *National Agricultural Investment Plan 2011-14*, September 2010, p.22
372. Federal Republic of Nigeria, *National Agricultural Investment Plan, 2011-2014*, September 2010, p.33
373. M.Koyenikan, 'Issues for Agricultural Extension Policy in Nigeria', *Journal of Agricultural Extension*, Vol. 12 (2) December 2008
374. Dom Okoro and Oliver Ujah, 'Agricultural Policy and Budget Analysis in Nigeria (1999-2007)', Report for Oxfam GB Nigeria, April 2009, p.39
375. Afua Banful et al, 'Constraints to Fertilizer Use in Nigeria', *IFPRI Discussion Paper*, July 2010, p.8
376. Afua Banful et al, 'Constraints to Fertilizer Use in Nigeria', *IFPRI Discussion Paper*, July 2010, p.21
377. This is the budget allocation to Agricultural Services & Technology Development (K60.8 billion) – which includes spending on ARD and extension – out of total agriculture budget listed in this table of ZK 1,182 billion; *Green Paper 2008-10* at http://www.mofnp.gov.zm/index.php?option=com_docman&task=cat_view&gid=66&Itemid=122, p.17. Jones Govereh et al note that in recent years, the government has devoted just 4 per cent to extension and agricultural research combined, and that 75 per cent of that 4 per cent goes on salaries. 'Trends in agricultural and poverty indicators in Zambia', Resakss policy brief, June 2007, p.3.
378. Republic of Zambia, *Sixth National Development Plan 2011-15*, January 2011, p.108
379. Interview with MACO officials, Lusaka, January 2011
380. Jones Govereh et al, 'Trends and Spatial Distribution of Public Agricultural Spending in Zambia: Implications for Agricultural Productivity Growth', *ReSAKSS Working Paper No.26*, February 2009, p.30
381. According to the Director General of the HOMSAP, there are no accurate statistics available, but it is obvious that women are not very numerous.
382. Budgetary Laws 2009, 2010, 2011
383. Republic of Burundi, Poverty Reduction Strategy Paper: First Annual Progress Report, November 2008, p.36
384. IFAD, Republic of Burundi: Country Strategic Opportunities Programme, September 2008, p.3
385. Interviews with MOFA officials and academics, Accra, March 2011
386. Ruth Meinzen-Dick, 'Engendering Agricultural Research', Paper for Global Conference on Agriculture and Rural Development, March 2010, p.23, <http://gcardblog.files.wordpress.com/2010/03/engendering-agricultural-research.pdf>

387. Interview in Tamale, March 2011
388. World Bank, Proposal to restructure the National Agricultural Advisory Services project for Uganda, June 2008, p.5
389. ActionAid, Six Areas for Improvement in Agricultural Financing, May 2010
390. MAAIF, *Development strategy and investment plan, 2009/10-2013/14*, Second Draft, July 2009, p.27; Samuel Benin et al, 'Assessing the impact of the National Agricultural Advisory Services (NAADS) in the Uganda Rural Livelihoods', IFPRI discussion paper 00724, October 2007, p.vii
391. Economic Policy Research Centre, Agriculture sector public expenditure review – Phase three, June 2009, p.10
392. FAO, Budget work to advance the right to food, 2009, p.54
393. Economic Policy Research Centre, Makerere University, An Insight into the performance of the National Agricultural Advisory Services programme, 5 August 2011, pp.4-5
394. Samuel Benin et al, Impact of Uganda's National Agricultural Advisory Services Program, IFPRI, 2011, pp.xx-xxiii
395. MAAIF, Agriculture Sector Development Strategy and Investment Plan, 2010/11 – 2014/15, July 2010, p.20
396. MAAIF, Proposed Plan to Operationalise the Non-ATAAS Component of the Agriculture Sector Development Strategy and Investment Plan, November 2012, p.47
397. MAAIF, Statistical Abstract 2011, p.vii
398. Morrison Rwakakamba, 'Uganda Budget: What Gain for Farmers?', <http://www.africanexecutive.com/modules/magazine/articles.php?article=6627>
399. Interview with District Agricultural Officer, Kumi, February 2013
400. Interview with MP, Kampala, February 2013
401. James Thurlow et al, 'Agricultural Growth and Investment Options for Poverty Reduction in Zambia', *ReSAKSS Working Paper no.19*, November 2008, p.53
402. James Thurlow et al, 'Rural Investments to Accelerate Growth and Poverty Reduction in Kenya', *IFPRI Discussion Paper 00723*, October 2007, pp.22, 32
403. Cited in Ephraim Nkonya et al, 'Options for Enhancing Agricultural Productivity in Nigeria', *NSSP Background Paper 11*, IFPRI, January 2010, p.1
404. Shenggen Fan et al, 'Setting priorities for public spending for agricultural and rural development in Africa', *IFPRI policy brief*, April 2009, p.4
405. NEPAD, Comprehensive Africa Agriculture Development Programme, November 2002, Section 5.7
406. Republic of Burundi, Budgetary Laws 2009, 2010, 2011
407. As with some other budget items, pinning down exact levels of expenditure on ARD is not easy in Ghana. Official sources indicate that the government allocated around 15 per cent of agricultural sector spending to ARD during 2007-09, amounting to an average of GH¢ 81 million a year. (MOFEP, 2010, source given to authors). Yet other sources estimate an allocation of around 22 per cent of the budget. (Babatunde Omilola, *Comprehensive monitoring and evaluation report for the Comprehensive African Agriculture Development Programme*, April 2010, p.12, www.resakss.org). However, very different figures are provided by Agricultural Science and Technology Indicators (ASTI) – a trusted global source of data managed by IFPRI - which estimates that Ghana spent GH¢ 352 million in 2008 (at 2005 prices), which represents a large increase over previous years. (ASTI, 'Ghana: Recent Developments in Agricultural Research', *Country Note*, June 2010)
408. Figures are for the budget allocation to 6 research institutes (KARI, KEFRI, KMFRI, KESREF, TRFK and CRF). Republic of Kenya, *Medium Term Expenditure Framework 2013/14 – 2015/16*, October 2012, pp.51-2
409. These are figures for the allocations to various Nigerian research institutes. 2013 *Budget Proposal*, Agriculture and Rural development, www.budgetoffice.gov.ng
410. Annex II – 1, <http://www.minecofin.gov.rw/ministry/key/budget>, accessed March 2012
411. Government of Rwanda, *Agriculture Sector Investment Plan*, 2009-12, Annex 3
412. Proportion allocated to NARO in 2012/13 budget. Republic of Uganda, *Background to the Budget, 2013/14*, June 2013, Table 36
413. This is the allocation to the country's principal research institute, the Zambia Agriculture Research Institute (ZARI), and its 10 agricultural research stations in 2011 (excluding fisheries and livestock research). Republic of Zambia, *Estimates of Revenue and Expenditure for the year 2011* (The Yellow Book)
414. ASTI, 'Ghana: Recent Developments in Agricultural Research', *Country Note*, June 2010
415. Kathleen Flaherty, 'Nigeria: Recent Developments in Agricultural Research', *Country Note*, ASTI, October 2010, p.2
416. ASTI, Burundi: Recent Developments in Public Agricultural Research, April 2011
417. MAAIF, Development strategy and investment plan, 2009/10-2013/14, Second Draft, July 2009, p.48
418. 'Crop Research Institute introduces 12 new improved crop varieties', GNA, 17 March 2010

419. Ministry of Planning, National Development and Vision 2030, *Public Expenditure Review: Policy for Prosperity 2010*, p.132
420. Stephen Akroyd and Lawrence Smith, *Review of Public Spending to Agriculture: A Joint DFID/World Bank Study*, Oxford Policy Management, January 2007, p.37; Patrick Alila and Rosemary Atieno, 'Agricultural Policy in Kenya: Issues and Processes: Paper for the Future Agricultures Consortium', IDS/University of Nairobi, July 2006, p.8
421. Government of Ghana, *Medium Term Agriculture Sector Investment Plan, 2011-2015*, September 2010, p.48
422. Shashidhara Kolavilli et al, 'Institutional and Public Expenditure Review of Ghana's Ministry of Food and Agriculture', *IFPRI Discussion Paper*, August 2010, p.22
423. Catherine Ragasa, 'Strengthening the Innovation Capacity of Nigerian Agricultural Research organisations', *IFPRI Discussion Paper*, December 2010, p.61
424. Federal Republic of Nigeria, *National Agricultural Investment Plan, 2011-2014*, September 2010, p.10
425. Catherine Ragasa, 'Strengthening the Innovation Capacity of Nigerian Agricultural Research organisations', *IFPRI Discussion Paper*, December 2010, pp.3-4
426. UN, High-Level Panel of Experts on Food Security and Nutrition, *Investing in Smallholder Agriculture for Food Security*, June 2013, p.81
427. See, for example, ActionAid, *Fed Up: Now's the time to invest in agro-ecology*, June 2012; ActionAid, *Asia at the Crossroads: Prioritising conventional farming or sustainable agriculture?*, February 2012; UN Human Rights Council, Report Submitted by the Special Rapporteur on the Right to Food, Olivier de Schutter, 20 December 2010; Oxfam, *Growing a Better Future: Food justice in a resource-constrained world*, July 2011; Christian Aid, *Healthy Harvests: The benefits of sustainable agriculture in Africa and Asia*, September 2011
428. Oxfam, *Extreme Weather, Extreme Prices: The costs of feeding a warming world*, September 2012, p.10
429. Jules Pretty, 'Agroecological Approaches to Agricultural Development', Background Paper for the World Development Report 2008, 2008, p.3
430. Jules Pretty et al, 'Sustainable Intensification in African Agriculture', *International Journal of Agricultural Sustainability*, February 2011
431. FAO, *International Conference on Organic Agriculture and Food Security*, May 2007, pp.5, 14; There are many other recent analyses arguing that organic farming can produce enough food for the world's population, including C.Badgley et al (University of Michigan), 'Organic agriculture and the global food supply', *Renewable agriculture and food systems*, Cambridge University Press, 2007; N.Halberg et al, *Global Development of Organic Agriculture: Challenges and prospects*, CABI Publishing, 2007
432. FAO, *The State of Food and Agriculture 2012: Investing in Agriculture*, p.53
433. UN Special Rapporteur on the Right to Food, *AgroEcology and the Right to Food*, December 2010, para 37
434. Dennis Garrity, 'Evergreen Agriculture: a robust approach to sustainable food security in Africa', <http://evergreenagriculture.net/content/evergreen-agriculture-robust-approach-sustainable-food-security-africa>
435. UN Special Rapporteur on the Right to Food, *AgroEcology and the Right to Food*, December 2010, para 20
436. UN Special Rapporteur on the Right to Food, *AgroEcology and the Right to Food*, December 2010, para 16
437. 'Regenerating Woodlands: Tanzania's HASHI Project', <http://www.wri.org/publication/content/8108>
438. World Agro-Forestry Centre, *A Rural Revival in Tanzania: How Agro-forestry is helping farmers to restore the woodlands in Shinyanga Region*, 2010, www.worldagroforestry.org/downloads/publications/PDFs/B16751.PDF
439. World Bank, *Basic Agricultural Public Expenditure Diagnostic Review, Final Draft*, April 2013, p.xii
440. Government of Ghana, *Medium Term Agriculture Sector Investment Plan, 2011-2015, Volume 3 – Commodity Programmes*, August 2009, p.55
441. 'Vegetable farmers schooled in organic farming practices', GNA, 5 September 2009
442. Republic of Zambia, *Sixth National development Plan 2011-15*, January 2011, p.112
443. FAO, *Scaling Up Conservation Agriculture in Africa: Strategy and Approaches*, July 2009, p.14
444. P.Simasiku et al, 'Natural Resource Management, Food Security and Rural Development in Zambia: Moving from Research to Action', Food Security Research Project, February 2010, p.5
445. Budget Speech, 12 October 2012, p.10, www.mofnp.gov.zm
446. Rackson Shamutuku, 'Maize mono-cropping, a recipe for disaster', *Times of Zambia*, 11 December 2010; Tiyese Sakala, 'Organic farming: Solution to climate change', *Times of Zambia*, 4 September 2010
447. Stanslous Ngosa, 'Exploring other soil enriching practices', *Times of Zambia*, 10 April 2010
448. Rachel Keeler, 'Kenya: Gates Foundation and Monsanto to develop genetically modified seeds for small farmers', 26 November 2009, www.ratio-magazine.com
449. KARI, *Strategic Plan 2009-2014*, June 2009, p.54

450. MAAIF, Development Strategy and Investment Plan 2010/11-2014/15, March 2010
451. ActionAid, Six Areas for Improvement in Agricultural Financing, May 2010, p.39
452. Government of Uganda, Draft Estimates of Revenue and Expenditure, FY 2009/10, Vol 1: Central Government Votes, p.738
453. Interview with NARO official, Entebbe, November 2009.
454. Oli Brown and Alex Crawford, Assessing the Security Implications of Climate Change for West Africa, IISD, 2008, pp.21-3
455. Government of Ghana, Medium Term Agriculture Sector Investment Plan, 2011-2015, September 2010, p.45
456. Government of Kenya, National Climate Change Response Strategy: Executive Brief, April 2010, p.9
457. Jane Kabubo-Mariana, 'The Economic Impact of Climate Change on Kenyan Crop Agriculture: A Ricardian Approach', *Policy Research Working Paper*, 4334, World Bank, August 2007, p.3
458. Susanne Neubert, Agricultural Development in a Changing Climate in Zambia: Increasing Resilience to Climate Change and Economic Shocks in Crop Production, German Development Institute, 2011, p.8
459. James Thurlow et al, 'The Impact of Climate Variability and Change on Economic Growth and Poverty in Zambia', *IFPRI Discussion Paper*, August 2009, p.vii
460. Government of Ghana, Medium Term Agriculture Sector Investment Plan, 2011-2015, September 2010, p.45
461. CAADP, CAADP Post Compact Review: Ghana – Technical Review Report, June 2010, p.iv
462. 'Adopt conservation farming, farmers urged', *Times of Zambia*, 23 June 2010
463. Republic of Zambia, Mid-Term Review: Fifth National Development Plan, 2006-2010, October 2009, p.115
464. 'Adopt conservation farming, farmers urged', *Times of Zambia*, 23 June 2010
465. ZARI, 2009 Annual Report, p.8
466. Catherine Nyirenda, 'Agro experts behind bumper harvest', *Times of Zambia*, 13 August 2010
467. SEND-West Africa, *Investing in Smallholder Agriculture for Optimal Result: The ultimate policy choice for Ghana*, 2010, p.42. A study of farmers in the three Northern regions found that access to credit was 11 per cent in Upper East, 14 per cent in Northern Region and 19 per cent in Upper West; Wilhemina Quaye, 'Food security situation in northern Ghana, coping strategies and related constraints', *African Journal of Agricultural Research*, Vol.3, May 2008, p.338.
468. ActionAid field research undertaken in West Pokot, Greater Trans Nzoia and Greater Kakamega.
469. Idris Badiru, 'Review of Small Farmer Access to Agricultural Credit in Nigeria', NSSP, *Policy Note No.25*, IFPRI, undated, p.2
470. AfDB, Rwanda Gender Assessment: Progress Towards Improving Women's Economic Status, 2008, p.20, <http://www.afdb.org/en/countries/east-africa/rwanda/>
471. MAAIF, Statistical Abstract 2011, p.vii
472. For example, as Ha-Joon Chang, of Cambridge University has argued, 'experiences show that it is crucial for the government to be significantly involved in providing agricultural credit. The simple fact is that without some subsidy elements and/or mandatory lending to small-scale farmers, private sector financial institutions are not going to extend enough credit to them... Subsidized credit does not guarantee agricultural success; however, agricultural success without it is impossible to achieve'. Chang also argues that another policy that can be crucial to farmers - insurance - 'is unlikely to work without some government help'. Again, there are successful examples of state-subsidized agricultural insurance in now developed countries and some developing countries, like Chile. Ha-Joon Chang, *Rethinking Public Policy in Agriculture: Lessons from Distant and Recent History*, FAO, 2009, pp.30-1, 42
473. UN, High-Level Panel of Experts on Food Security and Nutrition, *Investing in Smallholder Agriculture for Food Security*, June 2013, p.12
474. Ha-Joon Chang, *Rethinking Public Policy in Agriculture: Lessons from Distant and Recent History*, FAO, 2009, pp.30-1
475. Ha-Joon Chang, *Rethinking Public Policy in Agriculture: Lessons from Distant and Recent History*, FAO, 2009, p.42
476. C.Okojie ed al, 'Institutional Environment and Access to Microfinance by Self-employed Women in the Rural Areas of Edo State', *NSSP Brief No. 14*, IFPRI, 2010
477. MOFA, Agriculture in Ghana: Facts and Figures 2009, April 2010, p.22
478. UNDP analyst cited in 'Micro-credit to farmers could ensure food security', GNA, 16 January 2009
479. Idris Badiru, 'Review of Small Farmer Access to Agricultural Credit in Nigeria', NSSP, *Policy Note No.25*, IFPRI, undated, p.2
480. Calculated from the Annual Budget of the States and the Federal Government
481. FAO, MAFAP, Review of Food and Agricultural Policies in Uganda 2005-2011, February 2013, p.158

482. Government of Kenya, Ministry of Agriculture, *Strategic Plan, 2008-2012*, pp.7, 62
483. Tewodaj Mogues, 'Agricultural Public Spending in Nigeria', *IFPRI Discussion Paper*, September 2008, p.50
484. Federal Republic of Nigeria, *National Agricultural Investment Plan 2011-14*, September 2010, p.10
485. Government of Rwanda, *Strategic Plan for the Transformation of Agriculture in Rwanda (PSTA II)*, Final report, February 2009, p.5
486. Government of Rwanda, *Agriculture Sector Investment Plan, 2009-12*, p.22; Government of Rwanda, *Strategic Plan for the Transformation of Agriculture in Rwanda (PSTA II)*, Final report, February 2009, p.80
487. Government of Ghana, *Medium Term Agriculture Sector Investment Plan, 2011-2015*, September 2010, p.xi
488. Budget speech for the 2011 financial year, 18 November 2010, p.17, www.mofep.gov.gh
489. Aja Nair and Azeb Fissaha, *Rural Banking: the Case of Rural and Community Banks in Ghana, 2020 Vision, Brief 5*, July 2010, p.1
490. Verbal communication of the Minister of Agriculture during the first National Forum on Food Security in Burundi, 12–14 December 2011, Bujumbura
491. MINAGRIE, *Strategy to create a fund for agricultural micro credit in Burundi*
492. Global Witness, International Land Coalition and The Oakland Institute, *Dealing with Disclosure: Improving transparency in decision-making over large-scale land acquisitions, allocations and investments, 2012*; Oxfam, *Land and Power: The growing scandal surrounding the new wave of investments in land*, September 2011, p.23
493. African Smallholder Farmers Group, *Africa's Smallholder Farmers: Approaches that work for viable livelihoods*, undated, p.8
494. CAADP, *Highlighting the Successes*, November 2010, p.23
495. CAADP, *Highlighting the Successes*, November 2010, p.23; APRODEV/CTDT, 'Assessing the Comprehensive African Agricultural Development Programme as a Policy Framework for African Agricultural Development', Mimeo, 2012
496. See Aprovev, *Agricultural Research in Africa: Why CAADP should follow IAASTD*, May 2012, pp.13-14
497. http://internationalbudget.org/wp-content/uploads/2011/06/2010_Full_Report-English.pdf; <http://internationalbudget.org/what-we-do/open-budget-survey/rankings-key-findings/key-findings/>
498. Tewodaj Mogues, 'Agricultural Public Spending in Nigeria', *IFPRI Discussion Paper*, September 2008, p.63
499. Dickson Khainga et al, 'Governance in Public Expenditure Management: Key Issues and Challenges in Kenya', *Discussion Paper 77*, 2007, pp.11-13
500. Patrick Alila and Rosemary Atieno, 'Agricultural Policy in Kenya: Issues and Processes: Paper for the Future Agricultures Consortium', IDS/University of Nairobi, July 2006, July 2006, p.20
501. Patrick Alila and Rosemary Atieno, 'Agricultural Policy in Kenya: Issues and Processes: Paper for the Future Agricultures Consortium', IDS/University of Nairobi, July 2006, p.22
502. CSPP, *Budget Execution and Service Delivery Barometer*, January to June 2010, pp.1-10
503. CSPP, *A Brief Policy and Sectoral Analysis of Zambia's Fiscal Policies and Trends, 2006-2010*, March 2010, p.1
504. Concern, *Unheard Voices: Women Marginal Farmers Speak Out – A Zambian Case Study*, October 2009, p.20
505. Michael Muleba, 'Budget Monitoring Report 2010', FOSUP, December 2010, p.12
506. Federal Republic of Nigeria, *National Agricultural Investment Plan 2011-14*, September 2010, p.31. It continues: 'Project proposals are usually submitted by the MDAs at the state and federal levels and prioritized through a series of committees at the FMARD and the National Planning Commission (NPC), before "stakeholder verification" and subsequent parliamentary consideration and approval. Thus, while project selections are not necessarily initiated at the grassroots, substantial grassroots consultations characterize the process. The NAIP was subjected to stakeholder verification in June 2010'.

ActionAid is a global movement of people working together to achieve greater human rights for all and defeat poverty. We believe people in poverty have the power within them to create change for themselves, their families and communities. ActionAid is a catalyst for that change.

International Registration number: 27264198

Website: **www.actionaid.org**

Telephone: **+27 11 731 4500**

Fax: **+27 11 880 8082**

Email: **mailjhb@actionaid.org**

ActionAid International Secretariat,
Postnet Suite 248, Private Bag X31, Saxonwold 2132,
Johannesburg, South Africa.

Walking the talk Why and how African governments should transform their agriculture spending
ActionAid, December 2013.