Marginal farmers, a review of the literature

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1.0 Summary

We define marginal farmers as those who are ‘farming yet hungry’. These are people for whom farming is a major livelihood activity, yet who have insufficient assets to produce a surplus from their agricultural activities and whose non-farm activities are insufficiently reliable or remunerative for them to rely on market purchases for adequate food intake. This group, distant from centres of power and influence, has long suffered neglect by policy makers. Furthermore development aid to agriculture has declined over the past 30 years. The current awareness by governments on the importance of food policy creates an important opportunity to direct attention to this group of producers with potential positive outcomes for rural poverty reduction and urban food supply.

Around half of the world’s hungry are identified as ‘food-poor small farmers’. These people live mainly in Sub-Saharan Africa and South Asia. Within SSA the majority of marginal farmers are likely to be women and farmers in Less Favoured Areas. In this review, we focus on literature relating to marginal farmers in Sub-Saharan Africa and the policy options currently being discussed for moving these households out of poverty.

Economists debate the potential of a number of growth drivers for African economies, including minerals, manufacturing, tourism, global services and agriculture. Even where the main driver of growth is located in urban or coastal zones, a major mechanism for the spread of wealth will be through growth in agriculture to supply domestic markets. The value of Africa’s domestic food markets is estimated to be US$50 billion p.a. and projected to double by 2015, driven by urban population growth.
From the available literature on the development of agriculture in sub-Saharan Africa we identify four issues that are critical to the potential of marginal farmers to contribute to growth in agriculture and thereby move out of poverty: access to land; improvement in staple crop productivity; investment in public goods (research and infrastructure); and increased service provision to small holder farmers. The paper reviews each of these in turn.

There is clear evidence of a widespread decline in land holding size per household in the small farm sector for most African countries. The small area of cultivable land available to many rural households represents a significant hindrance to household welfare where livelihoods are highly dependent on agriculture. Within this context women are frequently disadvantaged regarding access to land. Tenure security is widely considered to be important with respect to agricultural investment, however land titling as a means to increase tenure security is not always the best option especially with regard to access for women farmers.

Woodland and other common property resources are also of great importance to poor households (especially those in areas of lower agricultural potential), in part compensating for their limited access to arable land, but also providing a safety net function in lean seasons and bad years. However, population growth (combined with new commercial opportunities) is putting pressure on common property resources just as it is reducing average land holding sizes. Poor households in general and women in particular often lack voice in the institutions that manage remaining common property resources.

Staple crop production remains an important priority for marginal farmers. This is in part due to unreliable food markets. Interventions to improve food markets together with agricultural research and service provision for staple crop production, are both important for the welfare of marginal farmers.

Investment in the provision of agricultural support services (input supply, technical advice, financial services, output market linkages) is seen as essential for agricultural development in Sub-Saharan Africa in general. Unfortunately, where provision is limited the needs of marginal farmers are the least likely to be met unless they are specifically targeted (for example extension services for women farmers).

The rural non-farm economy (RNFE) has received increasing attention from policy makers in light of data showing the extent to which rural households depend on non-farm sources of income for their livelihoods. The term RNFE encompasses a diverse set of activities,
including formal employment, casual labour and small-scale enterprises. Many of the goods and services produced within the RNFE are non-tradables, serving local customers; however, supply of goods and services to urban centres and beyond also occurs. Available evidence suggests that: non-farm income sources are important for stabilising and augmenting the incomes of rural households; many activities within the RNFE are low return, with capital and/or education forming barriers to entry into higher return activities for many rural inhabitants; demand for many of the goods and services produced within the RNFE is heavily dependent on incomes generated within the farm sector – urban demand is likely to figure more prominently in more accessible areas. Thus, whilst the RNFE is important to marginal farmers, as long as agricultural growth remains slow they are more likely to take up low paid, low skill, non-farm activities as a survival mechanism than they are to escape poverty by diversifying out of agriculture into a more remunerative enterprise within the RNFE.

Migration is also considered to be a pathway out of poverty for the rural poor. Again however, the evidence suggests that marginal farmers are amongst those least likely to benefit from migration. Three reasons contribute to this, firstly the poor are less likely to be able to meet the costs associated with migration and they are also likely to be among the least educated (education is a key determinant of migration). Secondly, migration is less likely to occur from remote areas. Thirdly, returns to migration depend in part on the strength of support networks in destination areas (as a way of finding good employment) and poorer households from remoter areas tend to have access to relatively weak networks.

Migration of men from rural areas has important implications for the remaining household. In addition to loss of labour, the de facto female headed household that results may be disadvantaged in terms of access to inputs, services and markets, especially if the flow of remittances from her absent partner is low.

Marginal farmers in Less Favoured Areas face challenges to agricultural growth in addition to improved services and access to markets. Improved agricultural productivity in LFA frequently requires improvements in the resources base. However, the poverty of smallholders in these areas means that these investments are unlikely to be made. Growth in agriculture in LFA calls for public investment in research to address the challenges of intensification in these production systems.

1 Agricultural labour on other peoples’ farms plus exploitation of common property resources are “off-farm” activities for those engaged in them, but may or may not be included within the RNFE. Here we do consider them together.
Risk mitigation by the poorest farming households and those in marginal agroecological zones (for example through crop choices and diversification) may occur at the expense of yield or income maximisation. Thus it is increasingly seen that reducing risk for poor households can be considered growth promoting where it enables households and individuals to invest in productive activities. Social protection can therefore have a potentially positive effect on agricultural growth.

The converse is also considered to be true: supporting agriculture can help households achieve their consumption needs and therefore meet social welfare goals i.e. supporting households in their productive activities may be a better strategy than implementing ‘ex-post risk management’ activities such as food or cash transfers.

In practice in Sub-Saharan Africa social protection activities are normally restricted to the poorest (destitute) households, although there are recent exceptions that are attracting interest. Nonetheless, the social protection agenda could play an important role in raising the profile of agriculture to the benefit of marginal farmers.

The potential role of farmer organisations is frequently raised as a means to overcome some of the challenges facing smallholders. However, the potential for producer organisations to fulfil this role for marginal farmers is challenged by the very nature of this group, who are the type of producer who is less likely to participate in and benefit from these groups.

Nonetheless, even where the potential for participation by marginal farmers in marketing groups appears low, farmers’ organisations may play an important role in providing fora for collective action, increasing the political voice of this group. Some gains to smallholder farmers in general, including infrastructure investment and improvements in service provision, may also benefit marginal farmers.

In conclusion, this review suggests agricultural production is likely to remain an important livelihood activity for marginal farmers due to a lack of alternative rural livelihoods and limited opportunities for migration in this group. In addition, provision of food crops persists as an important goal for rural households. Increased attention to policy and investment to support smallholder agriculture should therefore be welcome news for marginal farmers. However, unless the increased commitment to agriculture is sustained for a prolonged period (10-20 years) and/or is combined with effective advocacy on behalf of marginal farmers and their interests, there is a strong risk that the majority of benefits will accrue to better off farm
households that are more attractive propositions for service providers and better placed to respond to emerging market opportunities.

2.0 Introduction

Recent increases in world grain prices have added to the claims that we are facing a global food crisis. Climatic conditions and the diversion of cropland to biofuel production have contributed to recent shortages in food crops and added weight to calls to increase the supply of agricultural commodities. For many developing countries the challenge of meeting mounting import bills for foodstuffs whilst keeping food prices low for the urban poor has generated wide concern.

Within the debate on how to increase food production an increase in large scale commercial production is frequently raised as a possible solution. However, in rural Africa many poor households remain dependent on agriculture as the basis of their livelihoods. Whilst promotion of large-scale farming could raise aggregate food availability and lower prices to the benefit of poor consumers (including these poor rural households), it would do nothing to raise the income earning potential of such households and, if badly managed, could jeopardise their access to land.

A more appropriate strategy for increasing food supply and boosting rural incomes is to focus assistance on smallholder farmers. However this group, distant from centres of power and influence, has long suffered neglect by policy makers. Furthermore development aid to agriculture has declined over the past 30 years. The current awareness by governments on the importance of food policy creates an important opportunity to direct attention to this group of producers with potential positive outcomes for rural poverty reduction and urban food supply.

2.1 Marginal farmers

We define marginal farmers as those who are ‘farming yet hungry’. These are people for whom farming is a major livelihood activity, yet who have insufficient assets to produce a surplus from their agricultural activities and whose non-farm activities are insufficiently reliable or remunerative for them to rely on market purchases for adequate food intake. They include, but are not exclusively, those located in Less Favoured Areas (low potential agro-ecological zones with poor market linkages). They are not the poorest of their communities who are often unable to engage in any notable agricultural activity for a number of reasons
(old age, sickness, destitution), but neither are they those most able to respond to existing commercial incentives within agriculture.

Although they are numerous, their poverty and the small-scale nature of their activities means that marginal farmers exert little market power. Moreover, their lack of mobilisation (and the obstacles to this) means that their numbers rarely translate into political voice. The communities within which they reside are typically represented in parliament by urban dwellers and/or medium-large scale agricultural producers. Furthermore, as a group they have limited or no voice even within decentralised administrative systems. Women farmers may also be subject to various forms of social exclusion and political marginalisation. Lack of influence in centres of power is a characteristic feature of marginal farmers and one that has led to years of policy neglect.

Around half of the world’s hungry are identified as ‘food-poor small farmers’ (Gabriele and Schettino 2007, UN 2005, FAO 2004). These people live mainly in Sub-Saharan Africa and South Asia. In this review, we focus on literature relating to marginal farmers in Sub-Saharan Africa. This group is considered by Gabriele and Schettino (2007) to be food insecure primarily due to low agricultural productivity. The purpose of this review is to consider the characteristics of this group and the policy options currently being discussed for moving these households out of poverty.

The majority of marginal farmers in SSA are women. In SSA women make up the majority of small-scale farmers, and they dominate food production. Women farm both within male-headed households and as heads of household. The former are often disadvantaged in terms of intra-household allocation of resources (land, inputs, tools), and for a number of reasons they are also less likely to grow remunerative crops. Female headed farming households are often disadvantaged in term of assets and services, although de facto female-headed households in receipt of regular remittances from absent husbands may do better. These differences mean that women farmers commonly realise lower yields and lower incomes from farming than men (see Gladwin and McMillan, 1989; Ross, 1999; and Whitehead, 2005 for reviews of African women farmers and agricultural development).

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2 FAO (2004) estimated that there are just over 800 million hungry people in the world. Gabriele and Schettino (2007)’s estimates of where the world’s hungry live and what their dominant livelihood activities are rely on two additional sources, which are not fully compatible with FAO (2004). However, their estimates suggest that three main groups each account for around 25% of the world’s hungry: smallholder farm households in South Asia, smallholder farm households in Sub-Saharan Africa and rural landless in South Asia. It is thought that around 20% of the world’s hungry now live in urban areas.
Although we are defining this group by their farming activities, household survival frequently depends on a diverse range of livelihood options outside of farming. Therefore the needs of marginal farmers also lie beyond agriculture and farming. This is reflected in the development pathways usually suggested for this group:

1. become commercial agricultural producers
2. take advantage of migration opportunities (either to leave or support remaining family)
3. seek employment in the non-farm sector
4. remain ‘non-viable’ as agricultural producers and survive under some form of welfare (social protection).

This review will consider the needs of marginal farmers a) in order to generate and benefit from an increase in agricultural productivity b) within a wider rural development context.

3.0 Growth opportunities in rural Africa

Economists debate the potential of a number of growth drivers for African economies (see, for example, Collier 2007, Hazell et.al. 2007 and Kaplinsky 2006). In turn, these national growth drivers offer varying prospects for impacting on rural poverty.

- Minerals – a number of African countries have significant mineral deposits and are the focus of huge current investment (especially from China) for their extraction. This is important for the generation of foreign exchange and tax revenue, however, modern extractive industries offer limited potential for generating rural employment and the challenge for government to ensure that the poor benefit from revenues is large (Collier 2007).

- Manufacturing – African manufacturing suffered as a result of liberalisation in the 1990s, unable to compete with cheaper imports. Weak infrastructure and high costs of services (eg. utilities) continue to affect the competitiveness of manufacturing. Strong competition will continue to come from China - and India looks set to follow (Kaplinsky 2006). Advocates of this route for development see prospects for export oriented manufacturing in coastal zones (Fafchamps et.al. 2001). Migration to these areas would have implications for rural development (positive and negative)
• Tourism – this is a growing global industry, however tourist attractions are unequally distributed across the continent. For some countries with marketable ‘experiences’ (for example Tanzania) tourism is already an important source of foreign exchange.

• Global services – The government of Rwanda has set the target of turning Rwanda into a knowledge-based economy and has made major investments in IT infrastructure and education.

• Agriculture remains the ‘default driver’ where others are not possible or of low potential; it is also the only option that can penetrate deep into rural areas. Although historically prices for traditional export crops have been in decline, the medium run trend is for higher prices driven by Asian demand (livestock feed) and biofuels. In addition African urban markets will grow steadily with rising populations and incomes, this is in evidence in West Africa already (Wiggins 2000, Tiffen 2003).

Even where the main driver of growth is located in urban or coastal zones (as in the first three options above), a major mechanism for the spread of wealth will be through growth in agriculture to supply domestic markets. (The other major mechanism is rural-urban migration, which, at greatly accelerated rates, would imply significant social disruption). There is likely to be significant growth in urban demand for food; Africa’s rate of urbanization at 3.5 percent p.a. is already the highest in the world (UNFPA 2007). However, there are important regional differences: Western and Southern Africa report urban populations of 38 and 36 percent respectively, whilst Eastern Africa has an average urban population of just 26 percent. Diao et.al. (2003) estimate the value of Africa’s domestic food markets at US$50 billion p.a. – three times the combined value of Africa’s traditional and non-traditional agricultural exports – and project that this figure will double by 2015, driven mainly by (urban) population growth.

Meanwhile, the relative neglect of agriculture within development policy coupled with long-term underinvestment has left rural areas impoverished and households struggling to sustain their livelihoods. Even with growth in other areas agriculture will remain critical for rural poverty reduction. The following section reviews principal features of smallholder agriculture in Sub Saharan Africa that have implications for the development of this sector.
4.0 Issues for Agricultural Development

African agriculture is widely reported to be in crisis. Despite achieving increases in productivity, FAO data suggest that this has failed to keep up with population growth and per capita production is not rising. Per capita production fell sharply between 1970 and the mid-1980s and has not recovered. This decline (15% between 1965 and 1995) occurred at a time of rapid population growth (Wiggins, 2000).

Production increases in sub-Saharan Africa have been due mainly to increases in area cultivated rather than increases in yields. This situation is frequently contrasted with the Asian experience in recent decades where the reverse is true. Within Africa, Southern and Eastern Africa is perhaps in a more precarious position. Land scarcity is more acute in countries where severe land inequalities resulted from colonial policy. Furthermore the crisis of HIV/AIDS in Southern and Eastern Africa has severely impacted on households’ capacity to mobilise labour for agricultural production.

From the available literature on the development of agriculture in sub-Saharan Africa we can identify four issues that are critical to the potential of marginal farmers to contribute to growth in agriculture and thereby move out of poverty: access to land; improvement in staple crop productivity; investment in public goods (research and infrastructure); and increased service provision to small holder farmers.

4.1 Access to land

Although past increases in agricultural production in sub-Saharan Africa are considered to result largely from an expansion of total area cultivated, there is clear evidence of a widespread decline in land holding size (per household) in the small farm sector for most African countries (Jayne et al 2003, Lipton 2006). This trend is believed to be more pronounced in Southern and Eastern Africa (Jayne et al 2003). Data on area cultivated per agricultural capita indicate a strong trend toward smaller holdings between 1960 and 2000 (FAOSTAT reported in Jayne et al 2003).

Table 1. Land to person ration in sub-Saharan Africa (land cultivated/population in agriculture) source: Jayne et al 2003 using FAOSTAT data

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Meanwhile, examination of data from household surveys in these countries shows considerable inequality in land holdings even within the smallholder sector, with extremely low per capita land holding (less than 0.1 ha per capita) for the lowest quartile of small holders.

Data from agricultural censuses for four African countries compiled by Lipton (2006) support this picture. The data show a decline in the median land holding size and also suggest that a greater share of the total land area is cultivated within small holdings over time.

**Table 2** Changes in median farm size (data from agricultural censuses) source: Lipton 2006
The small area of cultivable land available to many rural households represents a significant hindrance to household welfare where livelihoods are highly dependent on agriculture. This is confirmed by a strong positive relationship between access to land and household income (Jayne et al. 2003).

Within this context women’s access to land is frequently worse than that for men within the same household and the same community. Women tend to have smaller holdings and these may be less fertile or more distant from the homestead (Ross, 1999). Women usually gain access to land through male relatives and there is evidence that these claims may become weakened in the context of land scarcity (Whitehead, 2005).

Falling farm size is attributed to an absence of new land to bring into cultivation (although see below on this), rising rural populations, inheritance norms and the ongoing role of farms as safety nets which means families are unwilling to lose access to their land (Ellis 2005). The problem of poor access to land is not limited to certain geographic locations. A significant proportion of rural households in all the countries studied by Jayne et al (2003) had very limited access to land. Furthermore variation in land holding was found largely within rather than between villages. The policy implications of this observation are twofold: 1) that geographical targeting of marginal areas will miss a large number of vulnerable households 2) that the close proximity of better and lesser endowed small holders offers the possibility that increasing agricultural productivity on larger smallholdings will also benefit those less able to realise increased growth on their own farms. This point is stressed elsewhere in the literature (Lipton, 2006): even if better-off small holders are the principal beneficiaries of increased agricultural production, the growth in this group is likely to be the best mechanism to pull the poorest, near landless, households out of poverty through increased employment opportunities.

Nonetheless improving access to land in the smallholder sector is still seen as critical to ensuring that the poorest rural households realise benefits from growth in agriculture: “multiplier effects tend to be much weaker when the source of agricultural growth is concentrated in relatively few hands. Thus the rate of growth is likely to be affected by the distribution of assets in the agricultural sector, particularly land” (Jayne et al, 2003: 255).

Four broad mechanisms present themselves as options for increasing the land area available to marginal farm households. The first is the possibility of bringing new areas of land under
cultivation. Much discussion now assumes that Africa is fast reaching its “land frontier” whereby all moderate-high potential agricultural land has been brought into cultivation. By contrast, a forthcoming World Bank report (World Bank 2009) will argue that population densities remain low in the so-called Guinea Savannah zone, which occupies a large proportion of both West and southern and eastern Africa. This land remains under-exploited due to past problems of disease (now being tackled), difficulties in sourcing water from deep water tables with traditional technology and a lack of research investment into appropriate soil management technologies and crop varieties adapted to the Guinea Savannah environment. These are essentially technical challenges that can be overcome – as they have been in similar environments in central Brazil and north-east Thailand, two areas that have witnessed enormous agricultural growth in recent decades, becoming agricultural exporting regions of global significance. Not only do these areas offer growth potential for African agriculture; if this is exploited, some of the land pressure on other areas could be temporarily relieved. Development of the Guinea Savannah lands will, however, require large-scale public investment in both agricultural research and basic infrastructure provision.

The second option is the possibility of land redistribution; this is a complex and highly politicized route most relevant to those countries with colonial legacies of inequitable land distributions. The third option is the encouragement of land markets (in particular rental markets) to increase land availability. The latter option usually implies land titling (through existing law) or the strengthening of legal frameworks surrounding land ownership. Finally, legal changes to inheritance and other rights could ensure that women gain access to land within their communities that they are currently denied and/or maintain access that they could lose over time.

Tenure is often raised as a critical issue in discussions surrounding development of smallholder agriculture as it is considered to play a critical role in farm investment decisions and farmers ability to access formal credit. Two points from the literature should be noted here: First is the observation that, where customary systems of tenure operate, the absence of freehold rights does not necessarily lead to tenure insecurity. Customary systems can confer a range of ‘secure’ rights (from the right to cultivate, to lend, to bequeath, etc) to the holder. Second, recent research suggests that the empirical evidence in support of a relationship between tenure security and investment is limited. This is explained by the observation that in much of sub-Saharan Africa, where informal methods of establishing rights to land exist, investments are frequently made to enhance tenure security rather than because of it
(Brasselle et al. 2002). Furthermore, with regard to access to credit, it is noted that in much of Africa land titling is not sufficient to increase access to credit, ‘outright access to credit and other markets [is] a more important constraint than tenure security’ (Maxwell and Wiebe 1998).

Freehold title as a route to increasing land availability and productivity has potential risks, not least that the poorest and most vulnerable may be forced to sell in bad times. Although disadvantaged by traditional systems in allocation of land, women are particularly vulnerable to being stripped of their land rights through formal titling procedures. This occurs because it is the male head of household who commonly named on title deeds. Even where provision has been made in law for joint registration of land, women are frequently unaware of their rights and local administrators are not necessarily inclined or equipped to enforce them (for a review see Lastarria-Cornhiel 1997).

Nonetheless: “in densely settled zones exhibiting extremes of farm subdivision, it is doubtful that anyone gains much from the absence of a land market and from the lack of security of ownership or tenure. Moreover, many existing tenure systems are deeply gender-biased against women both in custom and law, causing serious dysfunctions among control, decision making, and use of land as a productive resource” (Ellis 2005).

Awareness of the potential unintended consequences of land titling together with recognition that customary systems can offer security of tenure and have a role to play role the social networks crucial to household survival (through borrowing and lending of land) have led to the following recommendations (from a review by Maxwell and Wiebe 1998):

- Customary tenure should be allowed to evolve or adapt (rather than be replaced by freehold).
- Land titling (privatisation) only in cases where tenure is already evolving toward individualised holdings.
- There is a rationale or allowing dual systems to continue as they serve different purposes.

In their discussions on smallholder farms in West Africa, Toulmin and Gueye (2003, p66) warn of the need for smallholders’ land rights to be protected, particularly as the value of land in peri-urban areas increases:
“If smallholder agriculture is to have a future, it needs an appropriate system of tenure legislation and administration which firmly supports the rights of the small farmer against land grabbing”.

Meanwhile, woodland and other common property resources are also of great importance to poor households (especially those in areas of lower agricultural potential), in part compensating for their limited access to arable land, but also providing a safety net function in lean seasons and bad years (Cavendish 2000). Population growth (combined with new commercial opportunities) is putting pressure on common property resources just as it is reducing average land holding sizes. Poor households in general and women in particular often lack voice in the institutions that manage remaining common property resources (Beck and Nesmith 2001).

Finally, we have thus far discussed the need for secure land tenure primarily in terms of protecting marginal farmers against the worst consequences of rapid population growth. However, secure land tenure is also one of the conditions necessary for rising populations to contribute to a virtuous process of agricultural intensification. Rising populations can make more labour available for agricultural production, effectively changing the relative cost of land to labour. Thus labour-intensive activities, such as soil and water conservation investment, may become viable for small farms, in turn creating the conditions for additional investment in agricultural intensification, for example, increased use of inputs and diversification into high value crops (Tiffen et al, 1994). Secure land tenure provides necessary assurance for farmers contemplating increased investment in their farms. Such investment is also more likely where there is strong demand for farm products and appropriate technology is available (Tiffen et al, 1994, Meertens at al 1996, Wiggins, 2000).

However, it should be noted that population growth does not always increase the relative cost of land to labour. Households may be faced with reduced land areas but no possibilities to intensify production through increased labour input (Scherr 2000). Demand for non-farm labour, migration and HIV/AIDS can all reduce the labour available to rural households.

### 4.2 Staple crop production

Food security is a top priority for rural African households. To meet this goal, households have, broadly speaking, two options: they can earn income and purchase their food needs or
they can produce their own. Most rural households in sub-Saharan Africa choose to produce their own as far as possible. There are social and cultural reasons why food production may be prioritised. Women farmers in particular are often found to focus on food production, this may reflect their responsibilities for domestic provision, but also may arise through unequal access to the resources that enable cash cropping (Gladwin et al. 2001). Smallholders are also widely thought to be unwilling to rely on unstable food markets, so, where markets are inefficient or highly volatile, plant their holdings to staple crops rather than potentially more remunerative crops (Fafchamps 1992, Jayne 1994, Pandey 2006). Unfortunately, small farm size and low levels of productivity mean that for many households they are only able to meet a small proportion of their food needs.

These observations lead to two policy points. First, the need to make food markets function more efficiently. The existence of stable food markets can encourage farmers to switch to higher value production on their smallholdings where there is a demand for output. Strong market linkages are seen as critical here and the most obvious response is to improve transport linkages. Rural road networks are very poor in much of sub-Saharan Africa and improvements here are frequently seen as the first steps in improving access to input, output and food markets. Strengthening of institutions to support market development such as producer and trader organisations and improved market information systems, are also policy options for supporting market development.

The second route to improve outcomes for the poorest farmers is to turn attention to increasing staple crop productivity for this group. This might be through research and extension or improved access to inputs and finance. This option is vital for both those households that retain a commitment to food crop provision and for those for whom increased staple crop productivity is a prerequisite for farm diversification into higher value crops.

4.3 Public goods

Investment in public goods (such as agricultural research and rural roads) has already been mentioned as a route to increasing staple crop productivity and stabilising food markets to facilitate diversification. Of course investment in these areas is seen as essential for agricultural development in general and there is an ongoing debate as to whether returns to public investment (in terms either of growth or of poverty reduction) are higher in so-called higher potential or lower potential (agricultural) areas (Fan et al. 2000; Palmer-Jones 2003; Fan and Chan-Kang 2004 – see also section 7.0 below). For both political and technocratic
reasons, initial investment is likely to be concentrated in higher potential areas, which may nevertheless contain large numbers of marginal farmers. For similar investment to be extended to lower potential areas, where the proportion of marginal farmers may be higher, political commitment to such investments will need to be sustained over a significant period and the case for gradually shifting the priority to new areas (which will grow stronger over time) will need to be made.

Time and again, farmers have been shown to respond positively to demand in agricultural markets (Wiggins, 2000) and improving transport links is a priority for linking farmers to markets. The growing urban population in sub-Saharan Africa gives rise to a growing domestic demand and has been key to successful intensification of agriculture in a number of examples (eg. Machakos, Kenya; Kano, Nigeria; Kumasi, Ghana). The potential demand from urban centres may be threatened by cheap imports, often by foodstuffs produced within subsidised productions systems. The implications for policy here are the reform of agricultural policies in OECD countries.

Despite good reported returns to investment in agricultural research, public investment in this area declined during the 1990s (Pardey et al. 1997; Alston et al. 1998; Beintema and Stads 2004). However, the role of improved technology in agricultural intensification and growth continues to be evidenced by a number of studies (Haggblade 2004; World Bank 2009).

Publicly funded agricultural research needs to identify those areas not addressed by the private sector (in particular plant breeding in crops important to small holder farmers and crop management technology appropriate to their circumstances). Furthermore agricultural research targeted to this sector must recognise the different needs of different ‘smallholder farmers’, from those engaged in subsistence activity as one aspect of diverse livelihood strategies, to those seeking opportunities to commercialise and intensify production (Tripp 2001). Prioritising research appropriate to poor smallholders or marginal farmers is an enduring problem, as they often lack the voice to “demand” technologies particularly suited to their needs. In addition to the need for technology to be appropriate to farmers’ circumstances, successful technologies are often those that prove to be adaptable (by farmers) and suitable for incremental adoption (Scherr 2000).

Finally, as well as the need for funding of research activities there is a need to build research capacity in national research systems, an area that has suffered considerably from limited government support.
4.4 Service provision

Improved service provision is necessary in a number of areas to realise the potential benefits of investments in infrastructure and technology. Poor infrastructure contributes enormously to current problems of access to inputs, finance, technical advice and output markets. However, improved transport links alone will not secure these services for the rural poor.

Particularly where private service suppliers (e.g. microfinance organisations, input suppliers) are concerned, service provision is likely to spread firstly in higher potential, more accessible and more densely populated areas. Most enterprises will first develop business models that work in these areas (in itself, often a challenging task), then learn how to adapt them to more challenging (i.e. higher cost and/or risk) environments (Johnson et al. 2004). Pioneering suppliers will then expand into more challenging environments as competition increases in the higher potential zones. However, public policy can also seek ways of encouraging them to expand their geographic scope and also to develop products suitable for poorer clients faster than market forces alone would cause them to do (Poulton and Dorward 2008).

A leading role for the state in service provision for smallholder agriculture was largely rejected by donors as a result of the liberalisation agenda. However, it is increasingly argued that state intervention for this sector is imperative particularly given the primacy of food staples, and the lower likelihood of private sector service providers stepping in to support staple crops in research and extension, marketing, finance and input provision (Dorward et.al. 2004). Given past inefficiencies in direct public sector service provision in Africa, there is increasing interest in a range of public private partnerships to support service provision to smallholder farmers. Under such arrangements the role of the state can vary from providing a coordination role, bringing together potential providers of complementary services, to bearing some of the risk or even providing an element of direct subsidy when private firms extend their services to more remote or risky rural locations.

Traditional, centralised, top down public extension systems are charged with being both costly and inefficient. Furthermore, only a fraction of available provision has been addressed to women. Privatized extension systems are considered a way forward but many hold deep reservations regarding how such systems can serve poor smallholder farmers with few means to create effective demand. However, privatised extension can take a number of forms ranging from entirely privately funded and delivered services to publicly funded services delivered by private agents (Chapman and Tripp, 2003).
A revitalised extension strategy (private or public) depends upon increased provision of trained and motivated staff (male and female). This cannot be ignored within a policy to improve agricultural extension, especially in those countries where HIV/AIDS has claimed the lives of many of those working in his service.

Marginal farmers are less likely to benefit from increased service provision if it is not targeted at them. Women farmers face particular problems with access to credit, extension and inputs. Where these services are provided to the household head women farmers risk being bypassed. Where services are provided through cooperatives and farmers’ associations, women often miss out, either because they are excluded or because membership is not socially acceptable (Gladwin and Mc Millan, 1989). Women are also less likely to hold title to the land they are farming and may be less able to secure credit for that reason.

As mentioned above, extension services in the past have failed to serve women farmers equitably. Although, this may in part be due the effect of gender (most extension agents are male) there is evidence to suggest that poor households, without sufficient assets to follow recommendations for inputs, spacing etc. are less likely to receive extension advice (Ross, 1999).

A final point to note here is that the role of the state in service provision to smallholder farmers is increasingly justified in terms of social protection (fertilisers rather than food aid). This will be discussed further below.

Although agriculture forms a central component of livelihoods for most rural households, it is far from the only income source for most. It is argued therefore, that poverty reduction strategies for marginal farmers must also look beyond agriculture. Increasing levels of diversification are considered by some (e.g. Bryceson 1999; Ellis 2005) as evidence of the failure of agriculture to support rural households and adds strength to the argument that future growth in rural economies (and therefore future opportunities for employment and poverty reduction) will take place outside the farm. However, it is more often recognised that farm and non-farm economies are closely interlinked and that benefits for the poorest, landless or near landless emerging from a growth in agriculture will occur through increased demand for goods and services within the rural economy. In the following section we will consider the role of the non-farm rural economy in rural development.
5.0 The rural non-farm economy

For a number of years now the rural non-farm economy (RNFE) has received increasing attention from policy makers in light of data showing the extent to which rural households depend on non-farm sources of income for their livelihoods (Bryceson 1999, 2002; Ellis 2000, 2005; Ellis and Freeman 2004; Haggblade et al. 2007; Jayne et al 2005; Reardon 1997). The emergence of the livelihoods concept has also been significant in drawing the attention of policy makers to the plurality of income sources used by rural households.

The importance of off-farm activities in rural livelihoods is not a new phenomenon. Seasonality in agricultural production systems means that farm households have always allocated their labour to different tasks according to the agricultural calendar. Perhaps a more recent driver of diversification is the need for to earn cash income to finance farm activities or to meet cash needs for education or healthcare. Reduced availability of land may also have a part to play in the trend for increased employment outside the farm. Importantly, diversification is also as a response to risk and a coping mechanism in the face of shocks. There are clearly a wide range of factors driving diversification, these can be loosely characterised as ‘push’ or ‘pull’ factors (Table 3).

Table 3: Drivers of diversification (source: drawn from Barrett et al. 2001)

<table>
<thead>
<tr>
<th>Micro level (households) responses</th>
<th>Macro level drivers</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Push factors</strong></td>
<td></td>
</tr>
<tr>
<td>Risk reduction</td>
<td>Limited risk bearing capacity – weak financial systems</td>
</tr>
<tr>
<td>Response to diminishing returns to labour (eg. in the face of land constraints)</td>
<td>Constraints on land and labour markets</td>
</tr>
<tr>
<td>Reaction to crisis or liquidity constraints</td>
<td>Climatic uncertainty</td>
</tr>
<tr>
<td>Need for self provision</td>
<td></td>
</tr>
<tr>
<td><strong>Pull factors</strong></td>
<td>Opportunities for employment created by:</td>
</tr>
<tr>
<td>Complementarities between activities</td>
<td>Commercial agriculture</td>
</tr>
<tr>
<td>Specialisation of individuals</td>
<td>Proximity to urban centres</td>
</tr>
</tbody>
</table>
The importance of non-farm income can be viewed as an indicator of the failure of agriculture to supply viable livelihood and therefore the ‘deagrarianisation’ and depeasantisation of rural societies (Bryceson, 1999). Diversification can reflect the increasing impoverishment of rural households (who then typically seek employment as agricultural labour) or represent an opportunity to generate income to be invested in agriculture. Given these very different scenarios and the range of possible returns to off-farm activities it is not surprising that the relationship between RNF and household poverty is not always clear. A review of the global evidence suggests that the relationship between diversification and income level is ambiguous and the direction of the relationship cannot be assumed (Davies et al. 2007, Haggblade et al 2005). However, Barrett et al (2001) reviewing a series of case studies from Africa (special issue Food Policy) report consistently positive relationships between non-farm income and household welfare.

A wide range of activities can be found in the RNFE, from casual labour to formal employment and business activities. For poor rural households, selling labour to other farm households can be important – although Otsuka and Yamano (2006) cast doubt on this in the case of East Africa - along with petty trading. Formal employment (public sector, NGOs), rural manufacturing and provision of tradable services are rarer or have significant entry requirements. Environmental resources (such as wild foods, wood products and grasses for consumption and sale) also make a significant contribution to incomes of rural households, especially the poorest (eg. Cavendish 2000).

Although estimates of the income shares of rural households deriving from the non-farm activities vary substantially, the evidence points to a large and growing RNFE (Davis et al. 2007). The RIGA dataset (Rural Income Generating Activities - complied by the FAO to allow cross-country comparison of participation in non-farm activities) shows that 48% of households in developing countries (in the dataset) gain income from non-farm activities.

The importance of off-farm income varies considerable between countries and regions. We have already discussed the importance of staple crop production for rural African households; Figure 2 shows the continuing importance of crop production as a source of income for African households in comparison to other developing areas. It is also notable that participation in agricultural wage labour is lower in Africa (with the exception of Malawi) than for other developing areas such as South East Asia and Latin America.

Figure 1. Sources of income for rural households (RIGA) (source: Davies et al 2007).
A breakdown of non-farm income sources (Figure 2) further suggests that opportunities for non-farm wages are low in Africa. Here, most non-agricultural income is derived from the service sector. This finding supports the comment by Haggblade et al (2002) that the rural non-farm sector is dominated by service and commerce and that manufacturing plays a small (and vulnerable) role.

**Figure 2.** Non-farm income sources – cross country comparison (source: Davies et al 2007).
Studies in Africa that have demonstrated a positive correlation between wealth and non-farm activity also suggest that the poor face significant entry barriers to participation in the RNFE, in terms both of low education (Otsuka and Yamano 2006) and lack of access to capital (Reardon 1997). Thus, whilst land-poor households might obtain slightly more of their income from non-farm sources (Otsuka and Yamano 2006), it is definitely the better off who benefit most in absolute terms. Do the opportunities in the RNFE therefore offer a route out of poverty for the poorest (marginal) farmers? Or simply exacerbate existing inequalities?

To overcome the entry barriers which limit the extent to which the poor can find and exploit opportunities in the non-farm sector, a number of interventions are possible (Table 4). Among these, access to capital and the development of education and skills in poorer households are seen as critical for enabling participation by the poor.

The provision of micro-credit is a popular intervention to overcome entry barriers and improve livelihoods of poor households. However, as a strategy for growth in the RNFE Haggblade et al. (2002, p87) caution the use of supply side interventions such as credit provision in the absence of demand: “injections of microcredit may merely redistribute poverty as new entrants divide a fixed pie into ever-smaller increments”. This problem has been illustrated in the case of women’s micro finance programmes (Mayoux, 1999).
Table 4: Strategies for supporting the RNFE (source: Ashley and Maxwell, 2001)

<table>
<thead>
<tr>
<th>Removing general constraints to growth</th>
<th>• Investment in transport, communications, education, health</th>
</tr>
</thead>
<tbody>
<tr>
<td>Facilitating rural-urban links</td>
<td>• Facilitate flow of migrants and remittances</td>
</tr>
<tr>
<td></td>
<td>• Increase the flow of market and price information to rural areas</td>
</tr>
<tr>
<td></td>
<td>• Regulations/standards that facilitate out-sourcing and sub-contracting</td>
</tr>
<tr>
<td></td>
<td>• Develop rural recreational amenities for urban population</td>
</tr>
<tr>
<td></td>
<td>• Identify opportunities for increasing access to social business networks</td>
</tr>
<tr>
<td>Facilitating enterprise growth</td>
<td>• Develop small towns</td>
</tr>
<tr>
<td></td>
<td>• Support producer organisations for marketing and sourcing</td>
</tr>
<tr>
<td></td>
<td>• Remove regulatory or bureaucratic burden on small/medium enterprise</td>
</tr>
<tr>
<td></td>
<td>• Reform ‘extension’ into business advisory service</td>
</tr>
<tr>
<td>Sector or sub-sector specific interventions</td>
<td>• Support industrial clusters</td>
</tr>
<tr>
<td></td>
<td>• Incentives for industry relocation</td>
</tr>
<tr>
<td></td>
<td>• Use of planning gain in concession allocation to encourage local economic linkages</td>
</tr>
</tbody>
</table>

Further caution is suggested by Start (2001) regarding the encouragement of individual small-scale rural enterprises (mainly through micro-credit) as a route for the poor into the RNFE. The increase of debt and risk, low productivity of micro-enterprises, and a potential increased burden on women and children are all potential negative outcomes of encouraging small-scale informal activity through micro-finance. Development support may be better targeted at small and medium sized enterprises to create employment opportunities – however, this too is not without risk for the poorest who may be subject to exploitation and poor working conditions.

Public intervention to encourage private sector development and thereby extend formal employment opportunities to rural areas requires a certain political will, especially if the returns to investment in these areas are uncertain. However it is a model that has been applied in some regions (Taiwan and India, Start, 2001). Policy to support private investment will
need to support rural areas in development of transport links, infrastructure, education and financial services.

Without externally derived demand for labour, increased rural employment opportunities can only emerge if the agriculture sector is successfully stimulated. Therefore it may be argued that policy in support of the RNFE includes measures for developing agriculture.

A second reason for supporting agriculture within a context of increasingly diversified rural livelihoods is suggested by Bryceson (2002) who reports that despite increased reliance on off-farm incomes, food self-provisioning is growing in importance. Support for food production in the small farm sector is considered to be of ongoing importance for addressing rural welfare and reducing dependence on imports.

A final policy implication of diverse rural incomes relates to environmental goods. The importance of these goods to rural incomes highlights the importance of access to and management of environmental resources by rural households. Policy that does not disadvantage marginal farmers must recognise the need to support effective common property management (CPR) regimes and avoid disenfranchising this group.

Constituting the poorer members of rural communities, the evidence so far on the potential of the RNFE suggests that marginal farmers will not be the first to benefit from growth in this sector. Marginal farmers are more likely to exhibit ‘diversification out of desperation’, taking up low paid, low skill, non-farm activities as a survival mechanism rather than out of choice. This is particularly true for women who as a result of lower wage rates and less education are clustered in low-entry, low return activities (Whitehead, 2005). Nonetheless, even if not benefiting from direct employment, marginal farmers should benefit from other consequences of the development of the RNFE such as improved communications and infrastructure and increased marketing opportunities.

### 5.1 The way forward – rural or urban, farm or non-farm?

In opposition to a view that a focus on agricultural development is the best route for growth and poverty reduction in rural areas, it has been suggested that development support should be focused on generating opportunities for poor households outside agriculture. However, for most commentators it is not a case of ‘either / or’ - those that advocate growth strategies based on agriculture stress that the benefits for the poorest households will be derived from increased demand for services generated by those households who are able to increase their productivity. Employment opportunities within rural areas are unlikely to arise in the absence
of growth in agriculture generating increased demands for services. In other words, most rural development strategies emphasise both the farm and non-farm economy.

Whether the rural economy has sufficient growth potential to act as a driver for national development and poverty reduction is another matter. It is argued by some that urban growth offers the best prospects for economic development and that the facilitation of urbanization offers the best route out of poverty for the rural poor:

For small farm agriculture to grow and prosper in Sub-Saharan Africa, rapid rural-urban transitions will have to take place in order to reverse declining farm size, provide a robust domestic market for farm output, increase cash in circulation in rural areas, and take the pressure off overexploited natural resources (Ellis, 2005 p144)

It is therefore suggested that a more balanced view of rural-urban interactions is needed, one that does not deny the need to improve agriculture but raises questions as to whether this is the best option for poverty reduction. Where economic growth is evident in urban centres policy should ensure that infrastructure is developed to support that growth (Ellis 2005). For the rural poor to benefit from urban growth they must migrate. The WDR 2008 presents migration as one of three pathways out of poverty for the rural poor (the others being farming and labour) (World Bank 2007). However, most governments have traditionally viewed rural-urban migration as a problem that should be discouraged. Findings of a UN survey carried out in 1978 found that 90 out of 116 developing countries had policies to slow down or reverse rural-urban migration (Vercueil, 2003). The disapproval towards rural-urban migration stems from the potential negative impact of population movements on urban centres and the rural economy. These are further considered in the following discussion.

6.0 Migration – what role for poverty alleviation?

Early models of economic growth describe the movement of surplus labour from the rural sector to centres of industrialisation. The transition of economies from mainly rural subsistence production to modern capitalist enterprise is the basis of development. This social transformation is seen around the world as countries develop; urban populations are now set to exceed those of rural in developing countries by 2020 (World Bank, 2008). However, so-called ‘premature’ urbanization, where populations move to urban centres even when there is
urban unemployment and inadequate infrastructure creates problems of overcrowding, pollution and crime.

The other negative outcome of rural-urban migration is the impact on agriculture, which may suffer from lack of labour in rural areas. Migration has become an important consideration within rural development and has generated academic and policy interest in why people migrate and the consequences of their movement for those who remain.

6.1 Patterns of migration

Migration from rural areas takes a number of forms in addition to that of permanent relocation to urban centres, these include international, circular and rural-rural migration. Migration choices are influenced strongly by location and thus vary highly between and within countries. Where international migration flows consist mainly of unskilled workers, a large proportion of these will originate from rural areas. The potential remittances from overseas workers to rural households means they are significant in some areas but mainly of importance in developing countries in close proximity to OECD borders (e.g. Mexico, Caribbean, Turkey). South Asia and sub-Saharan Africa play a lesser role in low skilled international migration (Lucas, 2007).

Rural-rural migration is also significant in some locations. Movement to another rural area can represent ‘replacement migration’ for workers who have moved to urban centres; in other cases there is population movement in response to opportunities in commercialised agriculture or infrastructural development (e.g. irrigation schemes).

The evidence that many migrants take part in seasonal or temporary migration, also challenges the traditional view of migration as permanent relocation. This circular migration can be for a number of reasons including restrictions on family accompaniment (practical or regulatory) or a choice by migrants to return home (planned or unplanned). Seasonal migration as a part of a diversified livelihood strategy is a common characteristic of households in some agroecological zones. Even where migration is for a number of years, migrants may retain an ambition to return home with accumulated savings.

Decisions to migrate can be crudely classified as ‘push’ or ‘pull’ factors (poverty and insecurity pushing people out of rural areas and better opportunities pulling them into urban ones). Migration is normally the decision of the household head and can often be considered a family strategy rather than an individualistic decision. Thus, migration can present a route
out of poverty for the migrants themselves or a strategy to improve the situation of those who remain behind (Lucas, 2007).

6.2 Migration and rural development

This leads us to consider the ways in which migration may impact on rural development. At the household level remittances from family members may constitute an important part of household incomes, indeed the literature on livelihoods and the RNFE suggests remittances provide an important component of household incomes though this varies widely between countries and regions (Davies et al 2007).

The impact of remittances on rural households is unclear. In addition to consumption smoothing, remittances in response to crises (death, injury, environmental events) may increase a household’s capacity to withstand shocks (Lucas, 2007). Remittances have also been found to increase investment in agriculture and boost productivity (FAO 2003). This is attributed to both increased household financial resources plus the positive effects of exposure to new ideas which has been found to increase adoption of improved technologies in households with migrated members. However, the negative impacts of migration are also commonly reported: in some cases the effect of remittances is to reduce labour force participation. A number of studies have found that remittance receipts do not offset the loss of labour by migration of family members (see Lucas 2007). The FAO ‘Roles of Agriculture’ country case studies from Mali, Ethiopia and Ghana reported negative impacts on agriculture in areas of out-migration (Vercueil, 2003).

In addition to the potential benefits of remittance flows rural-urban migration has a potential benefit on the rural economy by reducing pressure on land. Where rural out-migration is impeded for example in Ethiopia where the system of land rights reduces out-migration and South Africa during the apartheid regime, rural poverty may be aggravated (FAO, 2003).

When considering the role of migration in poverty alleviation it is important to consider whether the poor participate in migration and whether their migration results in positive impact for households left behind. Better off and better-educated households may have more opportunities to migrate since they can bear the initial costs and may have greater employment opportunities (Waddington and Sabates-Wheeler, 2003).

There is evidence that the poor do migrate (though they are less likely to do so internationally) and remit (Lucas 2007). The evidence that poor households benefit from migration is mixed,
However, but it is clear that there are potential benefits of migration to rural households either as a coping mechanism or as an accumulation strategy (Waddington, 2003). Nonetheless, even those households who do not take part in migration may benefit for the following reasons (Lucas, 2007):

1. They may take part in a chain of replacement migration
2. They may benefit from investments financed by migrants
3. Increased foreign exchange leading to expanded economic activity
4. Multiplier effects from remittance spending eg. house construction

With regard to marginal farmers, it is important to note that migration is less likely to occur from remote areas. Distance per se is not necessarily the cause, more likely is the lack of information, migrants with family networks at their destination benefit from improved information and assistance in locating accommodation and employment. Furthermore, the evidence that in some areas “education is the key asset that determines outmigration” (Anriquez, 2007, p17) has clear implications for the opportunities open to women and the poor.

Nonetheless, the impact of migration is seen overall as positive, hence “communities that are isolated from the migration process […] remain amongst the poorest” (Lucas, 2007).

### 6.3 Migration and the feminisation of agriculture

Migration is often cited as the driver of the ‘feminisation of agriculture’. Although this is frequently perceived as a characteristic of rural areas across the world, recent data suggests it is primarily an issue in SSA (see Table 5).

<table>
<thead>
<tr>
<th>Region</th>
<th>Number of females for every 100 males</th>
</tr>
</thead>
<tbody>
<tr>
<td>East Asia &amp; Pacific</td>
<td>100.7</td>
</tr>
<tr>
<td>Europe &amp; Central Asia</td>
<td>95.6</td>
</tr>
<tr>
<td>Latin America &amp; Caribbean</td>
<td>91.4</td>
</tr>
<tr>
<td>Middle East &amp; North Africa</td>
<td>99.3</td>
</tr>
<tr>
<td>South Asia</td>
<td>103.3</td>
</tr>
</tbody>
</table>
Two factors are important in the gender imbalance in rural SSA. Firstly, migration (especially international migration) is predominantly male. Secondly, the loss of life as a consequence of HIV/AIDS has initially resulted in an increase in feminisation rates. This trend is predicted to be reversed as more women die of AIDS related illness (Anriquez, 2007).

The loss of men is important to a consideration of marginal farmers since the resulting female-headed households often fall within this group. Although in some countries female-headed households form a disproportionate percentage of the rural poor, this is not always found to be the case (Quisumbing et al. 1995, IFAD 1999). Some of the difficulty in analysing the implications of female headship arises because female-headed households are not a homogenous group and the ways in which headship is created (e.g., widowhood, migration, divorce or choice) have implications for the assets and status of the household. Nonetheless, the absence of a working adult male has consequences for household welfare, either through an absolute shortage of adult male labour (which may be important for tasks such as land clearing or ploughing), or through the reduced access to other inputs and service that may be experienced by the de facto female household head.

### 7.0 Less Favoured Areas

Forty percent of the developing world’s rural population are considered to reside in Less Favoured Areas (LFAs) (Kuyvenhoven et al. 2004). These are areas of low agricultural potential and/or with limited access to markets and poor infrastructure. Agricultural potential may be limited by poor or fragile soils, low or unreliable rainfall, and challenging terrain. Hence, LFA are usually characterised as the highlands/uplands and drylands. The remoteness of these areas also means that they are often neglected by policy and services. Farming households in these environments can therefore be considered marginal in all senses.

It is suggested that a disproportionate number of the rural poor reside in LFA (Hazell et al. 2000 cited in Fan and Chan-Kang, 2004) – but data cited elsewhere do not suggest this (this

<table>
<thead>
<tr>
<th>Region</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sub-Saharan Africa</td>
<td>116.3</td>
</tr>
<tr>
<td>High income non-OECD</td>
<td>92.0</td>
</tr>
<tr>
<td>High income OECD</td>
<td>92.2</td>
</tr>
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<tr>
<td>High income OECD</td>
<td>92.2</td>
</tr>
</tbody>
</table>
could be a problem of definition of LFA). However, the character of poverty is conceived to be essentially different in LFA (discussed further below) and there is no dispute that high numbers of the rural poor reside in LFA.

Despite the high incidence of poverty in LFA, rural investment has traditionally been focussed on areas with higher agricultural potential because it is considered that the returns to investment will be greater. Furthermore, increased growth in high potential areas offered the prospect of attracting populations from more marginal areas and relieving pressures in those locations. Modelling work based on data from China and India has suggested that these assumptions do not necessarily hold true (Fan and Chan-Kang, 2004), even if they once did. Returns on investment in areas such as roads, agricultural research and education are often now greater, both financially and in terms of poverty reduction, in areas dominated by rainfed agriculture than in irrigated areas. They do note, however, that such investments may be more costly in LFA; firstly, the costs of building roads and infrastructure are greater in remote areas, secondly the development of improved varieties is more difficult in more variable and limiting environments. Applying the same methodology to the differently endowed regions of Uganda they conclude that investing in the least favoured areas brings the best returns in terms of poverty reduction. Investment in higher potential areas still brings good returns to investments (this is in contrast to China and India where diminishing returns are in evidence).

7.1 Characteristics of poverty in LFA

The characteristics of poverty in LFA are seen as a product of agroecological constraints and the remoteness of populations from markets and services. Low agricultural productivity means that households generate little surplus to invest in resource enhancing or conserving technologies - a prerequisite for agricultural intensification in highland and dryland areas prone to resource degradation. Added to this, climatic variability and the absence of formal insurance mechanisms in many LFA means that coping with shocks is a central part of household livelihood strategies.

Household strategies for coping with and mitigating shocks explain some of the chronic poverty experienced in LFA. It is argued that in an unpredictable environment households’ production strategies are geared to reducing risk rather than maximising production. This clearly has implications for development strategies that would seek to encourage increased farm productivity for poverty reduction. The tendency for risk mitigation means that small
holders are more likely to select low risk cropping activities, are less inclined to invest in inputs such as fertilisers, and choose to diversify activities to spread risk (Ruben, 2005).

To enable consumption smoothing, households are also more likely to retain higher levels of assets than is optimal. These strategies serve to reduce the impact of shocks and avoid the loss of key assets in the event of their occurrence.

Poor infrastructure and market linkages means that employment opportunities in LFA are often limited and income diversification is typically ‘desperation led’ (low skilled, low return activities) (Barrett et al 2001). Migration is an important strategy for households in LFA, and remittances can play an important role in household incomes. However, male out-migration is one reason for the reported gender imbalance in LFA areas reflected in higher numbers of female-headed households and high dependency ratios (Ruben and Pender 2004)

7.2 Policy options for LFA

Taking into account the low-productivity, high-risk production environment in LFA, three development pathways are suggested (quoting Ruben and Pender, 2004):

1. Agricultural pathways that focus on investment in land resources for improving the productivity and sustainability of the natural resource base
2. Employment based pathways that improve returns to family labour
3. Institution based pathways that reduce risk and transaction costs of investments

Regarding pathway 1, it is argued that due to the characteristics of poverty and the fragile resource base in LFA, the strategies for agricultural growth commonly promoted in higher potential areas will prove inadequate. Increased agricultural productivity must be associated with improvements in the resources base, and as we have already noted the ‘asset poverty’ of smallholders in LFA means that these investments are unlikely to be made spontaneously. Policy for growth in agriculture therefore calls for public investment in research to address the challenges of intensification in the production systems of LFA (listed in Table 6).

However, it is suggested that before technological innovation can take place it is essential to ensure that the poor have secure access to environmental assets: land, water, trees and pastures (Ruben et al 2003). This requires support for institutional factors including systems for enforcing property rights and means for organising and collective action necessary for the management of common property resources. These institutional structures, it is argued, create the necessary conditions for demand-driven participatory technology development.
Table 6 Principal farming systems in LFA (Ruben et al 2003)

<table>
<thead>
<tr>
<th>Agro-ecological zone</th>
<th>Production system</th>
<th>Share of developing countries’</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>rural popn.</td>
</tr>
<tr>
<td>Highlands/hillsides</td>
<td>Perennial/tree crops</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Shifting cultivation</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Intensive cropping</td>
<td>24</td>
</tr>
<tr>
<td>Drylands/arid areas</td>
<td>Migratory herders</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Agro-pastoral</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Mixed rainfed</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>42</td>
</tr>
</tbody>
</table>

Low levels of available nutrients are the limiting factor in many LFA. The current low use of mineral fertilisers can be a function of the increased risks incurred with their use (as compared to more predictable environments) and their high costs as a result of poor transport links. Agricultural research for these areas needs to take into account farmers’ need to reduce risk and must also consider returns to labour. Technologies to improve soil nutrient and water management are needed to boost productivity; innovations to reduce risk (e.g., plant breeding for drought tolerance and disease resistance) are also important. Low external input techniques, whilst appropriate to conditions of limited capital and high risk, nevertheless may overestimate farmers’ willingness to invest labour on farms, especially where households strategies for reducing risk involve the diversification of income generating activities.

A range of possible instruments exist to support agricultural intensification in LFA (Ruben et al 2003):

- Input provision to support soil and water conservation
- Support for covering sunk costs
- Rural microfinance
- Veterinary support
- Land market mechanisms
- Water charges and tradable water rights
- Food for work for the development of rural infrastructure
• Micro-enterprise programmes
• Payment for environmental services
• Training and extension (FFS)
• Market development

The second development pathway suggested for LFA is diversification; households in LFA frequently exhibit diversified livelihoods as a strategy for risk mitigation. Support for the RNFE and migration has been discussed above. However, the importance of improved market access through transport and infrastructure is critical for remote areas.

The third option is institutional development to reduce risk for households in order that they are able to take risks with investments (for example savings schemes, support networks and insurance products).

The reduction of risk is an important component of a new agenda for social protection (SP). Traditionally, social protection has been approached in a relatively narrow, welfarist framework, aimed at protecting the poorest with safety nets. More recently the concept of social protection has been broadened, considering (amongst other issues) livelihood security and prevention of loss of assets. The relationship between agriculture and social protection is considered further in the next section.

8.0 Social Protection

Smallholder farmers have been identified as the largest ‘functionally vulnerable’ group within rural populations (Devereux 2001). The vulnerability of farming households is evidenced by the suggestion that around half of the world’s hungry are smallholder farming households (UN 2005). Given the obvious need to enhance livelihood security amongst this group in order to cut hunger and poverty, possible synergies between social protection and agriculture are currently a hot topic.

“Social protection is concerned with the ways in which households’ or individuals’ resistance to adverse events can be strengthened” (Farrington et al 2004:3). However, ‘social protection’ is conceived to be wider in scope than a ‘safety net’ approach to social assistance in that it aims to link support activities to broader goals of growth and poverty reduction.
As mentioned previously, risk mitigation by the poorest farming households (for example through crop choices and diversification) may occur at the expense of yield or income maximisation. Thus it is increasingly seen that reducing risk for poor households can be considered growth promoting where it enables households and individuals to invest in productive activities. Social protection can therefore have a potentially positive effect on agricultural growth.

The converse is also considered to be true: supporting agriculture can help households achieve their consumption needs and therefore meet social welfare goals i.e. supporting households in their productive activities may be a better strategy than implementing ‘ex-post risk management’ activities such as food or cash transfers.

The potential linkages between agriculture and social protection can thus be considered two-way. Agricultural growth has the potential to reduce both risk and vulnerability experienced by farm households. Social protection may have a positive impact on agricultural growth by reducing risk and thereby freeing farm households to invest in more productive activities.

Farrington et al (2004) review the potential relationships between social protection and agriculture. Cash transfers, food provision, employment schemes, and financial service provision are ‘social’ interventions which can have a positive impact on agricultural production by promoting investment, stimulating production and increasing demand. Agricultural interventions which may have a positive impact on risk and vulnerability include legislation concerning access to land and labour rights, technology development for more productive, resilient crops or labour saving techniques, and service provision such as financial services, insurance and marketing assistance. Subsidised or free inputs could be considered in either category.

Despite increased debate regarding the potential role of social protection interventions in supporting agricultural production, in practice in Sub-Saharan Africa the scale of activities is generally restricted to the poorest (destitute) households. Many of these fall outside our definition of marginal farmers who we define as engaged in some productive activities. Exceptions to this generalisation include the large Productive Safety Net Programme in Ethiopia, the recent input subsidy scheme in Malawi and potentially also the LEAP programme in Ghana (Devereux et.al. 2008).

Moreover, the social protection agenda (which sees potential social benefits from supporting agriculture) could play an important role in raising the profile of agriculture to the benefit of
farmers in low potential areas, or those currently unable to produce a surplus, i.e. marginal farmers.

### 9.0 Farmer Organisations

The potential role of farmer organisations is frequently raised as a means to overcome the challenges of smallholders operating within ‘thin’ markets. Small farmers are frequently unable to produce in quantities necessary to attract buyers and negotiate effectively for fair prices. In his review of producer organisations Penrose-Buckley (2007, p25) concludes that whilst producer organisations are not able to alter structural impediments to small farm development, they can play an important role by creating:

- “an intermediary and larger business that enable small scale producers to compete more effectively in the market and increase their bargaining power;
- a platform for producers to promote and defend their interests;
- a channel through which support and investment can be provided to small scale producers more efficiently and effectively.”

However, the potential for producer organisations to fulfil these expectations for marginal farmers is challenged by the very nature of this group, who by our definition are the type of producer who is less likely to participate in and benefit from producer organisations.

In order to participate in producer (marketing) organisations the farmer must be producing a surplus, this obviously excludes those marginal farmers who are not producing above household consumption or engaged in cash cropping, yet for many of these households farming is and will remain an important component of their livelihods. Marginal farmers are also less likely to be in a position to take on some risk or tolerate the delayed payments that are a common feature of cooperative selling arrangements.

Women may be disinclined or unable to participate in farmer organisations for a number of reasons, these may be cultural or related to the type of cropping activities undertaken by women (we have already noted that women farmers often give priority to staples which are less likely to be marketed). Gladwin and McMillan (1989) and Ross (1999) describe some of the barriers to women’s participation in farmer’s organisations. Importantly, women may not
have access to even the limited cash requirements that are required for participation in producer organisations (the poorest may be excluded for the same reasons).

Nonetheless, even where the potential for participation by marginal farmers in marketing groups appears low, farmers’ organisations may play an important role in providing fora for collective action, increasing the political voice of this group. Thus farmers’ organisations may be able to act as a lever for services for marginal farmers. This is an important role for women’s groups, which may act as fora within which women can seek to influence policy debates (Gawaya, 2008).

10. Conclusions

We have defined marginal farmers as those belonging to food poor households for whom farming is a major livelihood activity. They hold few assets, have limited access to resources and services, and experience poor market linkages.

For a number of reasons women will constitute a large proportion of marginal farmers: Women are less likely to access employment opportunities outside farming, they are often responsible for food crop provision, they have less access to productive resources and are poorly served by service providers, they are also politically weak. Likewise farmers in low potential agricultural zones are also often ‘marginal’ since they produce little surplus production to allow investment or intensification; they tend to prioritise risk mitigation and are remote from markets, services, and power.

However, other marginal farmers exist outside of these two groups. Studies of land distribution note that a significant proportion of rural households in SSA have very limited access to land and that this group is widespread rather than confined to particular geographical regions.

We have considered how policy concerned with lifting the rural poor out of poverty (which typically considers four possible scenarios: commercial farming; employment in the non-farm sector; migration; or survival under some form of social protection) may or may not succeed in addressing the needs of marginal farmers. Concluding points are summarised below.
Can marginal farmers benefit from current policy to support agricultural development and become viable farms?

We have identified four areas of intervention with regard to increasing agricultural productivity that are of particular importance to marginal farmers: improved access to land, increased investment in research, increased service provision, and improved infrastructure.

The literature review suggests that for marginal farmers, and particularly women, to benefit from programmes to improve access to land, interventions must take into account of the challenges involved in strengthening women’s claims on land. The creation of privatized land holding systems may be to women’s disadvantage in some cases.

Agricultural research has not always recognised needs of marginal farmers, increased funding will need to target the farming systems and crops important to marginal farmers. These areas are unlikely to be considered by the private sector and therefore require an investment in public research which is currently operates under extreme resource constraints in most of SSA.

Similarly, private sector service providers are unlikely to target marginalized farmers, therefore reaching this group requires a commitment to public investment in service provision and a reorienting or services to reach poorer and women farmers. Support to farmer organizations although increasingly seen as a route to improved services and marketing for smallholders, is also less likely to impact on this group unless barriers to their taking part are addressed.

Policy advocating investment in rural infrastructure needs to focus on LFAs in order to have a positive impact on this farmer’s marginalized by their location.

Will marginal farmers benefit from opportunities outside farming (in the RNFE, or migration)?

The literature review suggests that marginal farmers may only obtain limited benefits from participation in the RNFE, as poorer households with limited capital and education are more likely to be confined to low entry, low return activities. Similarly marginal farmers may be among those least likely to benefit from migration since poorer households are less likely to take part (fewer resources, less educated) and migration is lower from remote areas.

Marginal farmers may however benefit indirectly from migration either as pressure on resources in rural areas is relieved or as remittances benefit the local economy.
What prospects exist for Social Protection for marginal farmers?

Immediate prospects for increased social protection to support marginal farm households are low; however, the potential synergies between support to agriculture and social protection may increase the arguments in favour of support to marginal farmers.

In conclusion, this review suggests agricultural production is likely to remain an important livelihood activity for marginal farmers due to a lack of alternative rural livelihoods and less opportunities for migration in this group. In addition, self-provision of food crops persists as an important goal for rural households. Increased attention to policy to support smallholder agriculture should therefore be welcome news for marginal farmers. However, there is a strong risk that support for agriculture will miss this group unless they are specifically targeted.
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