

Small-scale farming and youth in an era of rapid rural change

**Felicity Proctor
Valerio Lucchesi**

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This paper is a product of the Knowledge Programme Small Producer Agency in the Globalised Market. The Knowledge Programme aims to map, elicit and integrate knowledge on the dilemmas confronting small-scale producers in global, regional and national markets. The programme works with different actors to bring new voices, concepts and insights into the global debate. It thereby seeks to support the development community, including policy makers, producer organisations and businesses, in their search for better informed policies and practices. The programme is lead by the Humanist Institute for Development Cooperation (Hivos) and the International Institute for Environment and Development (IIED), and integrates a global learning network, convened by Mainumby Ñacurutú in Bolivia.

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Executive summary

Youth make up approximately one-fifth of the total population in many countries in developing and emerging economy regions. In sheer numbers the youth population in these regions is the largest it has ever been and possibly ever will be. Further, in the rural areas and most significantly in large parts of rural sub-Saharan Africa, the absolute number of youth has increased and will continue to increase.

The prospects of rural youth finding decent work in many countries of the developing and emerging economy worlds, particularly in Africa and South-Central Asia, is limited. The opportunities for work outside agriculture in these sub-regions make the situation for young rural people particularly precarious. While acknowledging that issues of youth and youth employment are rising up the international policy agenda, there remains a low level of policy and investment intervention that focuses explicitly on rural youth and on youth employment opportunities in the agriculture and agribusiness sectors.

Given the dependence on small-scale farming for food production and for food security domestically, regionally and globally and for its capacity to absorb labour, how small-scale farming is supported, how youth respond to farming opportunities and whether farming, including small-scale farming and the evolving agrifood sector, can meet the aspirations of youth, will be critical for both future food security and employment.

In general the debate on farming and the role of the small-scale farmer is dominated by a focus on aspects of production, and is set within a framework of the prevailing farm structure with limited reflection on alternative trajectories. Business as usual, which assumes that through broad-based ‘one-size-fits-all’ production-orientated interventions an adequate livelihood can be secured for the majority of small-scale farmers, including rural youth, is potentially misguided. Critical choices must be made for differentiated groups of small-scale farmers, including young farmers, to enable rural transformation to take place over the coming decades while minimising risks to food security and livelihoods. Stimulating the growth of farms and rural agribusinesses is essential to improve rural labour market performance for this generation and the next.

Alternative visions are required for the future of small-scale farming as a viable livelihood that is both valued and respected by society and which contributes to global food security. National debates on farming futures that engage the voice of the farmer, the youth and the private sector is a prerequisite to such future visioning. Such visions must take into account the sheer numbers of small-scale farmers, the diversity of small-scale farms and farm households, the aspirations of youth, and rural population dynamics. Further, the development of alternative visions should be set within the framework of wider rural transformation, with an understanding of national demographics as well as longer-term national and rural economic and societal transformation, including changes in the agrifood market structure and the growth of employment opportunities in the non-agriculture sectors. Choices and pathways selected need to acknowledge trade-offs and must address potential negative consequences.

Given the changing dynamics of farming and agrifood markets domestically and internationally, agriculture and agrifood sectors offer new opportunities for job creation. Increasingly national and international agribusinesses are recognising the role of small-scale farmers as valued business partners. Thus, the private sector can play a key role in supporting new business models that enable the expansion of rural and urban jobs in these sectors.

Governments and their development partners have a key role to play in creating a supportive and enabling environment for agriculture and agribusiness including providing a new focus on rural youth through rural and agricultural policy and investment. National employment and labour policies, including those for youth, should be revisited to give explicit focus to agriculture and the associated agrifood market chains and service industries as a major sector upon which to strengthen opportunities for securing and expanding decent employment.

Despite a growing disillusionment on the part of rural youth with livelihood and employment opportunities offered by the agriculture sector, innovations in small-scale farming are emerging, in particular in the peri-urban environment and in new and changing agrifood market chains, which are attracting the youth. There is an urgent need to build on such innovations and share lessons learned.

This paper focuses on developing and emerging economy regions of the world. It provides an overview of the demographic changes and trends in employment, specifically that of youth, and an overview of small-scale farming and trends in agrifood markets. It reflects on the aspirations of rural youth and identifies some of the drivers and innovations that have engaged youth in agriculture – and which might help to inform and shape the future. Finally, it identifies some emerging policy implications that address small-scale farming and youth in an era of rapid change, including knowledge gaps which if filled could better inform the debate on the future of small-scale agriculture and on who will be the next generation of farmers.

1 Why smallholder agriculture and youth matter in an era of change: an introduction

The challenges facing farming globally are daunting, not least given that the demand for food is estimated to increase by 70 per cent by 2050 (FAO, 2009a). This increase is due to the combined effects of world population growth (from around 6.9 billion to an estimated 9.3 billion), economic development, and shifting consumer preferences.

While the absolute numbers are daunting in and of themselves, the geographic location and thus the implications of such an increase in the demand for food require attention. By 2050 an estimated seven out of ten people worldwide will live in low-income food-deficit countries (Oxfam, 2011) creating new challenges and opportunities. Further, the food price spikes of 2008 and 2010 have shown that food prices are a source of political and social tension – and food prices are expected to remain volatile. The use of food crops in the biofuels sector, evolving land and water constraints, and impacts of weather unpredictability combined with longer term impacts of climate change, will all and in different ways contribute to increased unpredictability in food production and imbalances in the supply of food within and between regions.

There is no doubt that the way in which food is produced, including who produces it and how national, regional and global commodity trading systems function and are governed, will be transformed in the coming decades.

This is set against the challenges of demographic transition in many developing and emerging economy regions where youth makes up approximately one-fifth of the total population. In sheer numbers such a youth population is the largest it has ever been and possibly ever will be. Further the absolute number of rural youth will continue to increase specifically in most of sub-Saharan Africa. This demographic transition adds to the challenges faced in terms of labour market development and the search for decent livelihoods and employment for the youth of today and tomorrow.

Despite the current high profile of agriculture, food security and global commodity markets within the international policy arena, and the emerging debate on youth employment, there seem to be some critical ‘blind spots’ within this debate regarding the structure of farming, the role and contribution of the small-scale farmer now and in the future, and the role of agriculture and agrifood chains as a source of employment.

Farmers are of course implicit in the debate but since huge expectations are placed on the farmer of today and on youth who represent the next generation of farmers, such stakeholders should be central to the debate together with representatives of agribusiness and investors in the agriculture sector. The debate on the role of different scales of farming including small-scale family farming, agribusiness and large-scale investors in agriculture, by region and by key commodity, the drivers and trends and interactions of these scales of farming as well as the role of agriculture and agrifood chains in employment must move to centre stage.

Despite the abundance of information on agriculture acreages by crop type, yield, numbers of livestock, quantities of commodities traded, etc., it is currently not possible to know what type of farmer or scale of farm produces a given commodity in a given location and thus to monitor change and trends. Nor is it clear what type of employment is generated by agriculture including by the different types of agrifood chains and agribusiness in both rural and urban areas and thus to ascertain the trends. The implications of such gaps in

understanding and the associated risks and assumptions are unknown. The stark reality is, however, that in many regions of the world, notably in developing and emerging economy countries, small-scale family farms are the sole or principal source of food production for domestic markets and, for some commodities, for regional and international trade and for employment. Such farms provide household wellbeing, food security and livelihoods for many millions of people. While the proportion of small-scale farms compared to large-scale farms varies by region (and indeed the definition of scale differs by region and by production system and market), a significant proportion of food consumed in most developing and emerging economy countries is likely to have been produced by small-scale family farmers. This contrasts with the developed world where larger-scale farming predominates, although even within, for example, Europe there is significant country-to-country variation.

Prevailing assumptions that small-scale producers will continue to contribute to their own and society's expectations of poverty reduction, food security, economic and wider sustainable development, need to be challenged. The structure and nature of small-scale farming and the farming family is not static. It is influenced by multiple factors, including demographics, economic development and urbanisation, dynamic changes taking place in local and global agrifood markets, weather and climate change, land access and scale, technical innovation and access to technology, and changing aspirations. These may test the prevailing assumptions about small-scale producers and their participation in global, regional and local agrifood markets.

A new debate on the nature of farming is needed, and specifically on what will happen inter-generationally within the small-scale farming sector. Will small-scale farming be able to face the wind of change and define a structure that offers a secure and 'decent' livelihood to the next generation? Will it continue to play a central role in key developing and emerging economy countries in providing food security and in feeding the population? Are the aspirations of youth compatible with opportunities available to them in the farming sector – both as small-scale farmers and as entrepreneurs or employees within the agrifood value chains? How can small-scale family agriculture sit alongside large-scale agriculture at national and global levels and secure access to dynamic and changing local, regional and international market opportunities? How central is small-scale farming to meeting future labour market needs?

The debate on the nature of farming and who farms within the alternative visions of how rural areas can respond to changing demand and markets must be moved centre stage and become an integral part of the debate on rural transformation, including the future of food up to 2050. If not, the changes taking place within rural areas and the farming community, including the demands and aspirations of the youth of today, may have untold consequences on the local and global economies and on the future of food production. Thus, policy prescriptions based upon current prevailing rural, farm and market structures may not be fit for purpose.

This paper raises some of the key emerging issues and identifies some of the 'seeds of change' that may serve as indicators for the future. Through a literature review, secondary data and information from global datasets, the paper explores the nature of intergenerational change in small-scale farming, and what it may mean for small-scale farmers in developing and emerging economy countries as they ride the local, regional and global market transformations in the next 20–30 years. It places emphasis on key informant interviews to provide insights from practice and observation at country level, including conversations with representatives of farmer organisations, civil society organisations and policymakers.

The paper also sets the scene with an overview of the demographic changes and trends in employment, specifically that of youth (Section 2), and provides an overview of small-scale farming and trends together with a commentary on the changing agrifood markets and their structures (Section 3). Drawing on evidence (where available) and on insights from practice and observation at country level, using information derived from key informant interviews, Section 4 reflects on the aspirations of rural youth and small-scale farming and agribusiness. Section 5 identifies some of the drivers and innovations that engage youth in the sector and that might help to inform and shape the future. Section 6 presents some policy implications that may expressly accompany rural transformation and what it may mean for small-scale farmers and rural youth employment in agriculture in an era of change.

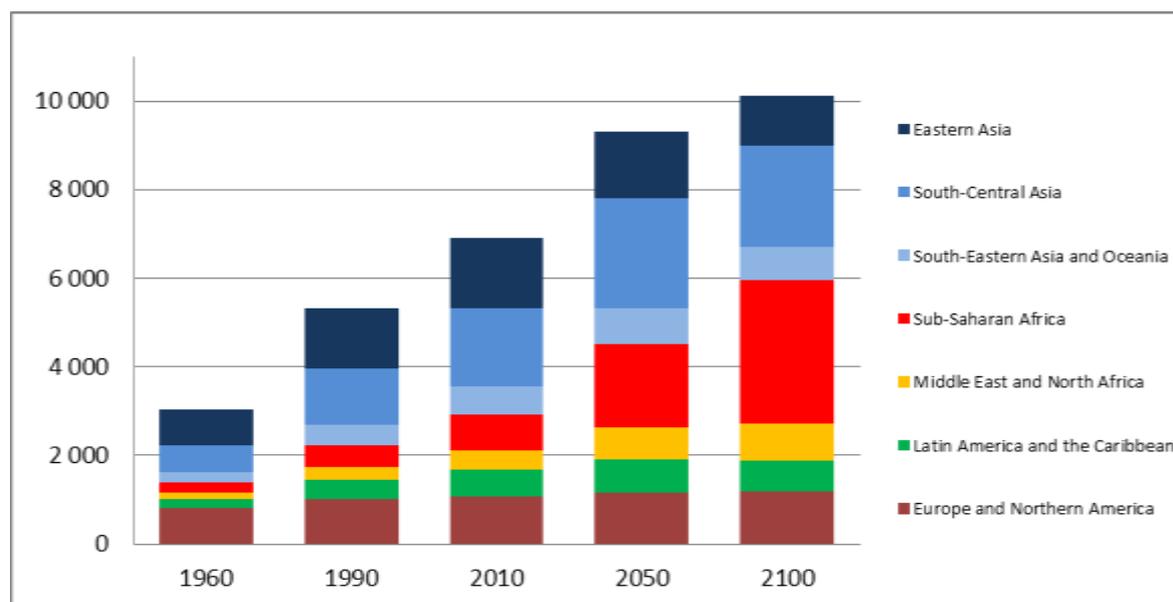
2 Demographics and rural transformation

Any debate on smallholder agriculture and its future role in national and global food supply – and in securing rural livelihoods and employment in particular for youth needs – needs to be set within the context of demographic change, the pace of urbanisation and rural transformation including economic diversification and industrialisation. This section outlines the trends in population dynamics in developing and emerging economies in particular rural to urban population change. It considers the role of agriculture in livelihoods and in employment and reviews employment trends by sector. It reflects on the particular challenges of unemployment and under-employment of rural youth.

2.1 Demographic change

The global population is growing rapidly, and is characterised by differential growth rates between regions. These differential growth rates mean that an increasing share of the world's population will live in developing and emerging economy countries (Figure 1 and Table A1). This trend will simultaneously challenge economic growth, accentuate the existing asymmetries between regions, and impact upon the economic structures within and between regions.

Figure 1 World population trends 1960–2010 and projections to 2100 in key regions (millions)



Source: Based on United Nations, World Population Prospects, the 2010 Revision

According to the most recent United Nations estimate, the world population will reach 9.3 billion people in 2050 – nearly 2.4 billion more people than today (UN, 2010). Although these aggregate statistics are widely acknowledged, the distribution of this population increase across regions and its implications are particularly relevant to this debate. While Europe shows characteristics of the final stage of demographic transition, with an ageing and declining population, the populations of sub-Saharan Africa and South-Central and South-Eastern Asia are still increasing rapidly, demonstrating different phases within the transition. Furthermore, these regions are growing at different rates: sub-Saharan Africa's population is

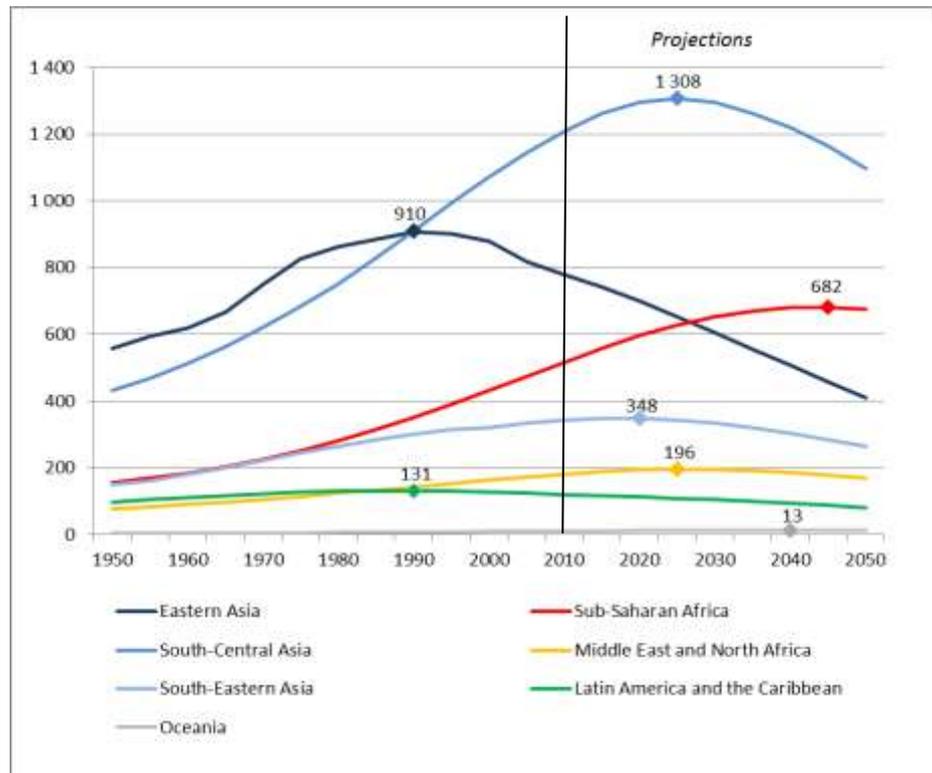
likely to double by 2050, reaching 1.8 billion while South-Central and South-Eastern Asia is likely to grow somewhat more slowly, by 40 per cent and 28 per cent respectively. Thus, sub-Saharan Africa is likely to become the second most populous region of the world after Asia. Eastern Asia's population growth (mainly China) should come to a halt as a consequence of the birth policies in place since the 1970s, the consequence of which is that Eastern Asia in general will probably face the same challenge as currently experienced in Europe, i.e. the burden of an ageing population. Further, the world is urbanising; the world's population today is considered to be more or less equally 'rural' and 'urban'¹. Yet there are stark differences between regions in their respective pace of rural and urban change.

The world's rural population is expected to reach a maximum of 3.5 billion in 2020 and to decline slowly thereafter, reaching 2.9 billion in 2050. The trend is expected to continue with almost all regions seeing a decline in the proportion of people and the total number of people living in rural areas over the period 2010 to 2050. The exceptions to this pattern are sub-Saharan Africa where the numbers are expected to increase from some 516 million to 674 million and the Middle East, from 78 million to 93 million. However, during this period, the proportion of the total population living in rural areas in sub-Saharan Africa may decrease from 58 per cent to 36 per cent and in the Middle East from 34 per cent to 24 per cent. There are inevitably country-to-country variations within these regional figures. The peak in rural population will differ by region. While in South America and Eastern Asia these peaks have already occurred, in the Middle East and North Africa and in South and Central Asia the rural populations will not start to decline until around 2025, and in sub-Saharan Africa will not begin until around 2045 (Figure 2 and Table A2).

The rural population is highly concentrated in a few countries. In 2009, 18 countries accounted for 75 per cent of the rural population and all but three (Japan, the Russian Federation and the United States) are located in Africa or Asia. India has the largest rural population (842 million), followed by China (725 million). Together, they account for some 46 per cent of the world's rural population. Bangladesh, Indonesia and Pakistan follow, each with over 115 million rural inhabitants. In Africa, the largest rural populations are located in Nigeria (79 million), Ethiopia (69 million), Egypt (47 million), the Democratic Republic of Congo (43 million), the United Republic of Tanzania (32 million) and Kenya (31 million) (UN, 2010).

¹ The definitions of 'rural' and 'urban' remain open to contestation. International statistics rely on national definitions of the two terms, and these vary significantly from country to country. In many situations, areas defined as urban have rural characteristics in terms of occupations (e.g. reliance on agriculture), and also in terms of level of infrastructure and services. Such characteristics may even extend into bigger cities. In some regions particularly Latin America, this can lead to significant undercounting of the rural population (IFAD 2010).

Figure 2 Rural population trends and projections to 2050 in key regions (millions)



Source: Based on United Nations, World Urbanization Prospects, the 2009 and 2010 Revisions

Work by Anríquez and Stloukal (2008) explores key driving factors in rural demographic change including the ratio of youth to the aged, the ratio of males to females, fertility levels and migration. In the coming decades, most of Asia will have to deal with massive internal population movement as many rural inhabitants migrate in search of urban jobs and lifestyles. A key driving force of rural population dynamics is the emigration of working-age adults, largely to urban areas. The outcome is likely to depend on policies that promote incentives and create economic opportunities for migrants, rather than impose constraints on spatial mobility. The nature and structure of farming will play a central role in the dynamics of such rural transformation including migration.

The main economic concern with the demographic transition² relates to the evolution of the population's activity structure, which in turn reflects its age structure (Bloom *et al.*, 2001). Absolute numbers may be less important than the growth rate or relative size of youth cohorts. This evolution is reflected in different dependency or activity ratios, which summarise the respective portions of active and inactive people in the economy.

Asia, the Pacific and sub-Saharan Africa currently make up some 82 per cent of the world's rural population and with these figures projected to rise to over 85 per cent by 2050, how

² In general, a country proceeds through three stages of demographic shift: in the first stage, the proportion of the young in the population rises; in the second stage, the proportion of young people declines, that of the elderly cohort (aged 65+ years) increases modestly and, most importantly, that of adults (aged 25-64 years) increases sharply; finally, in the third stage, the proportion of adults falls while that of older people rises

countries in these regions manage their rural transformation processes including the agriculture sector has major implications nationally and globally.

2.1.1 Youth entering the labour market

Youth make up approximately one-fifth of the total population in many developing and emerging economy regions. Globally in 2010, over 85 per cent of youth were living in developing and emerging economy regions with the three Asian regions accounting for more than half (55 per cent) of the world's youth.

Defining youth

'Youth' is defined as the age group 15 to 24 years. There are differences in the way national statistics programmes define and measure youth. Definitions of youth are based in part on the end use of the measurement. If one aims to measure, for example, the age span at which one is expected to enter the labour market, then the statistical definition of 15 to 24 years may no longer be valid, given that more and more young people postpone their entry into labour markets to well beyond the age of 25. Alternatively, there are numerous situations, especially in developing and emerging economy countries, where the typical age of entry into the labour market may be below 15, in which case the delineation between youth and child labour becomes blurred.

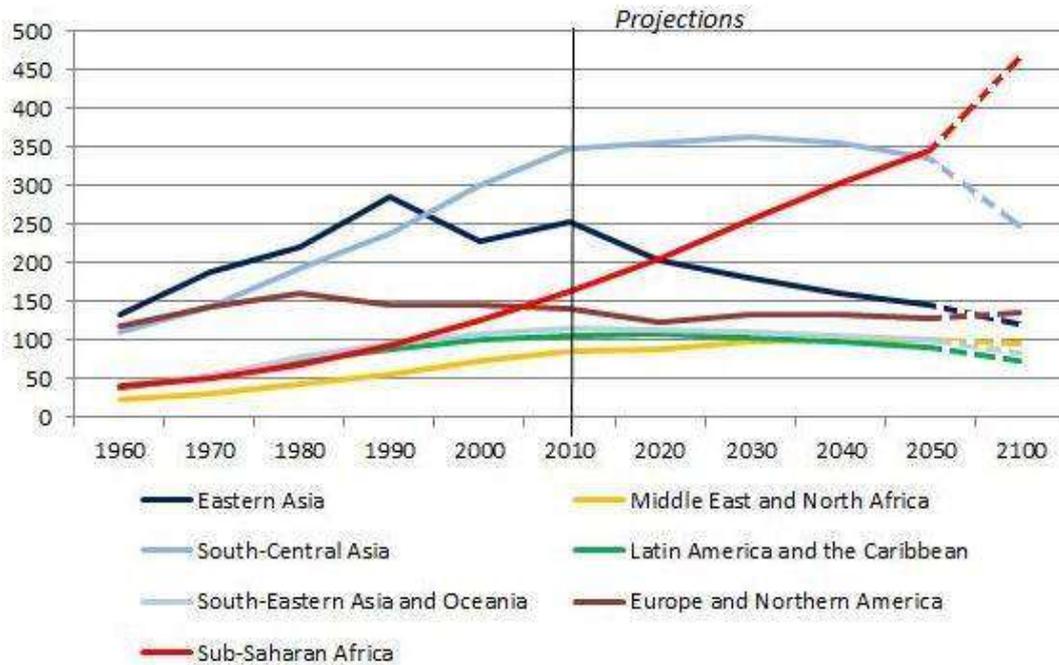
Source: ILO, 2010a

In the next five years the share of youth living in the developing world will remain unchanged, as decreases in that of East Asia and Central and South-Eastern Europe (non-EU) and Commonwealth of Independent States (CIS) are balanced by large increases in South Asia and sub-Saharan Africa.

In Africa, youth populations (i.e. 15–24 years) will continue to grow for several decades. Between 2010 and 2020, the number of youth living in sub-Saharan Africa is expected to increase by 42.5 million. In the same period, in Latin America and the Caribbean and North Africa and Middle East regions, an increase in the number of youth is also projected but to a lesser extent in relative terms when compared to sub-Saharan Africa. In many developing countries, especially in Asia, youth populations are near their peak, and are projected to decline in coming decades. Latin America will reach its peak around 2020 (Figure 3 and Table A3).

It is noteworthy that people under the age of 14 years now make up 42 per cent of the inhabitants of the sub-Saharan Africa region, with the next youngest region being South Asia (32 per cent) (Livingstone *et al.*, forthcoming).

Figure 3 Youth population (aged 15–24) trends and projections to 2100 in key regions (millions)



Source: Based on United Nations, World Population Prospects, the 2010 Revision

When different demographic trends are translated into yearly cohorts – particularly into yearly cohorts of new entrants in the labour market – we have a clearer indication of what the labour supply, and indeed employment demand, should be in the coming decades. The work of the RuralStruc programme (Losch, *et al.*, 2011) shows the delayed trends between the main growing regions of Asia and sub-Saharan Africa and provides an estimate of the need for absorption by the different regional economies. At present, sub-Saharan Africa’s yearly cohort³ of the new economically active population (EAP) is around 17 million people and should reach 25 million in 15 years. The peak will occur after 2050. Thus, for a medium-sized country in sub-Saharan Africa with a population of, say, 15 million people, the annual cohort was 250,000 in the 2000s and is likely to be 400,000 in 2020s (Losch, *et al.*, 2011). In general, projections for sub-Saharan Africa may be underestimated, depending on assumptions made of fertility rates.

Countries whose youth population will continue to grow beyond 2030 have the highest ratios of youth population to working-age population, and many are only just beginning to see the ratio decline. These countries face substantial challenges in providing employment and health and education services to these large youth cohorts. The ratio of youth to the working-age population is projected to decline in most of these countries over the coming decades, however, providing some relief as they try to meet the needs of their youth populations (Lam, 2006).

2.1.2 Rural youth

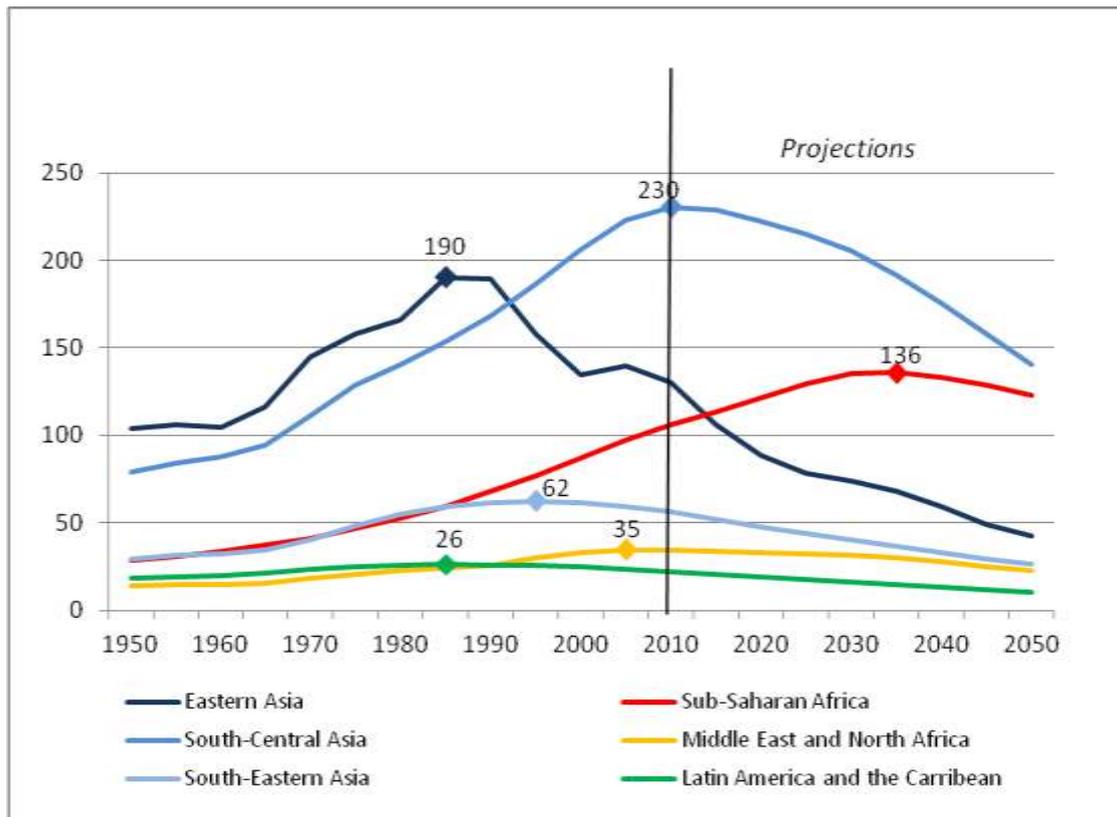
The proportion of rural youth is decreasing in all sub-regions as well as the absolute number of rural youth with the exception of sub-Saharan Africa where their number will continue to increase until 2030 or 2040 (Figure 4 and Table A4). In Eastern Asia, South-Eastern Asia and

³ Cohorts are calculated taking 1/10 of the 15-24 age group (Losch, *et al.*, 2011).

Latin America, the absolute number of those aged 15 to 24 living in rural areas has already started to decline over the past 10–25 years (Van der Geest, 2010).

Sub-Saharan Africa will therefore face particular and unique changes for the decades to come in securing decent livelihoods and employment for young people in both urban and rural areas, but in particular in the latter.

Figure 4 Number of rural youth (aged 15–24) by region, trends and projections to 2050 in key regions (millions)

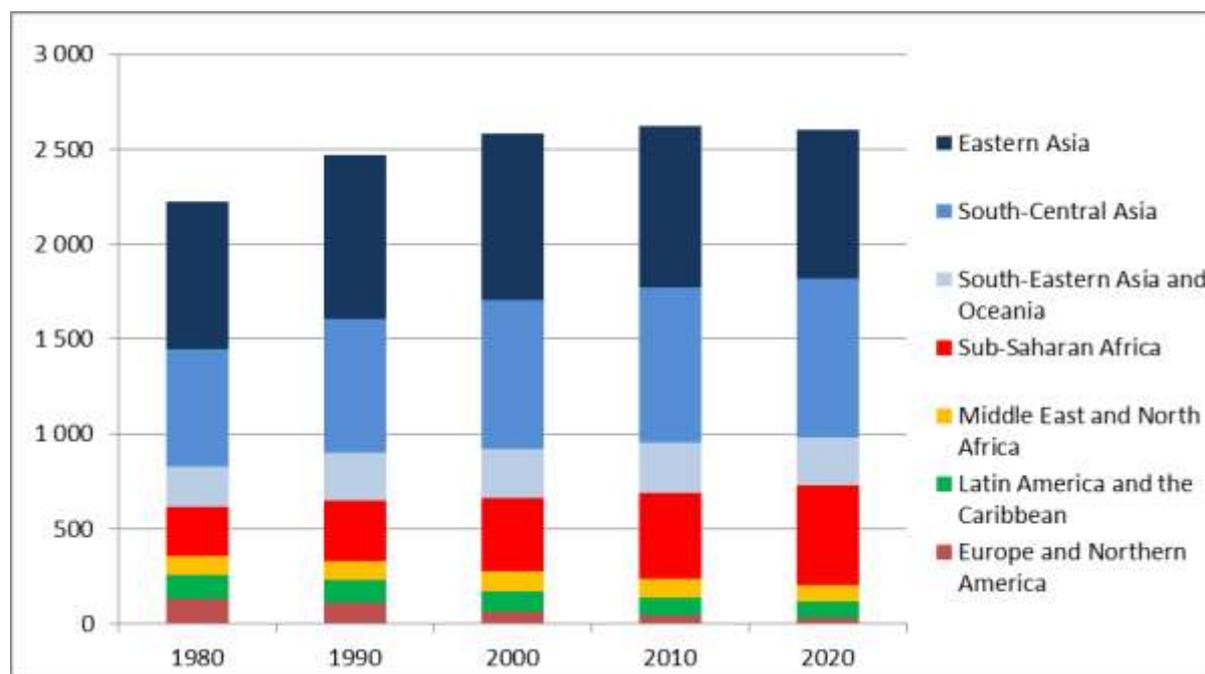


Source: Based on Van der Geest, 2010 (elaboration from United Nations, World Population Prospects, the 2008 Revision). Estimations based on population figures for the age group 15–24 and urbanisation rates

2.2 Changing rural economy, rural employment and youth

Throughout the developing and emerging economy countries, a high proportion of the population depend directly on agriculture for their livelihood and wellbeing, i.e. the agricultural population (AP). In 2010 the AP represented 38 per cent of the global population. For some of the most populous regions of the developing and emerging economy worlds, this proportion is significantly higher, for example 49 per cent for Asia and the Pacific and 55 per cent for sub-Saharan Africa. However, it is lower in the Middle East and North Africa, and in Latin America and the Caribbean, at 23 and 16 per cent respectively. In Europe and North America the AP makes up only 5 per cent of the population. These figures serve to emphasise the differential dependence upon agriculture between the developed and the developing and emerging economies (Figure 5 and Table A5).

Figure 5 Agriculture population trends and projections to 2020 in key regions (millions)



Source: Based on FAO (FAOSTAT statistical database)

In recent decades, the proportion of the population in all regions directly and indirectly dependent upon agriculture has declined and this is set to continue (projections to 2020). However, the numbers and trends in AP differ between regions. For the Asia and the Pacific regions the AP remains at around 1.9 billion (2000 and 2020) with sub-regional variations showing, for example, an overall decline in Eastern Asia to 783 million in 2020 but a steady increase in South-Central Asia from 778 million in 2000 to 834 million by 2020. In sub-Saharan Africa in the period 1990 to 2010 there has been a 41 per cent rise in the AP to some 450 million and this is projected to increase to 522 million by 2020. Nevertheless, here are significant regional variations within sub-Saharan Africa (Table A5).

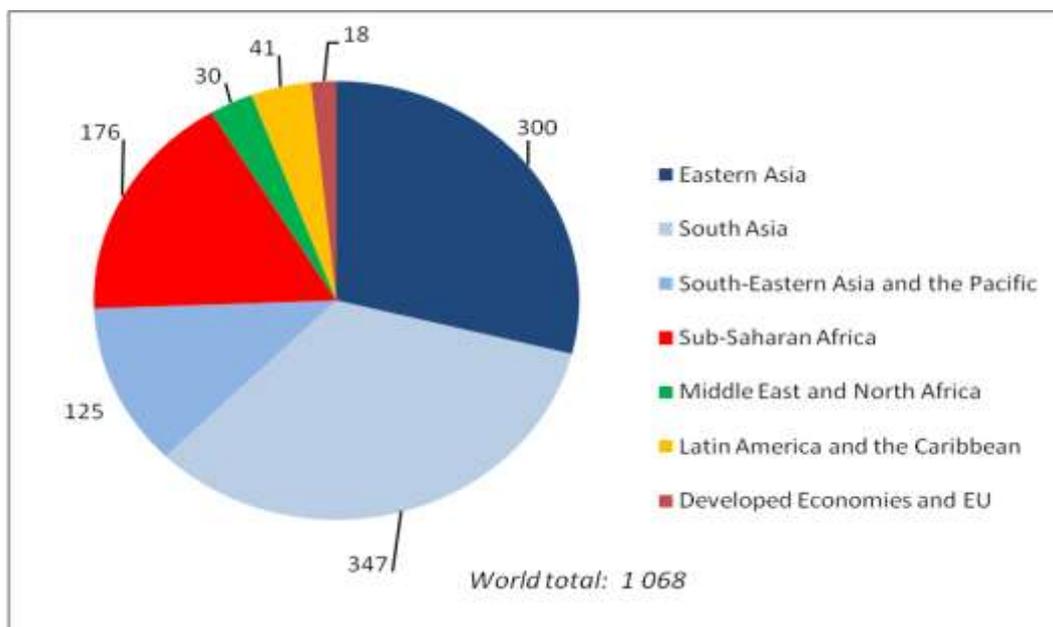
2.2.1 Who works in agriculture?

The wide range of land ownership patterns and methods of production gives rise to numerous types of labour relations and various forms of labour-force participation and employment in the agriculture sector. Those who work directly in agriculture have been summarised as: wage earners; self-employed; unpaid family members; and others including cooperative workers, people owning land as collective property, child labourers, and those engaged in non-market-based labour exchange (ILO, 2008).

Agriculture is the second largest source of employment⁴ worldwide after services, employing over one billion people globally in 2009 (Figure 6).

⁴ Employment: All persons above a specific age who during a specified brief period, either one week or one day, were in the following categories: paid employment and self-employment (ILO definition). In ILO 2011b, key recorded sectors are Agriculture, Industry and Services.

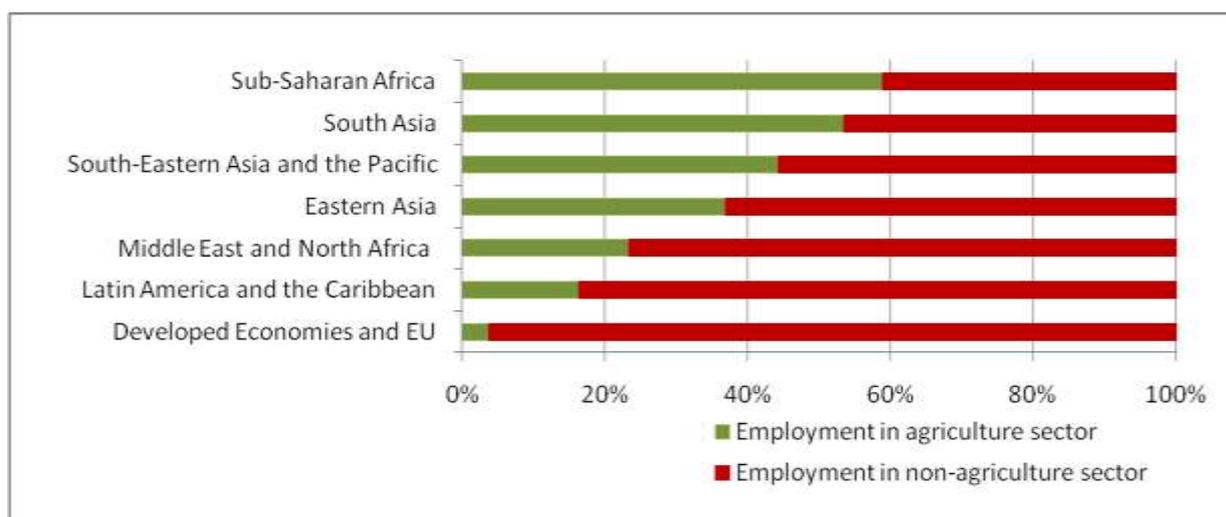
Figure 6 Employment in the agriculture sector in key regions (2009) (millions)



Source: ILO, 2011b and authors' calculations

While the employment share in agriculture globally has declined steadily by some 5.2 per cent over the period 1999 to 2009, the number of workers in agriculture actually grew by 3 per cent. Over the same period there was significant regional growth in sub-Saharan Africa and North Africa (28 per cent) and in South Asia (16 per cent) but also in the Middle East (19 per cent) (Table A6). In 2009, 59 per cent of total employment share in sub-Saharan Africa and 44.9 per cent in Asia and the Pacific, including 53.5 per cent in the South Asia, are recorded as being engaged in the agriculture sector (Figure 7).

Figure 7 Employment shares in the agriculture sector in key regions (2009)



Source: ILO, 2011b and authors' calculations

These figures are national and such sector employment breakdown is not available for the rural and urban populations. Yet it must be assumed that for all regions the proportion of people engaged in agriculture is significantly higher in rural areas than the national figures.

The ILO *Global Employment Trends 2010* report drew attention to an important indicator that gauges the extent to which workers in a given country or region are engaged in waged employment or in less-organised forms of employment. The ‘vulnerable employment’ indicator, defined as the sum of own-account workers and unpaid family workers, provides valuable insights into trends in overall employment quality. The total population in vulnerable employment reached 76.9 per cent in South Asia and 75.1 per cent in sub-Saharan Africa in 2008 (ILO, 2010a). While there is no breakdown for the vulnerable employment indicator for rural and urban areas or by employment type or sector, it can be assumed that the agriculture sector is a major contributor.

Agriculture is and will continue to be a major source of employment into the medium and longer term in many regions even if its relative share in comparison with other sectors is in decline. Thus, development in the sector and the manner in which farming is structured and rural labour markets function will have major impacts on rural household welfare and livelihood throughout much of the developing and emerging economy worlds.

2.2.2 Agriculture, income diversification and rural labour markets

There are virtually no examples of mass poverty reduction since 1700 that did not start with sharp rises in employment and self-employment income due to higher productivity in small-scale family farms (Lipton, 2005). Investment in food crop productivity – the key economic activity of the majority of small-scale farmers – in particular in Africa is critical, not only to poverty alleviation efforts but also for providing households with cheaper food and increased demand for services, which in turn foster agricultural and economic transformation supportive of broad-based economic growth.

In the longer run, the best prospect for many small-scale farmers to escape from poverty is likely to involve being ‘pulled’ off the farm into productive non-farm sectors. Abundant evidence of transformation processes elsewhere indicates that growth in non-farm sectors typically starts from a robust stimulus to agriculture, which generates rural purchasing power for goods and services (World Bank, 2007; RuralStruc programme⁵; and FAOs’ Rural Income Generating Activities⁶ (RIGA) databases⁷; and IFAD, 2010).

Many commentators and much of the rural non-farm economy literature suggest that rural diversification is a key to unlocking rural economic development and poverty reduction. Fox and Gaal (2008) note in their work on job creation and the quality of growth in selected countries in Africa ‘that in the small but growing non farm sector, a move into the informal sector seems to be related to pull factors. In most countries, average incomes in the informal sector are still at least 50 per cent higher than those in agriculture ... the highest poverty rates are always in agriculture’. Fox and Gaal note the significant growth of the informal sector compared to the formal sector in the late 1990s and early 2000s in selected countries including in rural areas. In a study on jobs, skills and income in Ghana drawing on data from three Ghana Living Standards Surveys, Nsowah-Nuamah *et al.* (2010) observed that ‘while jobs have expanded in line with the population, it is the lowest paying jobs which have

⁵ Selected regions were surveyed by the RuralStruc programme in Kenya, Madagascar, Mali, Mexico, Morocco, Nicaragua and Senegal.

⁶ Countries selected from four developing regions – Asia, Africa, Eastern Europe and Latin America,

⁷ <http://www.fao.org/economic/riga/riga-database/en/>

expanded in relative importance'. Indeed the authors note that in the recent period 1998/99–2005/2006 an increase in farming employment as a percentage of the total population has occurred following a decline in the prior period 1991/92–1998/99. Interestingly, this upturn was not seen for the 15–24 age group, where there was a continued decline in farming employment.

The main findings of the RuralStruc programme do not present rural diversification as a buoyant and optimistic reality in all contexts (Losch *et al.*, 2011). For many African countries this implies the need to focus effort on increasing the crop and livestock productivity of small-scale agriculture. It also requires better access to assets and greater equity in landholding in order to raise household disposable income for non-staple crops and consumer goods and thus drive the transformation process. How the small-scale farm sector is structured and supported in the coming decades, particularly in South Asia and sub-Saharan Africa, will be key to future employment, economic growth and poverty reduction.

Education levels, which played a role in Asia by allowing households to leave agriculture for more lucrative off-farm jobs, are by world standards relatively low in most areas of rural Africa and South Asia. Investments in rural education and communications are likely to become increasingly important to facilitate structural transformation in rural areas and the small-scale farm sector. However, the payoffs to education will depend on non-farm job opportunities, which are ultimately dependent on broad-based agricultural growth (Jayne *et al.*, 2010).

In general, rural labour markets tend not to function well because labour market governance and institutions are often weak and have little capacity to address directly the key factors determining supply or demand for labour, which are complex and fluid. Understanding how the conditions influencing the supply of labour (demographics, social norms, access to land and health and education levels) interact with the conditions influencing demand (general economic growth, investment levels, market access and technical progress) offers insights into the challenges and opportunities for government and partners to promote more and better quality employment in rural areas. It is through the intermediary institutions, structures and processes of labour market governance that these constituents can most directly promote more effective labour market functioning in terms of efficiency, fairness and social protection (ILO, 2008). Where labour is abundant and population pressure on land is high, there is often involuntary unemployment, with workers being unable to find employment at the going wage rate.

Stimulating the growth of farms and rural businesses is essential to enhance rural labour market performance for this generation and the next. Governments have a key role in creating an enabling environment for business and investment in rural areas.

2.2.3 The pushes and pulls of rural out-migration

The level and nature of migration is influenced by the complexities of 'push' and 'pull' factors. Key drivers include: factors related to the region or country of origin, including political instability and conflict; lack of economic or livelihood opportunities; and lack of access to resources, i.e. push factors; and factors related to the region or country of destination, including the availability of employment and demand for workers, higher wages, political stability or access to resources, i.e. pull factors. These push and pull factors will be influenced by others that facilitate or restrict migration, including ease of transportation, family or social networks, government policies, and trade and investment linkages.

Taking for example China, although the numbers vary (partly due to the inexact definitions of off-farm labour), between 170 million and 200 million members of the rural labour force found a job off the farm – mostly in rural towns and cities – with more than 6 million a year moving out of agriculture during the 1980s and 1990s. Estimates of the rise in the share of the rural labour force engaged in off-farm employment in China ranges from 35 to 40 per cent. Although youth are migrating more than those who are older, within the youth cohort are those who have the capacity to develop successful self-employment occupations and so remain in rural areas (Wang *et al.*, forthcoming). That said, for the rural population in the past several years migration has surpassed self-employment as the substitute sector for employment, and as long as wages continue to rise this trend is expected to continue.

2.2.4 Unemployment and rural youth

Given the very nature of the informal sector and the way unemployment is measured, unemployment figures generally are not helpful in understanding the true nature of the utilisation of human capital in developing and emerging economies, particularly under-utilisation. However, unemployment figures can act as a barometer. For example in 2010 the unemployment rates globally and across regions show those of the youth (13.1 per cent) are nearly three times those of the adult population (4.8 per cent) (Table 1).

Table 1 Youth and adult unemployment rate in key regions (2010)

	Youth unemployment rate (%)	Adult unemployment rate (%)
Asia and the Pacific	11.2	3.1
East Asia	8.4	3.3
South-East Asia and the Pacific	14.8	2.9
South Asia	10.3	3.2
Sub-Saharan Africa	23.8	6.5
Middle East and North Africa	23.8	6.4
Middle East	23.7	6.2
North Africa	23.8	6.5
Latin America and the Caribbean	15.8	5.9
Developed Economies and EU	19.1	7.4
World	13.1	4.8

Source: ILO 2010b and authors' calculations

Note: 'Youth unemployment rate' and 'adult unemployment rate' for 'Asia and Pacific' and for 'Middle East and North Africa' are calculated as average of the 'sub-regions'; South-East Asia and the Pacific are combined as reported in ILO 2011b. Authors did not revert to original dataset to disaggregate data

But global figures mask regional variations; for example, youth unemployment in sub-Saharan Africa and the Middle East and North Africa is estimated at 23.8 per cent compared to adult unemployment of around 6.5 per cent. Very limited data are available on rural unemployment and, within that, rural youth unemployment. Data from the limited country cases show that rural youth always experience higher unemployment rates than the economically active rural population at large (Table 2).

Van der Geest (2010), acknowledging the difficulty in isolating rural youth as a distinct demographic group, and describing their employment situation including barriers to

employment vis-à-vis that of urban youth and rural adults, worked on selected Living Standard Measurement Studies (LSMS). While these country databases have a limited historical and geographic coverage, they allow for a detailed analysis of both quantitative and qualitative aspects of rural youth employment. From the LSMS for Nicaragua, it was found that the rural youth attend school less often than their urban counterparts, and working rural youth tend to be employed under more vulnerable conditions than urban youth and rural adults. Moreover, rural young women's participation in the labour force is limited because of domestic tasks. Thus, rural young women face higher and different barriers to decent work than rural young men.

Table 2 Total rural employment and youth rural employment in selected countries, (latest year available)

Country	Year	Total			Youth (15-24)		
		Rural Economic Active Population	Unemployed		Rural Economic Active Population	Unemployed	
			No. of persons	Rate (%)		No. of persons	Rate (%)
Zambia	1990	2 263 688	494 412	22	735 165	302 640	41
Benin	2002	1 956 283	5 762	0.3	436 088	1 804	0.4
Ghana	2000	5 225 664	493 528	9	1 066 003	129 464	12
Indonesia	2000	59 134 517	2 445 411	4	12 174 215	1 738 220	14
Lao	1995	1 894 093	28 013	1	511 775	10 493	2
Uruguay	1996	155 025	6 565	4	31 285	2 381	8
Venezuela	1990	831 851	83 995	10	247 478	40 868	17

Source: ILO Rural Labour Statistics Dataset, 2011

The Youth Employment Network (YEN), coordinated by the ILO, produced its first benchmarking report on 19 countries in 2011. The report's authors stress that unemployment is a 'luxury situation' for most youth and that young people in developing and emerging economy countries, particularly in low income countries, cannot afford to be unemployed for a long period of time. The report notes that most youth in, for example Tanzania and Ghana, and to a lesser extent in Bangladesh, are 'active', even though measures of job quality such as economic sector and employment status indicate they are not placed in the best jobs or conditions. There is an over-reliance on the agriculture sector and most youth work as own-account and/or as unpaid family workers. It is noteworthy that for some countries there are significant proportions of 'inactive' youth, which include those who are not technically unemployed because they do not meet the active job search criteria but who would like to work (YEN, 2010).

A lack of decent work, if experienced at an early age, threatens to compromise a person's future employment prospects and frequently leads to unsuitable labour behaviour patterns that last a lifetime. There is a demonstrated link between youth unemployment and social exclusion. The inability to find employment creates a sense of worthlessness and thus potentially idleness among young people that can lead to increased crime, mental health problems, violence, conflicts and drug-taking. The most obvious gains then, in making the most of the productive potential of youth and ensuring the availability of decent employment opportunities, are the personal gains to the young people themselves (ILO, 2010b).

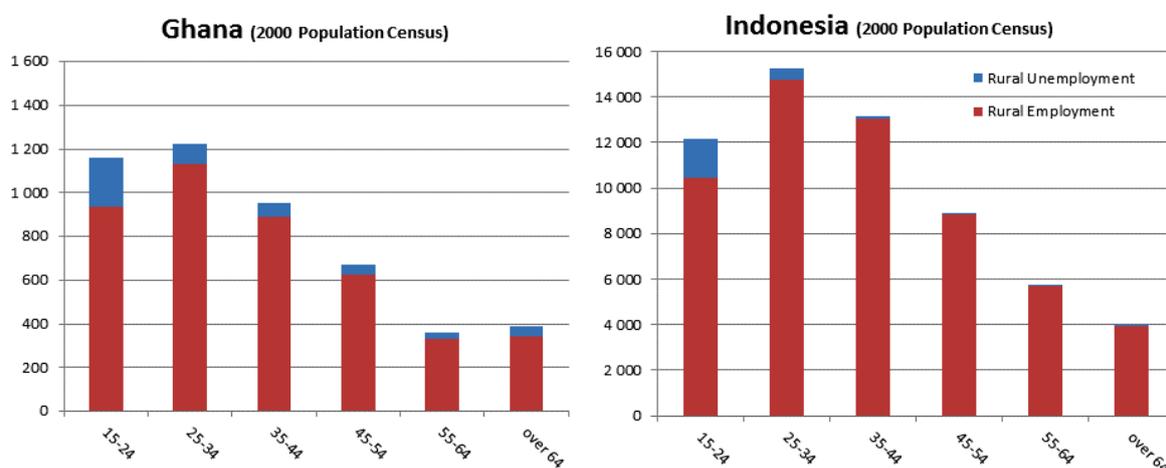
2.2.5 Transition of youth into work

In a study undertaken as a contribution to the World Development Report 2007 (World Bank, 2006) on how youth are faring in the labour market, based on evidence from around the world, Fares *et al.* (2006) show that they face various difficulties in transitioning to work.

It should be noted that it is usually impossible to isolate rural youth as a distinct demographic group, and to describe their employment situation vis-à-vis that of urban youth and rural adults as the global data are hardly ever disaggregated according to locality (rural/urban) *and* age group (youth/adult). Limited case study work suggests that younger cohorts in rural areas experience higher levels of unemployment, as the example for Ghana and Indonesia show (Figure 8 and Table A7).

Country-level evidence supports the finding that in developing economies many more young people than adults engage in family businesses (usually informal enterprises) or farms. There is strong evidence that young people are much more likely than adults to engage in unpaid work yet contribute to family work. In Benin in 2003 according to the household income/expenditure survey for example, 49.1 per cent of young workers were classified as contributing family workers compared to 7.3 per cent of adults (ILO, 2010a). What seems to happen is that many young people in developing economies start out as support labour in family businesses (likely to be an informal enterprise) or farms and then, as they become older, begin to earn income as own-account workers. However the chances for many of such young people ever transitioning to paid employment in the formal sector are slim (ILO, 2010a).

Figure 8 Rural economically active populations by age group and employment status in Ghana and Indonesia (thousands)



Source: Authors' calculations based on ILO Rural Statistics Dataset, 2011⁸

The 2010a ILO outlines World Bank and ILO work on profiling of the working poor across countries. Based on available data, young workers appear to be disproportionately susceptible to poverty, reinforcing the notion that youth are not just disadvantaged in terms of accessing work but also in finding productive work that provides sufficient income to escape poverty.

⁸ ILO 2011 initiative 'Labour Statistics for Rural Development' <http://www.ilo.org/stat/lang--en/index.htm>

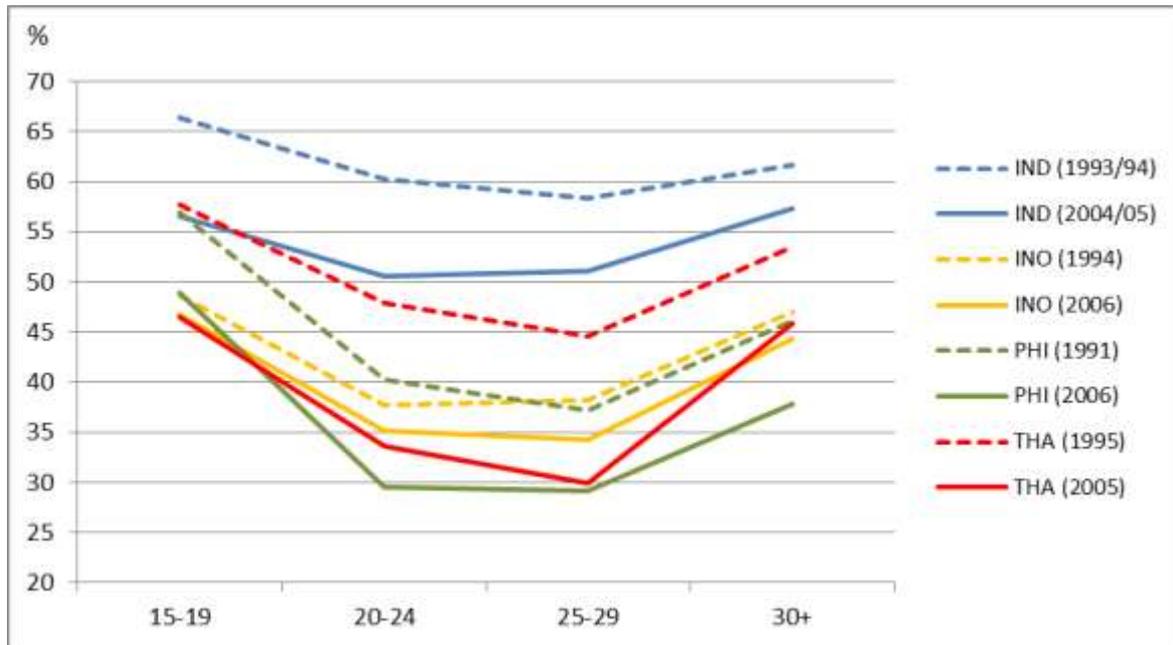
The existence of poverty among young workers reflects the reality that many young people are in the labour market not out of personal choice but rather because of the need to help support their families – younger siblings, parents and grandparents and even extended family. Higher labour force participation rates of the young working poor also reflect lost opportunities for many who might otherwise attend school and acquire skills and education that could raise their future productivity and potential earnings. The report also notes that the working youth who are also poor are most commonly found in the agriculture sector. The ILO acknowledges that the decline in the incidence of poverty among young workers worldwide before the global economic crisis represents a clearly positive trend. But it notes that a large number of young people still remain trapped in poverty and low-productivity employment, typically with very low levels of education and working in subsistence agriculture.

Unfortunately, the available global data on employment by sector and by age cohort are not disaggregated across all regions and over time, so one cannot test the hypothesis that more young people than adults are abandoning agriculture. Yet evidence from 15 countries (selected from four developing regions – Asia, Africa, Eastern Europe and Latin America), based on Living Standard Measurement Surveys, confirms that young household heads in rural areas are more likely to be involved in non-farm activities than older household heads (Davis *et al.*, 2007).

ADB (2008) suggests that over the past 15 years, youth employment has in general shifted from agriculture towards manufacturing and services. As incomes rise, it is natural to expect a decrease in the contribution of agriculture to GDP and hence to employment. ADB presents data on four countries in the South and South-Eastern Asia region, noting that despite the retreat from agriculture the sector remains a significant employer of young workers. This study notes that slow agricultural productivity growth contributes to the problems faced by young workers. Teenagers in particular are dependent on agricultural employment (Figure 9). This is most probably a consequence of lower participation in education in rural areas as well as lower skills requirements for agricultural occupations. High levels of teenage participation in the sector may also reflect slower job and income growth in the urban sector following Asia's financial crisis, and the 'return to the land' survival strategy that some young migrants have been compelled to follow.

The rural Youth Employment Network (YEN) estimates the national youth employment in agriculture (it does not differentiate rural and urban) at the following levels for selected countries: Indonesia, 43.1 per cent (2009); Bangladesh 44 per cent (2006); Tanzania 76.5 per cent (2006). All countries with the exception of Ghana showed a modest decline in the level of youth employment in the agriculture sector in recent years (YEN, 2010).

Figure 9 Youth employment in agriculture by age group in selected countries in South-Eastern Asia



Source: ADB, 2008. ADB staff estimates based on data from labour force surveys

Despite these high levels of employment in the agriculture sector, national policies for youth employment give little or no explicit focus to agriculture as a sector upon which to build and strengthen opportunities for securing and expanding employment for the young.

In conclusion, rural youth's prospects of finding decent work in many regions of the developing and emerging economy worlds, but most notably and worryingly in sub-Saharan Africa and in South Asia, are limited and focus largely on the agriculture sector. The limited opportunities to find work outside agriculture in these sub-regions make the situation for rural young people particularly precarious. Thus, a large number of youth remain trapped in poverty and in low-productivity employment, typically having very low levels of education and working in subsistence agriculture.

Further, the situation for rural youth is such that the overarching concept of 'decent work' as set out by the ILO,⁹ involving: the provision of opportunities for work that is productive and delivers a fair income; security in the workplace and social protection for families; better prospects for personal development and social integration; freedom for people to express their concerns, organise and participate in the decisions that affect their lives; and equality of opportunity and treatment for all women and men, seems a far cry from the rural realities of many in the developing and emerging economies of the world today.

⁹ <http://www.ilo.org/global/about-the-ilo/decent-work-agenda/lang--en/index.htm>

3 Trends in small-scale farming and in agrifood markets

The current structure of farming and the role of small-scale agriculture in the differing regions and how these align with and meet the changing national and global demands for food, including the agrifood markets, have a bearing on the opportunities for livelihood enhancement and employment in rural and indeed urban areas. Understanding these dynamics, set within an understanding of population demographics, and the policy processes that may influence them is central to the debate on livelihood and employment choices available to rural youth now and into the future.

3.1 The dynamics of small-scale farming

It is estimated that 500 million small-scale farmers worldwide support some 2 billion people, i.e. one-third of humanity (Wegner and Zwart, 2011). These farmers account for large shares of global agricultural output, and the livelihood and food security of many millions of rural households. There is no reason to believe that this position will change substantively in the short and medium term.

3.1.1 Defining small-scale farming

Defining the small-scale farmer is a challenging task. It is a relative concept in terms of function, scale and characteristics. Nagayets (2005) attempted to draw together examples of definitions to illustrate the diversity of conceptual approaches to the term. These included: family farms as ‘operated units in which most labour and enterprise come from the farm family, which puts much of its working time into the farm’ (Lipton, 2005); smallholders as those ‘with a low asset base, operating less than 2 hectares of cropland’ (World Bank, 2001); and a smallholder ‘as a farmer (crop or livestock) practising a mix of commercial and subsistence production or either, where the family provides the majority of labour and the farm provides the principal source of income’ (Narayanan and Gulati, 2002). Thus, while there is general agreement that small-scale farms are family operated and use limited non-family hired labour; there is less agreement on other factors, in particular those impacting on small-scale farm viability including land productivity, access and availability of public goods, agro-ecological conditions, etc. This lack of general agreement results in the development debate falling back to the size of the landholding (or numbers of livestock) owned or managed by a household or enterprise as being the key criterion. The ratio of agricultural area to agriculture population¹⁰ or rural population is commonly used as a proxy.

Getting to grips with numbers

Based on data from 14 countries, including China and India, some 348 million households farm less than 2 hectares of land (Table A8). Such data as are available exclude most of sub-Saharan Africa and many of the more populous countries of Asia such as Bangladesh, possibly making the commonly quoted figure of some 500 million small-scale farmers in the developing and emerging economy worlds an underestimation.

Whatever the reality of the numbers, there are tens of millions of small-scale farmers, predominantly concentrated in Asia and Africa. As some of the most populous countries in the world have a proportion of such small-scale farmers to all farmers of well over 80 per

¹⁰ Agricultural population (AP) is defined as all persons depending for their livelihood on agriculture, hunting, fishing and forestry. It comprises all persons economically active in agriculture as well as their non-working dependents. This referred population does not necessarily come exclusively from the rural population (FAO).

cent (Table A8), it must be assumed that global and national food security is strongly dependent on the performance of the small-scale agriculture sector.

The mean farm size varies by country. Selected country data are given in Table A9 and show, for example, a mean range size varying from 0.8 ha in Egypt, 1 ha in Ethiopia, and 1.3 ha in India, to 25 ha in Colombia and 73 ha in Brazil. In general, farms are smaller in countries with high population densities in South and Eastern Asia and in some countries in Africa. This mean size is a reflection of a number of factors, not least historical legacy and the institutional and legal arrangements relating to land access and land reform. In Africa and Asia mean farm sizes seem to have shown an overall decline over the 20th century, whereas in South America there appears to be no clear overall long-term trend (Eastwood *et al.*, 2010).

In terms of the ratio of agricultural area to agricultural population, trends vary considerably (Table A10). For Kenya, Senegal and Bolivia, for example, there has been a decline over the period 1980 to 2008, possibly suggesting a lack of alternative income-earning opportunity set in the context of an increasing population and stagnating growth in agricultural area, while the converse applies in the case of Brazil. In some regions of sub-Saharan Africa, in the period 1980 to 2010, the agricultural population almost doubled yet there has been very little expansion of total agricultural area (for some country examples see Tables A5 and A10).

Differing roles of small-scale farmers

Small-scale farmers play different and often multifunctional roles in different parts of the world. They may be key drivers of economy-wide growth in the early stages of development of a given country as well as providing sources of employment, food security, poverty reduction and ecosystem services. Multiple factors influence the extent to which they play such roles, not least land distribution and land inequality (Deininger and Squire, 1998).

The ability of the small-scale farm to provide a decent livelihood varies, depending on land quality, water access, availability of public goods, closeness to markets and infrastructure (such as roads). The type and value of crop (or livestock) is also a factor; a farmer producing high-value horticulture cannot realistically be compared with a farmer with the same size farm producing a staple crop largely or exclusively for home consumption (Anríquez and Bonomi, 2007).

Trends in small-scale farming

The Anríquez and Bonomi (2007) study is one of the few that have attempted to provide a long-term global view of trends in farming. The authors constructed a database of farming characteristics in 17 countries from three continents, across 43 different agricultural censuses. They note that more egalitarian land distribution will mean that the benefits of agricultural development will be more equitably distributed across the population, and thus make agriculture more pro-poor. They also note that the political economy of the bimodal¹¹ institutional setting provides an environment for policies that favour large-scale farming, and not necessarily small-scale farms. They observe that most countries that show a relative fall in average farm size also show improvements in farmland inequality. This may, however, have other consequences in terms of scale of farm for economic viability as there is evidence in some countries that the mean farm size is declining. In terms of cropping system, Anríquez

¹¹ A bimodal land structure predisposes a political economy environment in which the privileged few can steer public policy in their favour.

and Bonomi (2007) found that small-scale farms are more specialised in staple crops than their larger counterparts and that there were signs that openness of trade correlates with diversification away from staple crops. However, specialisation in staples is also highly correlated with population densities (or smaller farms as both go hand in hand). Anríquez and Bonomi's study of partial productivity, although based on a minimal sample, shows that the partial productivity of small-scale farms is larger than that of medium-scale farms. However, larger farms (greater than 10 ha) not only show higher partial productivity but, when observed across time, they also display larger increases in their productivity. This raises important questions on the future ability of the smaller-scale farm to compete.

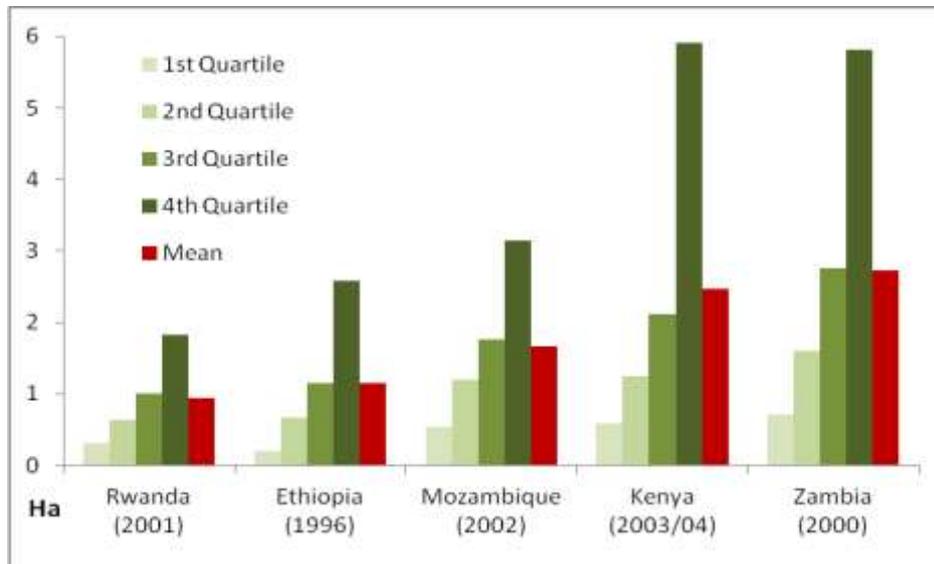
There is limited data on the age of farm household heads and cross-country data are unavailable on trends of farm household age over time. For selected countries in sub-Saharan Africa and for given selected years (FAO, 1997), the average age of holders of agricultural land was around 50 years in the period late 1980s/early 1990s (Table A11), with a fairly wide spread between the age cohorts. The highest proportion of landholders was in the age group 35–54 (range: Zambia 38.6 per cent to Swaziland 50 per cent). The exceptions were Guinea and Guinea Bissau, where a higher proportion compared to other countries were over 55 years. The proportion of those under 34 varied between countries, with higher levels seen in the Democratic Republic of Congo, Ethiopia, Tanzania and Uganda, ranging from 26 to 32 per cent. It is not possible to comment on the reasons for this variation between countries except to note that these countries have different political histories, demographic profiles, and legislation and customary arrangements governing land reform and asset transfer, and that one or more of these factors are likely to have a significant influence on the profile of the farm household structure.

3.1.2 Heterogeneity of small-scale producers within and across countries and regions

Sub-Saharan Africa

Relative to other areas of the developing world, Africa has traditionally been seen as a continent of ample land and scarce labour. While this was true some decades ago and may still apply in some areas, it no longer applies to much of southern and eastern Africa. In a comprehensive overview of the principal challenges confronting small-scale agriculture in sub-Saharan Africa, Jayne *et al.* (2010) examined small-scale farm survey data from five countries of eastern and southern Africa (Ethiopia, Kenya, Mozambique, Rwanda and Zambia) and noted the main changes affecting small farms in this region. First, there has been a steady decline in land-to-person ratios. Second, the distribution of available land is highly inequitable. It is well known that the colonial legacy has left much of Africa, for example Zimbabwe and Kenya, with severe land inequalities between small-scale, large-scale, and state farms. Perhaps less well acknowledged by policymakers and in the development debate are the major disparities in land distribution within the small-farm sector itself with its associated policy implications. Landholdings within the small-scale farm sector in eastern and southern Africa are often characterised as small but relatively 'unimodal', equitably distributed, and situated within a 'bimodal' distribution of land between large-scale and small-scale farming sectors. However, Jayne *et al.* (2003) found consistently large disparities in land distribution within the small-farm sector using national household survey data in Ethiopia, Kenya, Malawi, Mozambique, Rwanda, and Zambia. The authors noted that while average landholdings in the small farm sector range from between 2.5 and 3 ha in Kenya and Zambia to around 1 ha in Rwanda and Ethiopia, these mean farm size values themselves mask great variation (Figure 10).

Figure 10 Average land sizes of farms by quartiles in selected countries in Eastern and Southern Africa (late 1990s/early 2000s)



Source: Jayne, 2010

In selected countries in Eastern and Southern Africa (late 1990s), it was noted that while the top quartile of farm households have two or more hectares, the bottom 25 per cent of small-scale farm households are virtually landless, having access to less than 0.5 ha per farm household or around 0.11 ha per capita or less in each country examined. These findings call for much greater caution in the use of averages and for further detailed study such as that undertaken by Jayne *et al.* (2010).

Jayne *et al.* (2010) also noted the strong relationship between access to land, agricultural commercialisation and household income in Southern and Eastern Africa. Revenues from crop sales among households in the top land quartile are four to eight times higher than households in the bottom land quartile. Landholding size is positively related to variables signifying productive farming potential and wealth.

Continued growth in smallholder production will require increased investments in intensification. In order for smallholders to increase production with less additional land and without major increases in labour inputs, they will need to increase their own productivity through greater capital and technology investments. While there is some scope for increasing labour intensity of agriculture, given the growing young population profile, there is little evidence that this can be realised in the context of smallholder agriculture on a broad scale. The World Bank study *Awaking Africa's Sleeping Giant* concludes that '[current farm-level] competitiveness does not represent a sustainable path out of poverty, because at current productivity levels and farm size, agriculture is economically impoverishing and technically unsustainable. The challenge facing African countries is to invest in developing a more sustainable, productivity-driven base for competitive commercial agriculture over the long-run' (World Bank, 2009). This view resonates with Jayne *et al.* (2010) who note that most small-scale farms in Africa are becoming increasingly unviable as sustainable economic and social units.

Asia

Agriculture in Asia is characterised by smallholders cultivating small plots of land. India, China and Indonesia, some of the world's most populous countries, have together some 310 million farmers all with managed land areas of under 2 ha (Table A8).

In India, an overwhelming proportion of farmers are marginal (0.01–1 ha) or small (1.01–2 ha). More than 80 per cent of farmers in India belong to such marginal and small farm size groups. These two farm size groups also account for a large proportion of the total farm households in most states. Due mainly to sub-division of landholdings and other processes such as land distribution, their percentage has been increasing over time. The percentage of marginal farmers (0.01–1 ha) has gone up from nearly 38 per cent in 1953-54 to about 70 per cent in 2002–03 (NCEUS, 2008). Thus, the share of marginal and small farmers has increased substantially, not only in terms of numbers of farmers and holdings but also, more significantly, in terms of owned and operated area. The smallholding character of Indian agriculture is much more prominent and pertinent today than ever before.

Thapa and Gaiha (Forthcoming) provide an overview of smallholder agriculture across the Asia region and note the small average farm size. The overall trend in Asia has been for farm size to decline over time. Yet smallholders' contribution to the total value of agricultural output is significant in many Asian countries. For example, in India their contribution to total farm output is thought to exceed 50 per cent, although they cultivate less than 40 per cent of land

Latin America

For the Latin America region, Berdegú and Fuentealba (Forthcoming) examined evidence from seven countries¹² excluding Mexico, Peru and Bolivia where agricultural censuses are currently being undertaken. They provide a country-by-country commentary on issues of definition and classification over recent decades. Based on their analysis they conclude that there are 15 million family farms in these seven countries, controlling about 400 million hectares. Berdegú and Fuentealba (Forthcoming) consider that while a limit of 2 ha perhaps fits the distribution of landholdings in Asia, it is not a helpful definition in the Latin American context. The authors consider that such a definition distorts the understanding of smallholder agriculture, and misguides the design of public strategies and policies as it reduces the smallholder group to a fraction of its real size, particularly if measured in terms of economic and social contributions. Thus, in the Latin American context, and potentially relevant and applicable to some other regions and country contexts, the authors propose a simplification of the heterogeneity of smallholder agriculture that is useful for the purpose of designing and implementing development strategies, policies and programmes, as follows:

- Asset-poor smallholders in territorial and regional contexts that are not conducive to economic growth and social development
- Smallholder agriculture with some limitations of assets in territorial and regional contexts where there is a measure of economic growth and social development
- Asset-rich smallholders in territorial and regional contexts that are very conducive to economic growth and social development.

¹² Argentina, Brazil, Chile, Colombia, Ecuador, Guatemala and Nicaragua.

Thus, the heterogeneity of small-scale agriculture needs to be better codified if it is to be useful for the purpose of designing and implementing development strategies, policies and programmes.

FAO noted, at an ‘Expert consultation on statistics in support of policies to empower small farmers’ (FAO, 2009b), the need to consider the requirements of data for policies for small-scale farmers at the time of planning agricultural surveys. It also noted that countries adopt a variety of criteria for coverage and classification of agricultural holdings in their censuses and surveys, which makes international comparisons difficult. The classification and tabulation of data from agricultural surveys are not carried out to reflect adequately the role played by small-scale farmers.

3.1.3 Land, food and agriculture

Globally, relatively little new land has been brought into agricultural production in recent decades. Further, land is under increasing pressure due to urbanisation, desertification, salinisation, and allocation to alternative uses such as biofuels production. The allocation and use of global water resources place added pressure on agriculture in many regions (Government Office for Science UK, 2010). However, area expansion is still possible in some parts of the world, most notably in Latin America and sub-Saharan Africa.

Increases in agricultural production are essential to meet the consumption demand from increasing population and incomes. At least into the medium term – to 2050 – it is expected that agricultural productivity investments will make it possible to meet the increased demand from existing agricultural land resources, while reducing some of the environmental threats from increased production (Nelson *et al.*, 2010).

Within this bigger picture major regional differences exist on growth in the agriculture sector. Projections for the future, based on selected commodities, suggest that Brazil will show one of the fastest growing agricultural sectors, rising by over 40 per cent to 2019, when compared to the 2007–9 base period. China and India may also grow significantly, by 26 per cent and 21 per cent respectively. But production in sub-Saharan Africa is expected to be stagnant in per capita terms, as it barely keeps pace with population growth averaging around 2.2 per cent per year (OECD–FAO, 2010). Sub-Saharan Africa’s agricultural productivity is the lowest in the world and has stagnated over the past 30 years while it has increased in most other developing and emerging economy regions (Jayne *et al.*, 2010).

Important development differences exist between regions and countries that may be generating or inhibiting growth. The factors that inhibit growth include weak economic incentives and inability to adopt yield and productivity enhancing techniques due to lack of access to information, extension services and technical skills or lack of adapted technologies. Poor infrastructure including irrigation, weak institutions and discouraging farm and food policies also contribute. Overall, in recent years, yield growth rates have slowed down considerably in many countries including for major commodities. In particular, the growth rates of cereal yields have been falling since the Asian Green Revolution years. In sub-Saharan Africa especially there are indications of yield gaps, which could be readily exploited with given varieties and with known practices. Such uptake would help to fill the economically exploitable yield gaps that remain in many places.

In sub-Saharan Africa, but also in key countries in Asia, increasing agricultural productivity is seen as the principal, if not the sole, driver of the rural economy, and in some cases the national economy, and of growth in the off-farm sector. Farming families with higher

incomes are able to experiment with new technologies and management systems that might require high up-front costs but offer big productivity and resilience payoffs in the future. Increasing household income through broad-based growth in income is essential to improve human wellbeing and deliver sustainable food security. Families with more resources at their disposal are able to cope better with uncertainties (Nelson *et al.*, 2010).

The structure of the farming system and the impact of the scale of the farms and mix of farmer types are rarely placed centre stage in the international debates and the seminal works on food and agriculture. There are limited definitive data and analysis on who produces the food that enters domestic, regional and international markets, i.e. the type of farmer and farm household, and scale of landholding. Without such evidence to inform the underlying assumptions on forward projections in agricultural productivity and on national and global food production, issues such as changing farmer profiles and interest of future generations in farming give rise to risks on the future of the global food supply and indeed to employment and economic growth that have hitherto not been understood or addressed.

With the exception of plantation crops, agricultural production across the globe has historically been managed by owner-operated farms, with increases in farm size largely driven by rising non-agricultural wages. Recent developments in technology – such as zero tillage, pest resistant varieties, and information technology – make it easier to manage larger farms. While owner-operated farms, linked to the value chain via contracts or other forms of productive partnerships (including producer organisations), will continue to be a key pillar of rural development and thus food production (Deininger *et al.*, 2010), the nature and scale of transformation within owner-operated farms has yet to be teased out. ‘Super-farms’, prominent in the current debate on land use and food security, emerge only where vertical integration of operations well beyond the production stage allow large firms to better overcome the obstacles created by imperfections in for example marketing and access to finance.

It is evident that in some countries, such as China, small-scale producers play a central role in national food supply and export development. Yet in many other countries the picture is less clear. Mapping of different types of farm, the scale of production, the household profile, etc. and their role in domestic food supply are essential. Such mapping is also relevant for commodities that enter international markets.

3.1.4 Land availability and alternative farming strategies

There is abundant literature and persuasive evidence to suggest that measures to improve smallholder farmers’ capacity to increase food production and productivity, and to link to markets, will both enhance their purchasing power and increase wider food availability and so contribute to domestic and global food security. Nevertheless, this vision does not go unchallenged. The surge in investors’ interest in Africa has triggered a debate over the relative advantages and disadvantages of large-scale versus small-scale farming models not just in Africa but worldwide (Wegner and Zwart, 2011).

Deininger *et al.* (2010) in reviewing the rising global interest in farmland, provided a generalised classification of countries by the availability of land for rain-fed cultivation and the share of potential output achieved on areas currently cultivated (i.e. the yield gap). This typology: little land for expansion, low yield gap; suitable land available, low yield gap; little land available, high yield gap; and suitable land available, high yield gap, offers a framework to assist planning and to help to identify options, including providing incentives for existing

small-scale producers to use the development of land as a contribution to overall development.

Land-abundant countries, in for example sub-Saharan Africa, have choices about the future structure of the agriculture sector, whether to establish a sector founded on broad-based ownership of small and medium-size farms (possibly larger than those currently operated and expanding over time) or a dual structure where very large-scale farms co-exist with many small-scale producers. Given the short- and long-term impacts, particularly societal, associated with such choices, clear elaboration of the issues in an informed public debate about the development paths open to a given country, is needed. Projections of future population growth and the scope for employment generation in the non-agricultural economy including the pace and nature of urbanisation and rural-to-urban migration will be essential elements to help map out future scenarios for the evolution of farm sizes and associated farm investment.

Can small-scale and large-scale farms co-exist?

Oxfam (2011) provides an eloquent commentary on large- versus small-scale agriculture and seeks to debunk a series of myths that surround small-scale farming, suggesting that neither big nor small is bad or indeed beautiful. It notes that there are major imbalances in production and market power in the agrifood sector, particularly regarding the large public sector support and subsidies to larger-scale agriculture in the developed world.

In taking forward the debate on whether and how small-scale and large-scale farms can co-exist, Deininger *et al.* (2010) explore whether, when smallholders already own and cultivate land, there may be a case to replace them by large-scale cultivation. Using representative farm budgets from areas where smallholders and large farms producing the same crop exist side by side, the authors identified three factors of interest. First, although yields on smallholder farms are lower than those on large farms, often by a considerable margin, lower yields do not necessarily translate into lower efficiency. On the contrary, smallholder farms' costs are lower than or roughly equal (ratio less than 1.1) to those of large farms in two-thirds of the comparisons. This suggests that there is no strong case to replace smallholder with large-scale cultivation on efficiency grounds. Second, and more importantly, the data clearly indicate that, even though efficiency is comparable, smallholder cultivation has advantages on equity grounds. Smallholders' income is two to ten times what they could obtain from wage employment only. This does not imply that there may not be opportunities for productive partnerships between investors and smallholders (in gaining access to technology, for example, as illustrated by the poor performance of some smallholders without such access). Such opportunities would not require the transfer of land but would be based on more traditional contracting and out-grower schemes (Cotula, 2010; Vermeulen and Goad, 2006). Third, if payments for land are made or if advantageous opportunities exist for non-agricultural employment, small-scale farmers, especially those with limited management skills or access to capital, may increase their welfare by renting their land to an investor. However, in many cases, the land rents to be paid would be large, implying that investors may prefer to engage in contract farming rather than acquire land.

Large-scale investment does not necessarily have to result in the conversion of small-scale agriculture to large-scale agriculture. On the contrary, a variety of institutional arrangements can be used to combine the assets of investors (capital, technology, markets) with those of local communities and smallholders (land, labour and local knowledge). Such arrangements include land rental, contract farming, and intermediate options, such as nucleus estates with

outgrower schemes. Large-scale farming is only one option for farming the land and small-scale farmers may find it more profitable to retain their activity rather than accept waged employment. In these circumstances it may be advantageous for both small-scale farmers and large-scale investors to enter into partnerships rather than an agreement involving the transfer of land (Deininger *et al*, 2010).

3.2 Changing agrifood markets and structures

The past decade has been one of constant change, altering the environment in which the agrifood sector operates. It may be anticipated that the coming years will be characterised by continuing economic, demographic, market and environmental pressures that will bring both opportunities and challenges to farmers, food businesses, consumers and governments. Food insecurity, climate change, technology and innovation, and the changing structure of global food chains have been seen as major challenges to be faced (OECD–FAO, 2010).

Shocks to the global food supply have given renewed attention to agricultural production and call for increased investment in the sector. The recent trends in food prices – higher levels and higher volatility – have highlighted the need for increased investment and specifically for public policies to ensure that small-scale farmers have opportunities to increase their productivity and income. The World Summit on Food Security (2009) laid out a set of principles – the Rome Principles for Sustainable Global Food Security. This requires commitments to be carried forward such as those laid out in the L’Aquila Commitment on Food Security of US\$20 billion over three years, and the associated Global Agriculture and Food Security Program (GAFSP). Such principles are also laid out in a number of regional agreements including the Comprehensive Africa Agriculture Development Programme (CAADP), Latin America and Caribbean without Hunger 2025, ASEAN Integrated Food Security Framework and the Riyadh Declaration to Enhance Arab Cooperation to Face World Food Crises. There remains a critical need to monitor progress on such commitments and the impact of different interventions as they relate to the agriculture and food sector but in particular to the small-scale producer.

The agriculture trade balance

The past decade or so has seen a shift in the global distribution of leading producers and markets with increasing trade between developing and emerging economy countries. Thus, the map of global trade in agriculture has been changing, with some fast-growing economies playing a greater role. Regional and bilateral trade agreements are increasingly taking precedence. Such shifts have the potential to impact in different ways on the farm sector in a given country. Such impacts on today’s small-scale farmer and those of the future are poorly understood and not systematically monitored.

To reach the required levels of food availability, countries can either increase production or increase net imports of food, or a combination of both. According to FAO’s long-term projections towards 2050, today’s developing countries will provide most of the projected consumption growth by expanding their own production (FAO, 2009a). This places the debate on ‘who will farm in the future’ centre stage.

Transformative changes in international, regional and national agrifood markets

Factors driving change in local, regional and international agrifood markets include changing consumer demand and consumption patterns that reflect income and life style changes,

urbanisation, a rise in private and public food standards, and increased local and foreign direct investment in the agrifood sectors. As incomes rise, diets diversify away from staple foods towards increased consumption of meat, dairy, and fruits and vegetables. The pace and impact of such change differ by region, by country and by commodity.

In general, increasing vertical integration and concentration have enabled the industry to respond well to a wide range of changing consumer preferences, while maintaining relatively low consumer prices. However, there are concerns about the growing market power of the agribusiness sector, about price transmission, transparency, and what is a 'fair' distribution of profits across the food chain. Public food safety standards and private quality standards have both been raised in response to consumer demands, but these imply higher compliance costs. Some farmers, especially the small-scale farmer, face particular challenges in meeting these stringent standards and also the changing demands of vertically integrated supply chains in terms of organisation and logistics. Further addressing distortions in the agricultural trading system is considered a priority which will help to enable local producers and poor farmers to compete and sell their products, thereby facilitating the realisation of the right to adequate food. This is now being addressed at the level of the United Nations through Resolution 16/27 adopted by the Human Rights Council on the Right to Food (UN, 2011).

As the demand for agricultural products is growing at a faster rate in developing and emerging economy countries than in the industrialised countries, local and regional markets remain central to the interests of domestic agriculture, including small-scale agriculture, and market opportunity in many contexts. This may be contrary to the prevailing focus on international trade for many food crops produced by the small-scale farm sector.

Dynamic change in modern retail and associated value chains

Since the early 1990s a dynamic change has taken place in the modern retail sector in developing and emerging economy countries – namely the growth of the supermarket. Before roughly 1990, in most of these countries, supermarkets had occupied minor niches servicing richer consumers in large cities. Supermarkets took off in earnest in developing and emerging economies in the early to mid-1990s, and the sector has grown meteorically since then. In many countries supermarkets now dominate urban food retail and have extended beyond the middle-class clientele to penetrate the food markets of the poor. This change downstream in the food system has had ripple effects upstream in the wholesale, processing and farm sectors, mirroring the level of penetration by modern retail firms, differentiated by region and product category (Reardon and Berdegúé, 2006).

Yet, in many developing and emerging economy countries, market integration still remains significantly traditional in its institutional, organisational and management structures. However, traditional market structures are themselves changing, mirroring many of the principles and practices seen in modern market chains. In such contexts most private collecting agents still rely on informal strategies based on trust to obtain products from small-scale farmers, while agribusiness, including modern retail, generally makes greater use of contracts. Where countries are moving to more modern market structures, contracts are being used between the wholesaler or the collection unit, and the processing firm or the procurement service, if not yet at the farm level.

Differentiated small-scale producers – access to services and response to market opportunities

In any debate on small-scale producers and the market, it is imperative to understand the heterogeneity between countries. For example, some countries such as China have a very large small-scale producer supply base. Others, like Brazil, have a dual agriculture structure and a mix of large and small-scale suppliers. Likewise, it is essential to understand the heterogeneity of the small-scale producers themselves in a given context and the capacity of different groups within the small-scale sector to respond to changing markets and to access such markets.

In India, although marginal small-scale farmers (less than 2 ha) are very dominant in numbers, many areas have quite heterogeneous ‘smaller-scale’ farm populations with a mix of marginal small-scale with medium- and larger-scale (say 4 ha to 10 ha) farmers. The latter are important – not so much in numbers per se as in their share of the rural market. For example, from detailed farm surveys undertaken in western and central Uttar Pradesh and central and western Madhya Pradesh, Das Gupta *et al.* (2010a, 2010b) found that while small-scale marginal farmers are 70–80 per cent of the farm population, they only have a 20–30 per cent share of crop output (total volume in the area). The medium- and larger-scale farmers have 70–80 per cent of the overall volume of the crop economy, but are only 20–30 per cent of the farm population. Further, the authors found that the medium and larger-scale farmers have secured 85 per cent of the subsidised tube wells and purchase 90 per cent of the seed and fertiliser sold by the state and cooperative stores. Thus, in these study areas and in general, subsidies, schemes, and public sector actions tend to be skewed towards the medium- and larger-scale farmers within the heterogeneous group of ‘smaller-scale’ farmers. Further, the authors consider that growth in markets and in income will not translate into higher income and opportunity for the differentiated groups within the small-scale farm sector unless they have the appropriate levels and types of productive assets and support to enable them to participate in those markets as the competition and requirements increase.

Jayne *et al.* (2010) used small-scale farm survey data from five countries of eastern and southern Africa to highlight four under-appreciated issues in the context of small-scale farming. These are that:

- Land distribution patterns constrain the potential of crop technology and input intensification to enable many small farms to escape from poverty
- Most smallholders are unable to produce more than a marginal surplus and thus are limited in their capacity to participate meaningfully in commodity markets
- Most farmers are hurt directly by higher grain prices as consumers
- The marketed agricultural surplus of small-scale agriculture is heavily concentrated among a small group of relatively large smallholders.

A significant proportion of small-scale food crop producers do not engage in food crop markets at all. In Ghana, Chamberlain (2008) reported that larger smallholdings (compared to small-scale holdings) are more likely to participate in food markets (other than maize and cassava) and high-value perennial crop markets. Credit use is more frequent, as is the use of purchased inputs, especially fertiliser. With few exceptions, these relationships are stable across agro-ecological space. Chamberlain (2008) also noted that the smallest and poorest farms are particularly vulnerable to the constraints imposed by remoteness, missing or under-developed credit and input markets, and the risks associated with high variability in climate and/or commodity prices.

For those small-scale farms that are not viable but for which agriculture and livestock remain critical for household security, special social protection measures must be put in place to ensure their livelihood during the processes of rural transformation.

New business models support both farming as a decent livelihood but also new formal and informal employment opportunities along the value chain

Among the strategies for increasing benefits to small-scale producers in agricultural value chains are: investing in upgrading at farm level to meet production and processing requirements; adapting trading relationships and supply chain structure for better smallholder sourcing; adapting the product proposition and buying practices of the lead firm; and investing in broader sustainable livelihood strategies (Seville *et al.*, 2011). The World Economic Forum (2009) lists examples of business interventions along the value chain that seek to support small-scale producers in access to markets and improved nutrition for low-income consumers. Based on innovation in commercial practice on small-scale producers' inclusion in modern retail markets, Biénabe *et al.* (2011) reviewed case examples of successful retail market inclusion, and Vermeulen and Cotula (2010) reviewed business models that provide opportunities for small-scale producers.

Generally speaking, smallholders in fragmented and weakly integrated supply chains (such as cereals, rice) are exposed to a larger number of business risks and lower returns than those operating in integrated markets (such as Fair-trade cocoa, specialty coffee) where risks are more widely shared among supply chain actors (Livingstone *et al.*, forthcoming).

New opportunities in non-agriculture labour markets

The changes in agrifood markets are creating new job opportunities for rural and urban employment, both skilled and unskilled, in the formal and informal sectors. In the formal sector these might include agribusiness processing and packaging (dairy, fruit and vegetable processing plants, fresh produce cleaning, grading and packaging stations, warehouse management and storage, etc.) and transport, as well as in modern retail. Self-employment is very significant in the post-production share of value chains and mostly relies on trading and transport of both agricultural raw products and processed goods for the local rural and urban market (small-scale trading of foods, farm products, small shops and restaurants, transport and packaging, etc.).

4 Aspirations of rural youth in small-scale farming and agribusiness

Given the dependence on small-scale farming for domestic, regional and global food production, and its capacity to absorb labour – specifically in regions where alternative employment is limited and where youth populations are expected to rise in the coming years – how young people respond to opportunities and whether small-scale farming can meet their aspirations will be critical in terms of both future employment and food security. A key question is whether the agriculture sector and rural areas in general offer attractions to youth.

According to Tanzania’s Director of Youth Development, Joyce Shaidi, in 2006, ‘The rural areas and the agriculture sector in particular are currently not attractive to youth. The hand-operated hoe has remained the main farm implement for working the soil and has, for a long time now, rendered agriculture a difficult task’¹³

In his keynote address to the Thirty-fourth session of IFAD’s Governing Council, Kofi Annan,¹⁴ spoke of recent progress on African agricultural development and said the continent ‘has the potential to feed not just our own citizens but to help create a secure global food system’. He also said that further progress requires making farming attractive to young people with ambition and drive. ‘They are the generation we need to make change sustainable.’

Notwithstanding the comprehensive recent reviews on rural youth employment in developing countries (Van der Geest, 2010; FAO, in preparation), there have been few studies on the attitudes of youth in developing and emerging economy countries and their views on agriculture as a livelihood and employment option. While a group of experts did identify the main problems facing rural youth and young farmers, and the actions governments might take to address these problems (FAO, 1985), there remains a poor understanding of youth aspirations and an absence of the voice of rural youth in the policy process.

One exception to this is in the Pacific region, where it was noted that young people struggle to find formal employment when they leave the education system. In 2008, Ministers of Agriculture of the Pacific region asked the Secretariat of the Pacific Community (SPC) to explore what might be done to improve the attractiveness of farming as a career for youth in the region. As a first step, a survey of young people in Fiji, Tonga and Kiribati was undertaken to explore issues central to their participation in farming and what needed to be done to encourage and empower young people to realise the full potential of a farming career. The outcome of this survey is summarised in and contributed to the *Pacific Youth in Agriculture Strategy 2011–2015* (SPC, 2010). The strategy seeks to address, among others, the challenges set out by one respondent: ‘From a young age we have been programmed to think that a job in town or a job in an office is the ultimate aim ... that should change ... it should be promoted that agriculture is a noble profession whether you are a farmer or an extension officer’ (Youth respondent, Fiji, SPC, 2010).

Leavy and Smith (2010) note the potential difficulty of separating aspirations from expectations and also conceptualising aspirations in isolation from their determinants. The authors offer a set of ‘stylised facts’ related to the question of youth aspirations, which include:

¹³ <http://www.ilo.int/public/english/employment/recon/eiip/download/workshop/youthtan.pdf>

¹⁴ <http://www.ifad.org/events/gc/34/speech/annan.htm>

- Aspirations are formed against a broader, changing social context and wider changes in society. Both the environment close to the individual and the broader societal context therefore influence aspiration formation.
- Young people's aspirations and expectations in relation to economic outcomes are strongly related to socio-cultural influences and the degree of social embeddedness.
- Social influences on aspirations tend to be stronger in rural areas resulting in social pressures that encourage uniformity and limit student achievement regardless of aspiration and motivation to succeed.
- There is a tendency for rural young people's educational expectations to be lower than those of their urban counterparts.
- Higher poverty rates and lower socio-economic status in rural communities negatively impact on the aspiration levels of young people.
- Aspirations are not just about economic opportunity – status is important: agriculture is unappealing to young people because it does not bring status regardless of economic outcomes.
- African secondary school students' vocational aspirations and expectations do not reflect the employment opportunities or the realities of the labour market, or the socio-economic conditions and development levels of their countries.

The importance of prestige in the formation and fulfilment of aspirations is illustrated very well with respect to migration, where, along with economic security and social mobility, the potential for status enhancement via occupation and income can be considerable. This provides compelling reasons why agriculture may be unappealing as it may not bring status, regardless of the economic outcomes (Rao, 2009). Thus, it is important to note that aspirations are not just about economic opportunities. Perceived degrading work, such as manual labour performed in other locations, does not affect status in the same way as when it is performed in a person's home location, and such absentee work can enable acquisition of life skills and funds for self-employment and social and kinship contributions that confer higher status.

A 2003 National Sample Survey Office (NSSO) survey of farmers conducted in India, although it did not differentiate between age cohorts, found that nearly 40 per cent of the farmer households disliked their occupation and, given a choice, would quit farming (NCEUS, 2008). The main reasons for this, which is higher among smaller-scale farmers, were the lack of viability of farming reported by 27 per cent of the respondents (Mehta, 2011) and its perceived risks. The spate of farmers' suicides in many areas of India is one of the most disconcerting manifestations of small-scale farmer distress.

A study across 13 States in India (Sharma, 2007; Sharma and Bhaduri, 2009) showed the rising trend in withdrawal among youth from farming. It was noted that this trend appeared to be stronger in regions with low value of agricultural production per capita and in villages close to towns. At the individual or household level, the trend is stronger among higher caste, better educated and those with non-farm skills. Both the small and marginal landholding class and the large landholding class show a trend towards withdrawal. While the small-scale and marginal farmers are largely being pushed out of farming, the larger farmers, who are better off in terms of education and other resources such as capital, are moving to tap better opportunities outside the farm sector. A significant proportion of the rural youth were working part-time in farming, while there was a higher proportion of full-time farmers coming from the higher age group. Sharma (2007) asked 'Is "part-time farming" merely a stop-gap arrangement, where youth keep exploring other opportunities while clinging on to

their roots, or is it the way farming will be carried out in the future?’ When asking rural youth what they planned to do with their land, some revealing answers were given. More than 60 per cent answered that while withdrawal was high on their agenda, selling land was the last thing they would like to do. One could attach economic logic to it by saying that land for farmers serves as insurance and provides them with much-needed security. For a number of youth, farming was still a mark of their identity – their forefathers’ livelihood. Interestingly, 34 per cent of the young respondents answered that they would like their children to do farming not only because there was a shortage of opportunities elsewhere but because it is what their families had done for generations. Sharma (2007) reflected on whether this was inertia, a kind of laid-backness or compulsion, and noted that on the one hand the fading charm of agriculture drives the Indian farmer out of farming while on the other the limited opportunities outside farming, poor skill sets and a lack of capital are compounded by a host of cultural reasons that make the young stay on.

Within the framework of the RuralStruc programme, a survey of more than 2,000 households was undertaken in selected regions of Madagascar (Randrianarison *et al.*, 2009). It found that households are still largely interested in future involvement of their children in farming. The reasons given relate primarily to the households’ commitment to agriculture, the perceived adequacy of the actual assets, the need for labour and the desire for social cohesion. For households who chose to keep some of their children on the farm and to send others in search of alternative livelihoods, the need to diversify resources is the main aim. The option of land fragmentation of plots is not considered viable. One in four households said that they did not consider that their children would continue to operate the farm because they were uncertain about its future viability. The strategies mentioned by the households to improve their living conditions and achieve a better future for their children focus largely on strengthening their current activities. Strategies for diversification of agricultural activities were also mentioned except in the areas where specialisation within rice production is taking place. Rural and agricultural entrepreneurship and better marketing of agricultural products were also noted. Education and schooling is in many cases considered as a route to a better future.

In a similar manner, the RuralStruc programme (Kirimi *et al.*, 2010), mapped in selected regions of Kenya the prospects for agriculture and the households’ heads’ wishes for their children. The results indicate that across generations the agriculture sector is no longer considered an activity that provides a good standard of living. Salaried employment is viewed as a better prospect for the future by 64 per cent of the 900 households interviewed.

DIAL (2007) noted in its critical review of youth and labour markets in Africa, that some empirical evidence at the local level supports the notion that access to landholdings is difficult for the younger generation. But there is a lack of general data to gauge the magnitude and seriousness at the level of the African continent and to give a full picture on land transition across generations in Africa. This lack relates to the complex ownership issues in rural areas and is aggravated by the difficulty in measuring plots, for both conceptual and technical reasons.

Based on interviews with key informants selected from across three continents, a series of reflections have been collated concerning the aspirations of the rural youth and their families. These are summarised in Box 1.

Box 1 The future for youth in agriculture: what our key informants told us

Dismal profile of the agriculture sector

In some countries of the world, and most notably in India, agriculture is regarded as socially unviable, and associated with lack of self-esteem, living hand to mouth, and is not respected by society: *'To marry a farmer is something families would prefer their daughters not to do ... low income, drudgery, low societal standing ... no dignity left in farming today.'* Farming is a difficult life and offers no attraction to the youth. It is considered high risk as it is dependent on rainfall and has marginal returns. Young people see their parents struggling, which is demotivating. Even if young people wanted to go into farming, they are discouraged by the family. Thus, there is large-scale migration out of farming. The urban economy is growing and provides alternative jobs, and even if it is low paid, informal work is preferred. Farming is not considered to be a livelihood: *'it is a way to survive ... where there is no other option for many. Many do not even own the land – they toil the land'* (India).

Similar messages come from East Africa where youth see agriculture as a form of punishment and not as an enterprise that can provide income. In early years' education there is little focus on agriculture, and little interest shown by pupils in it. They would prefer to study anything but agriculture (Kenya). Agriculture *'is not the thing to do, i.e. if all else fails go into farming ... doing agriculture is a sign of failure ... agriculture needs to be demystified ... it needs to be made more appealing and technology driven, e.g. drip irrigation/greenhouses, etc.'* The way agriculture is packaged for youth is not appealing. Even horticulture is difficult as it is not mechanised and is considered drudgery requiring a lot of manual labour (Kenya).

New mindset needed from society and policymakers

Many respondents believed there was a need to change the mindset of society as it relates to small-scale agriculture to address challenges faced. Agriculture needs to develop a renewed profile – as a viable and innovative, modern sector that can offer decent work and can be attractive to youth. (Indonesia). *'There is a need for a coherent approach and indeed a raised profile for farming – family agriculture needs to be re-motivated and dignified'* (India).

Education and the media must play a role in improving agriculture's image

Young people are never praised on the television for being farmers. Only employment in areas such as business process outsourcing and banking is encouraged. Farming does not enjoy a favourable image in the media (India).

In East Africa it was considered that agriculture is perceived by educators to be a poor man's job, and a decent occupation to aspire to is a doctor or an engineer. No one talks of farming as a future career. This is further reinforced in schools; for example, when students make a mistake then for punishment they are sent to dig the school farm. In East Africa even the agriculture curriculum is changing: universities and colleges are erasing agriculture. For example, agricultural engineering is now embedded in biomechanics.

With higher education and non-farm employment opportunity the youth leave farming

If young people can acquire vocational or technical skills or education, they will take professional or other jobs: *'they can then be like the city boy/girl, caste is no longer a factor, they have a job and even richer relatives will make contact'* (India).

With youth turning away, who will farm?

Young people are turning away from major industrial crops, key commodities and food staples (Kenya). They aspire to leave agriculture. There are no/few incentives to engage in farming other than the lack of alternative opportunities. In general, agriculture is not an occupation of choice (East Africa). Small-scale farming is not an option preferred by the young (India). In general young people are leaving agriculture ... farming is increasingly the occupation of older people and in particular older women. This trend is likely to continue in China and is similar to what was seen in, for example, Japan in the 1960s. The pace and structure is influenced by commodity type, i.e. the small scale of the typical farm producing food grains cannot support the needs of a young family, for example education for their children, and this leads to youth out-migration to off-farm activity or employment (China).

Yet many dissatisfied and frustrated young people with limited education and opportunity will remain in agriculture. Small-scale producers including young people will remain as long as there is a labour surplus

overall in India but they will only farm as a last resort.

Youth will go into agriculture when it offers real business opportunities

While there was significant concern over the future opportunities for the majority of youth in agriculture, there were seeds of optimism. Such optimism was reported (generally) in those countries or regions where market opportunities may be more developed and where opportunities for diversification into higher-value agriculture are present (Latin America and East Asia).

New entrepreneurs are emerging in some contexts

In Nigeria, the young who go into farming are very business orientated and entrepreneurial and go into agriculture only if it offers a business opportunity. In some cases younger farmers go into agriculture as an occupational choice but others may see agriculture as a secondary source of income (Bolivia).

In Guatemala *‘the youth are proud to be the children of [vegetable] farmers and grateful that the vegetable business is a good business for the whole family’*. They are willing to continue with farming and contribute to the education of the family. They are not interested in migrating to the USA. This is not the case, however, in the maize areas, where there few opportunities to link with markets. These communities are often isolated. Even 4–8 ha still does not provide an adequate income compared to say 0.5 ha of vegetables.

The horticulture sector, which is labour and capital intensive, can be attractive to youth as even with a small plot of land a decent livelihood can be secured (China). In Indonesia there is a growing sense of market-orientated farming, mostly among the youth. They have a good understanding of technology and of product quality. They practise modern farming methods on the family farm and look for more land to rent.

Source: Key informant interviews, 2011

Youth who aspire to farming as a livelihood face many obstacles – some common to all small-scale farmers, others particularly pertinent to their age group. In an East Africa regional youth consultative workshop held in Uganda (East Africa Farmers Federation, 2009) a number of issues were identified that make it difficult to attract young people into agriculture. These are summarised in Box 2.

Box 2 Constraints to attracting youth into agriculture in East Africa

An East Africa regional youth consultative workshop identified the following constraints

- Shortage of production resources – land, finance
- Negative attitude about agriculture
- Limited agricultural knowledge and skills as well as leadership and managerial skills
- Limited youth groups and associations/cooperatives
- Youth involvement in decision-making still low
- Attraction of quick gains especially from white collar jobs
- Lack of youth policies
- Lack of support from elders for youth in agriculture
- Lack of experience and skill sharing
- Lack of market accessibility
- Lack of supportive social services and infrastructure
- Unwillingness of educated youth to engage in agriculture
- Absence of youth departments in national farmer federations

Source: East Africa Farmers Federation, 2009

The authors’ informant interviews also highlighted a number of barriers to young people’s engagement in agriculture within changing and dynamic agrifood markets. Access to land, credit and information were high on the list of key concerns of the youth, as summarised in Box 3. These are in addition to the factors that impact on all small-scale farmers, such as

weak infrastructure, in particular rural roads, and poor terms of trade. The latter were considered by some – notably from India – to be specifically detrimental to the small-scale producer. Weak organisation of farmers was seen to limit farmer access to markets. This lack of organisation was generally considered to be due in part to poor education and little awareness of the benefits of collective action such as increased bargaining power.

For many youth there is no choice but to remain in agriculture, with the associated risk of frustration and unmet aspirations in a globalising world. Given the extent of the challenge, particularly the anticipated rural youth population boom in some regions of Africa and Asia, better understanding of the aspirations of rural youth and better support for them to make a decent living from farming is sorely needed.

Box 3 Key barriers to youth entering farming

Credit is seen as a major barrier: there are no specific banks that service the agriculture sector and there is a weak understanding of the needs of young entrepreneur farmers (Indonesia). This view was shared by respondents from Africa where it was also noted that while there is an increase in microfinance institutions and intermediation in rural areas in which the youth also participate – cooperatives, for example, often have associated Savings and Credit Cooperatives (SACCOs) – there does not seem to be a youth push, i.e. youth are part of a system with no or limited targeted programmes. Similarly, in China some local and provincial governments as well as the Agricultural Bank of China, rural credit cooperatives and other banks offer financial support yet a strategic focus on youth is not evident.

The challenges of **youth and land access** are more complex. It is acknowledged that the different land tenure systems, for example in East Africa, play out in different ways in relation to intergenerational transfer and youth access. In Bolivia it was noted that land use and allocation is strongly based on community structures and this influences the way farmers work together. Systems differ between lowlands, valleys and highlands, and often also by product. *‘These differences are greater than the difference between generations in general – with land redistribution there is pride in being an agricultural producer’* (Bolivia).

When young people want to enter **agriculture as a business** early on in their careers this is often hampered by:

Timing of transfer of the land to the youth: they have to wait until they are older to inherit but by then it is too late. In Kenya, for example, with perennial crops such as tea, coffee, cotton and industrial crops, farmers are generally in their 50s and 60s. These farmers own the land and the title deeds. They have been there a long time and it is difficult for youth to enter except through inheritance.

High cost of land in relation to anticipated income: in India at present, for example, the high value of agricultural land has no relationship with the status of agriculture and agricultural reforms, even for low-potential agricultural land (remote semi-forest). Leasing land, however, is less of a problem. But given the income to be earned from agriculture there is no economic relationship with the purchase value of land or to some extent the rental value.

Difficulty in finding land for rental in some areas, for example the Kenya highlands (East Africa).

Decline in size of family farms and land sub-division. It was noted in, for example, East Africa that declining farm size combined with low education made young farmers very vulnerable. *‘Rural youth have few livelihood options; there are relatively few non-farm employment opportunities other than petty trading ... thus “poverty begets poverty”’* (East Africa). Land tenure systems and inheritance can mean an ever-declining average farm size (farm size in Bangladesh shrank between 1977 and 1996 from 1.4 ha to 0.6 ha; in India it decreased from 1.6 ha to 1.4 ha in the period 1990–1995).

Depending on formal and informal land tenure systems, outcomes can be disadvantageous for women and girls.

Commodities and land access for youth can play out in different ways. For example, paddy in Indonesia is

based on sharecropping with most land owned by urban investors or the millers, and thus land leasing is not so flexible. Production methods tend to be more traditional. Production is in the hands of the older generation, and the young are less interested. However, some differentiation is now taking place in, for example, specialist and quality rice production, which is generally undertaken by the younger and more entrepreneurial farmers.

Skills development and technology transfer was considered key by many respondents including ‘model farmers’ and farmer field schools (China). It was noted that young farmers particularly lack information on the business side of agriculture, including gross margins and thus profitability (Kenya) and commodity value chain knowledge, i.e. production through to market (Indonesia).

While it was acknowledged that young farmers are themselves doing much of the innovation, it was noted that public research is not providing enough of the right kind of knowledge to support the modern young farmer. Furthermore, extension services suitable to support the modern food sector are weak or inadequate (Indonesia). There was a call for young farmers to be given the necessary information on opportunities for employment or self-employment in small-scale farming and in modern food chains (Indonesia).

There was a call for more technical and vocational training (most regions).

Source: Key informant interviews, 2011

5 Moving the agenda forward: some drivers and innovations

Multiple factors shape intergenerational change in small-scale farming, including: agricultural productivity, economic growth, change in labour markets, development of non-farm jobs and employment in industry and services, land reform and access, trade policy and structural change in agrifood markets. Small-scale farmers themselves can and will shape the future in the way they respond to externalities and how they develop new models and ways of working. Small-scale farmers, including young farmers, innovate in ways that may be indicators for the future and may offer opportunities for public sector enablement and support. This section identifies some areas of innovation and change, which may be the drivers or change leaders of the future and thus warrant further attention, support or monitoring as the wider rural transformation process takes place.

5.1 Youth in small-scale agriculture: a cause for optimism or concern?

The voices of our key informants were insightful. There is a very clear message that agriculture should remain central to the national and development partners' agendas, and that the challenges of both understanding and addressing the scale of farming must be better understood and addressed. For many countries small-scale agriculture will remain central for future generations. Therefore, the need to ensure that agriculture offers a decent livelihood must be addressed, and this may mean transformative change in the nature and structure of small-scale farming (Box 4).

A further strong message is that young people are the key to the future of agriculture both as small-scale producers and as part of the labour market for different scales of agriculture and within the value chains. However, given the growing disinterest of youth in this sector, there are risks to agricultural production and food supply as a whole, raising the question of 'who will farm in the future?' Moreover, there are looming concerns about the lack of capacity of other sectors to absorb the 'youth dividend', in particular in Asia and Africa, which will lead to high unemployment, disillusionment and the associated risks of instability.

Box 4 Diverging views on small-scale agriculture – where do we go from here?

Placing agriculture and youth at the centre of policy and investment

A clear message is needed that nations must feed themselves and ensure employment for their populations, including the youth. They are the future and they need to be part of agriculture. The critical need to increase investment in agriculture was emphasised, including meeting commitments of the Maputo Declaration, and to invest in youth in agriculture, with more young people having access to resources, skills, land and capital for a decent livelihood in agriculture (Kenya). With increasing costs of living and high unemployment there is a risk that disenfranchised and disillusioned youths will take to the streets.

'In the last five years there has been seen a shift towards new emerging small-scale producers who are entrepreneurial and more creative (including sustainable agriculture) – such young small-scale producers need to be fostered and encouraged – this is a new opportunity ... [Indonesia] may need to guard against the risk of such small-scale young entrepreneurial farmers being crowded out by larger-scale agribusiness'.

'Agriculture has lost some of the best brains to other sectors and new topics.' 'Agriculture needs to develop its own and a new or renewed profile – as a viable and innovative and modern sector and one that can offer decent work and be attractive to youth, including being science and technology-based.'

Such a mindset in public policy and society more widely has yet to take off (Indonesia, East Africa).

Managing change with small-scale producers central to the rural transformation

Commentators from both India and China send a clear message that ‘*small-scale farming will remain the basis of production for many decades to come*’ and will dominate into the foreseeable future. Both see transformation within the small-scale farm sector. In the case of China the growth of larger-scale [small-scale] farming will be influenced by the pace of non-farm employment opportunity and urbanisation. This is already being seen in, for example, grains but from a very low base, with shifts in average farm size from 0.6 ha to 0.8 ha. The ability to rent land has opened the possibility for the steady expansion of farm size although such rural transformation is likely to be slow and steady. The numbers of ‘large-scale farms’, i.e. 20–50 ha is still a very small percentage of the total number of farms. In India, it is felt that there will also be land consolidation through sub-leasing, so there is likely to be some shift from very small- to small/medium-scale farms. Similarly, in India it is considered unlikely that there will be increases in large-scale corporate production.

There is a strong call for policymakers in the agriculture sector to identify the small-scale farmers who are willing and able to be progressive, and ensure that they have differentiated services and strategic policy support, so that small-scale farming can offer a decent livelihood to rural youth into the future and to expand, create and secure rural (self) employment opportunities (Indonesia). Within this new approach, it must be recognised that while some small-scale farms are not viable they may be critical for household food security at some level during rural transformation. This applies in particular to the small-scale rice sector (Indonesia), which requires complementary policy support and intervention.

Commentators from Bolivia emphasised that a process of change is taking place, which is dismantling agricultural structures of the past in terms of both agricultural production and marketing. This will impact on the ways in which individuals and groups work, crossing between rural and urban space. Such societal changes are moving very fast in rural areas; the state is still using old rural development instruments, such as heavy investment in old-style agricultural research. Thus, agricultural policymaking is considered to be behind the curve and stuck while other sectors are moving forward. This needs to be addressed through a longer term plan that reflects reality.

Out-migration of farmers offers new opportunities for rural–rural migration. ‘*In Kerala, one of the biggest problems [opportunities] today is that the population has moved from being producers to being consumers.*’ Rural households are increasingly no longer productive and migrants come to Kerala from other states to farm while the youth of Kerala look for jobs in, for example, IT and services (India).

Likewise, in China, being able to rent land in home locations or indeed in other regions or provinces offers new economic opportunity. This can vary region by region. In wealthier regions where farmers may have moved fully into non-farm activity, rural–rural migration is happening. This might be attractive to young farmers who are willing to move, rent land and become full-time farmers.

Roles and relationships will change

It is felt that the corporate sector will play an increasingly central role in the organisation and structure of the agrifood sector through their work along the supply chains, including technology transfer and interface with the small-scale producer (India). Collective action between farmers (to ensure their place in the market) will be central and this is currently not in place (India). Production must be clearly market driven/led even for the service producers as this gives them a clear framework in which to function and be held accountable (Kenya).

Better multi-stakeholder dialogue informed by evidence-based research

Commentators called for national dialogue on the issues and opportunities for agriculture, in particular small-scale farming set in a changing domestic and international agrifood sector and change within the wider economy (Indonesia). Given that most governments work to a short-term (3–5 year) time horizon, the wider implications of rural transformation, including farming, are poorly debated. This should be rectified (East Africa).

National dialogue and advocacy needs to be backed by evidence

There were calls for research into: small-scale agriculture and ‘scale for viability’; the role of urban (educated) youth in investing in small-scale agriculture as a full- or part-time business and the implications of this to rural youth; the role of the agriculture sector in youth employment along the entire

value chain (East Africa, Bolivia); good practice on youth group formation and role of youth in policy (Kenya); whether and how rural and urban youth are forming their own groups, whether or not they own the land (they can and do rent land), whether this is a growing trend, what are the drivers and what support can be provided to foster this (East Africa).

Source: Key informant interviews, 2011

5.2 Some factors that influence livelihood choices made by rural youth

5.2.1 Land and land access

The extent to which land is available to small-scale producers or newcomers to agriculture to purchase, lease or rent in order to expand their areas of production is poorly understood and researched. It will inevitably vary between regions and countries and within countries.

In many areas, respondents in the five sub-Saharan African country studies by Jayne *et al.* (2010) stated that unallocated land is unavailable, particularly close to urban areas and district towns and along major highways. These findings reinforce the view that over time rural populations tend to cluster in areas with the best agro-ecological conditions and access to markets and services, leading to a more concentrated pattern of settlement. Land shortages in favourable areas are exacerbated by the apparent rise in patronage-based land allocations to political elites (Jayne *et al.*, 2010). At the same time, there are still large tracts of unallocated land in the more remote parts of some countries, but the economic value of this land is low, partly because of the lack of access to markets, infrastructure and services. Thus, in densely settled areas where population growth and sub-divisions have created land shortages, rural poverty has become closely associated with inadequate access to land.

In China, the market for cultivated land rental has developed strongly, with some 19 per cent of cultivated land being rented for farm operations. This figure is high internationally, especially among developing and emerging economy countries. Assuming that cultivated land rental produces benefits for farmers, including gains from economies of scale and higher labour productivity, rising cultivated land rental markets are contributing to the welfare of China's farming population. It is argued that if policymakers can find ways to further strengthen the rights of lessors and tenants as well as lengthen contract periods, farmers – even those that rent – will invest more in their land, because they will be able to capture the returns to their investments (Gao *et al.*, in press).

In India, the nature of the relationship between farmers and buyers impacts on the structure of land leasing. Contract-farming operations work mostly with large and medium-size farmers, with the exception of firms in Karnataka, Tamil Nadu and Andhra Pradesh, where there are small-scale and marginal farmer contracts due the nature of the crops (cucumber/gherkin and broiler chicken). This bias in favour of large- and medium-scale farmers is perpetuating the practice of reverse tenancy in regions like the Punjab where these farmers lease land for contract production (Asthana, 2011).

Intergenerational land transfers

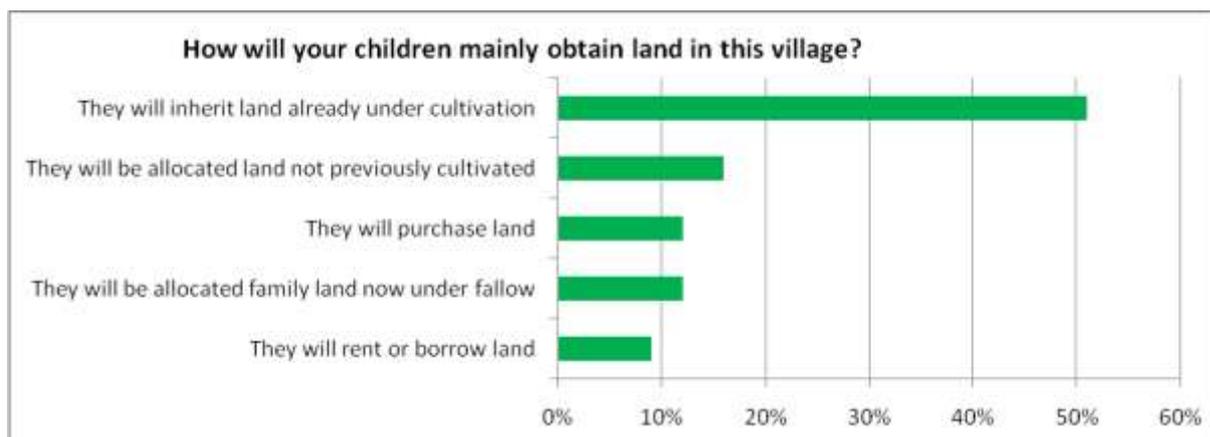
The allocation of land resources within extended families, including the intergenerational dimension, has received little policy or academic attention in recent decades. The land access and tenure security status of different generations in sub-Saharan Africa is emerging as a critical issue. This can become particularly problematic where alternative livelihoods are not available and can trigger wider social conflicts (Quan, 2007).

In sub-Saharan Africa, historical and contemporary political processes of social organisation and mobilisation shape access to, and the control and utilisation of, land. This results in complex and diverse systems of land rights, land use and intergenerational transfer. National land policies and land reforms vary in relation to these diverse contexts. Many governments seek to replace or build upon ‘customary’ land tenure systems with ‘modern’ property rights based on state legislation. However, to date relatively little rural land has been registered and customary systems apply through much of the region (Deininger, 2003). Changes in recent decades in terms of demographic growth, urbanisation and livelihood diversification, including remittance transfers, are impacting on customary systems. Processes of individualisation and commercialisation of land relations are reportedly taking place (Cotula, 2007).

White (2011) notes that tension regarding the transfer of land and other assets from one generation to the next is not new and that even when land is available, the youth may have to wait a long time to gain access to these assets. Quan (2007) provides case examples of intergenerational transfer set within a context of changing intra-familial land functions, rising land value and increasing individualisation of decision making within households. The impacts have been largely negative in the case of the cocoa sector in Ghana. Marked intergenerational conflicts over land were reported in Burkina Faso and Cote d’Ivoire and Rwanda, and were seen as linked to the civil conflicts in Rwanda.

The 2008 household studies undertaken in nine countries in sub-Saharan Africa on smallholder agriculture through the *Afrint* programme¹⁵ sought among many other issues to understand how the next generation in the sample villages would obtain land. While the picture differs significantly from country to country (Table A12), inheriting land already under cultivation is still considered by householders as the most common means for their young people to obtain land within a given community (Figure 11).

Figure 11 Households’ reflect on how children will obtain land – results from household surveys in nine countries in sub-Saharan Africa



Source: *Afrint*, 2011

In Kenya, inheriting is essentially considered the almost exclusive means of land transfer (94 per cent). Renting or borrowing land is somewhat higher in Ethiopia and Ghana than in the other countries. Purchasing of land is common in Mozambique, Uganda, Zambia and

¹⁵ Ethiopia, Ghana, Kenya, Malawi, Mozambique, Nigeria, Tanzania, Uganda and Zambia <http://blog.sam.lu.se/afrint/>

particularly in Tanzania, where it is considered to be even more common than inheritance. For countries with relative land abundance such as Zambia and Mozambique, over 40 per cent of households considered that land previously uncultivated could be allocated to the next generation. Given the average farm size and agriculture area to agricultural population ratios in sub-Saharan Africa, the anticipated increases in rural youth populations and an assumption of increased longevity of current household heads, a crisis looms for both timing of land access (specifically inheritance) by the next generation and land available for future viable small-scale farming occupations. Alternative future scenarios and their implications must be explored and debated locally and plans put in place to pre-empt a crisis in rural areas.

5.2.2 Youth and farmer organisations

One of the few studies undertaken on farmers' organisations and their young members is that by Tijsseling (2008) on farming youth in Kenya and the work of the Kenya National Federation of Agricultural Producers (KENFAP). The case study shows that although many of the needs of the youth are the same as those of adults, there are challenges that are exclusive to youth, such as lack of land, knowledge, skills and start-up capital. These are in addition to those that apply to farmers in general including youth, such as lack of markets, poor infrastructure and unfavourable weather conditions. Because of this, it is important for farmers' organisations not only to focus on the needs of farmers in general, but also on the specific needs of young farmers. The review emphasised the importance of formulation of a youth policy by farmers' organisations, creating youth representative positions on different committees, and the importance of addressing the needs of youth at all levels within the hierarchy of the organisation. The study also shows that social networking is welcomed by young farmers and is considered very important for their wellbeing and motivation.

Emerging from a study in Uruguay was a counterview – that young people are generally not interested in joining a cooperative, 'that they maintain another rhythm, and have other urgencies and perspectives' (Samson, 2010).

Youth group formation may be fostered by governments and NGOs as a means to secure credit, for example in the case of Kenya (see Section 5.2.5). Therefore it is difficult to judge the young people's view of such institutional structures as a means to help them up the entrepreneurial ladder, to support advocacy and/or business and market development. Further reflections on this question are given in Box 5.

Box 5 Do youth respond differently to opportunities offered through group formation?

In China, there was felt to be no evidence to show that young people are responding in a different way to agricultural opportunities. However, as cooperatives offer a range of services, they are likely to make agriculture more attractive to youth. Cooperatives tend to be for the higher-value subsectors, e.g. horticulture, livestock and fisheries, none of which are part-time farming activities.

In Bolivia, it was felt that the forms of organisation will be more influenced by use of external inputs. For example, potato farmers used to spend 60 per cent of their time on seed potato management and now the young or their organisations buy seed potatoes. Such changes in management and technology impact on organisational structure and requirements.

In East Africa, it was noted that youth are involved in other ways within the farmer organisations and cooperatives, where those who are educated are employed in management or middle management. This young professional cadre in such organisations may attract more youth directly and indirectly, making the sector more attractive and thus encouraging them to join primary societies. However, this cannot be pushed by public policy. The role of collective marketing is seen as very important, but besides isolated examples

of youth in peri-urban agriculture, there does not seem to be any key measurable difference between the way in which youth act and engage in the market compared to the older generation. The view on collective action is not youth focused per se, but for the farming community in general, through which youth also participate and benefit. In Kenya it was considered that the most successful groups integrate youth at levels of 20–30 per cent of total membership.

Source: Key informant interviews, 2011

It was noted in Kenya (H. Kinyua, pers. comm., 19 April 2011) that youth with an interest in agriculture may join farmer organisations and cooperatives and although they may not take up farming in the first instance they may offer production and value chain services to other members of the organisation such as collection (dairy), transport, pest scouting and crop spraying.

To gain a better understanding of youth and farmers' organisations, a programme managed by the International Movement for Catholic Agricultural and Rural Youth (MIJARC) and supported by FAO and IFAD was launched in 2011. This includes mapping of existing young farmer organisations, farmer organisations addressing youth issues, and rural organisations representing young farmer interests. A survey is being carried out to identify specific needs, challenges, expectations and aspirations for youth, both women and men, in entering into farming activities.

5.2.3 Youth and new agribusiness opportunities

Youth and value chain business opportunities

Crop diversification, value added and new and innovative approaches to staple crops are attracting entrepreneurial small-scale farmers of all ages to new business opportunities. Davis *et al.* (2007) suggested that younger household heads who are engaged in farming tend to derive a higher income from their agricultural activities than older household heads. This was possibly attributed to the younger generation being more open to new crops and technologies that produce higher yields and possibly being more involved in post-harvest value addition (storage, processing) or more profitable ways of marketing their produce. Further study is required to substantiate this.

Stories of youth innovation from Indonesia, Kenya, Ethiopia and Vietnam are given in Box 6.

Box 6 Youth innovation in farming and agribusiness

Higher value horticulture and agriculture attracts small-scale farmer innovation

In the horticulture sector in Indonesia, driven largely by changing markets or modern retail and export, there is a growing sense of market-orientated farming – mostly by younger farmers. They are aggressive, with a good understanding of technology and of product quality. They practise modern farming methods on the family farm and/or look for more land to rent. Access to such land is fairly easy – apart from the cost of rental. Most small-scale young farmers supplying the modern markets work in associations or groups. They are forced to do so by the necessity of offering quality and quantity given their farm sizes of between 1.3 and 1.7 ha. Thus, young entrepreneurs rent land to farm when business opportunities exist, land is available, and tenure systems are conducive.

In Kenya, horticulture crops, particularly for export, are attractive to the youth as land can be leased. Youth who enter horticulture can be the sons and daughters of farmers farming the family land; or they can be renting land; or they can be those already in employment in cities who invest in horticulture as a second source of income. Generally it is not too difficult to find land on a small scale, even within a community's own land – there will be a few households who are not farming or are not using all of their allocation,

whether in the wheat-growing areas around Narok or on unirrigated lands and in the irrigation schemes in central and western Kenya and the Rift valley.

Source: key informants

Stories from Ethiopia

Tuna Geda, 30, is busy in his onion farm located near Lake Zway in the eastern Shoa province of Oromia Regional State of Ethiopia. Like tens of young farmers who are now working for him, he is also a son of poor farmers who rely on rain-fed agriculture farming on a plot of 0.25 ha. In order to support his family, Tuna began working for other farmers as a daily labourer when he was 15. Including the half hectare of land he got from his family after his father died few years ago, he now produces fruits and vegetables on 25 hectares and cereals on another 12 hectares. 'I decided to quit school at sixth grade after I began working for a very hardworking rich farmer in our neighbourhood,' he says. 'Then I say to myself "one day I will have tractor like him and become a rich farmer"'. When my father died, I realised that it is time for me to act.' Tuna then began using groundwater, renting a water pump for growing vegetables on his family's plot. After he bought one water pump, Tuna began renting idle plots from the neighbourhood to expand his agriculture. He used both oxen and the labour of youngsters in the village to develop the land. Tuna has created jobs for some 50 youths (Siay, 2011).

A few kilometres away from Tuna's farm, Simbiro Dadi, 26, is also engaged in farming fruits. He has been producing mango and papaya on 4 hectares for the past few years. 'I completed tenth grade and moved to agriculture, borrowing water pumps from other farmers like Tuna' (Siay, 2011).

New young farmers: examples from Vietnam

In Vietnam various extension and credit agencies enabled young farmers with no previous experience to establish successful new enterprises and escape poverty, as the following examples show.

A couple (aged 18 and 20) in rural Phan Theit built their piggery with loans from a credit cooperative and the local farmers' union. Although they had very little land, the piggery enabled them to make a living. Government extension services and their local youth group provided them with technical advice.

A 19-year-old man in Bin Thuan borrowed half an acre from his father to grow dragon fruit, which made him economically self-reliant. He obtained his start-up capital from a private credit cooperative and extension support from the fruit marketing firm that purchased his crop.

A couple (both aged 21) built their own house themselves with the proceeds from their third coffee crop. They received a lease of land from the government, an establishment loan from their district People's Credit Fund cooperative and technical advice and guidance from both their local youth federation and the local coffee mill (<http://www.yesweb.org/>).

Such 'boutique' examples of young entrepreneurial small-scale farmers provide a window into potential policy and intervention opportunities to support young farmers. Such limited examples should not, however, detract from the reality of rural youth and agricultural employment as described in earlier sections.

Input markets offer new employment opportunities in rural areas as the marketing of seeds and agrochemicals or veterinary services provision expand and professionalise. Furthermore, employment opportunities are set to increase along the agrifood value chains for local, regional and international markets and the associated horizontal services. In China, for example, young people are (and always have been) active players in the middle stream of the value chains in employment and/or as entrepreneurs in brokering and wholesale. This tends to be hard physical work and involves long hours, e.g. transportation, for which youth are better adapted (J. Huang, pers. comm., 26 April 2011). As these agrifood markets expand and change, so too do the related employment opportunities. Greater effort should be made to understand and support youth employment opportunities generated by the agrifood sector as a whole include inputs services.

Credit and financial intermediation

Smallholders everywhere face constraints in accessing credit and other financial services. Youth potentially face particular challenges in securing formal credit for business start-up due to their lack of collateral and proven business experience. The lack of specific study of youth's access to credit is noted in the case of Africa (DIAL 2007). Access to credit and insurance is important for accumulating and retaining other assets and such access needs to be central to any intervention in support of enhanced participation of youth in the sector.

5.2.4 Rural youth and the ICT revolution

The pace of change in mobile phone and internet access in rural areas in developing and emerging economy countries will change the face of how business is done at all stages of the agrifood value chain. Technology, market information and market connectivity is already being accessed and used in new ways through innovation in information and communication technologies (ICT). It is generally considered that the next generation will be able to capture and exploit new technologies for better livelihoods. However, empirical evidence on this is lacking.

Mobile phones foster new ways of business linkage

Market information systems (MIS) are designed to improve market transparency. Information disseminated to producers, traders and consumers is aimed to help with decision taking on marketing, production or investment. MIS are expected to improve efficiency, lower transaction costs and make trade more competitive and reduce information asymmetries with middlemen and other buyers, leading to better prices for the producers. ICT (in particular internet and mobile phones), brought about the emergence of a second generation of MIS at the end of the 1990s, characterised by their decentralised, interactive and sometimes private aspects. Sometimes, MIS link up with other institutional market arrangements such as Warehouse Receipt Systems, commodity exchanges or multi-stakeholder roundtables. Second generation MIS also differentiate themselves in terms of products covered and scale. Many second generation initiatives are no longer based within government ministries but within the private sector and their institutions (chambers of agriculture, trade associations representing farmers, traders, processors), or are entirely private sector, linking, for example, buyers and sellers as in the case of Kenya Agricultural Commodity Exchange Limited (KACE).

An increasing number of case examples demonstrate how the use of information and communication technologies has improved small-scale farmer access to information and to markets (Box 7). However, there are limited studies of user and beneficiary age cohorts. Exceptions to this are the work by Sulemana (2010) on the use of ESOKO market information systems in Ghana where differences were found between users and non-users of ESOKO by, for example, education, cultivated area and selling practices but not by age group; and the work of Isaac (2010) and the use of the KACE services including Market Resource Centres (MRC). MRCs tend to be used more by younger household heads due to their greater mobility. However, it was noted that such services as MIS require additional factors of support to value chain development and are not in and of themselves sufficient to bring about market inclusion or enhanced benefits for smallholders.

Box 7 How small-scale farmers can link to buyers using mobile phone and internet

Linking Learners

This internet service supports local entrepreneurs in East Africa to learn how to operate commercial market access enterprises. Through Linking Learners, enterprises link small-scale farmers with other key players in the market chain. <http://www.linkinglearners.net/>

The First Mile Project is about how small-scale farmers, traders, processors and others from rural areas learn to build market chains, linking producers to consumers. The project encourages people in isolated rural communities to use mobile phones, e-mail and the internet to share their local experiences and good practices, and learn from one another. It is supported by the Government of Switzerland and is implemented in collaboration with the Agricultural Marketing Systems Development Programme of the Government of the United Republic of Tanzania.

'Xam Marsé' ('Know your market') is Wolof for the agricultural market information systems developed and operated by Manobi, in conjunction with Sonatel, since 2001. With Xam Marsé, Senegalese farmers, traders, hoteliers or housewives receive real-time information via SMS messages on their mobile phone, or 'the web, on the prices and availability of fruit, vegetables, meat and poultry, on any of Senegal's markets.

The **Eastern Corridor Agro-Market Information Centre (ECAMIC)** project focuses on supporting 24 cooperative farmer communities with around 15,000 members in the Eastern Corridor in Ghana. Price information collected at the local district markets is combined with other relevant agricultural information at the ECAMIC office and distributed to district offices through e-mail and SMS. <http://www.iicd.org/projects/ghana-ecamic>

The SMS-based **'411 Get It'** service is a joint venture between Safaricom and the Kenya Agricultural Commodity Exchange (KACE). It provides information on agricultural produce and market prices, enabling farmers to identify favourable markets and cut out the middlemen.

M-PESA is now live in Kenya, Tanzania, South Africa, Fiji, Qatar and Afghanistan with over 20 million customers across these markets, over \$500m transferred every month and over 40,000 M-PESA agents – providing employment and further income. While only 4 million Kenyans have bank accounts, 10 million people in Kenya now use the M-PESA money transfer service – which includes transactions in the agriculture sector.

El Correo del Agricultor (The Farmer's Mail) broadcasts market price information, gathered on the market in Santa Cruz, aimed at 15,000 farmer families in the region of Valle Grande, Bolivia. The programme is well received among producers and has a strong impact on the negotiating position of the small-scale farmers, resulting in better market prices.

While innovation in ICT is moving forward, access and opportunity is still to be exploited fully by small-scale farmers and entrepreneurs. A number of respondents from the key informant interviews felt that by and large, ICT is still a relatively new tool. For example, in rural Indonesia it is used for time/quality/quantity information exchange between farmers and buyers but it is still very much used for basic information. Most other exchanges, for example, contract negotiation, are undertaken face to face.

There were different views from key informants on youth and the role of ICT and its applications. In general it was felt in East Africa, despite the perception of young people's greater potential interest in ICT and its applications, that these do not offer young people any specific youth advantage. What matters is how farmers (including young farmers) are organised: the young do not benefit from ICT more than the older generation. ICT brings a range of services such as payment over the phone and price information. In general there is equal age usage (M. Mugoya, pers. comm., 21 April 2011). A respondent from Guatemala noted, however, that young people are more open to new information and are more used to

absorbing ‘global’ information. They are seen to be keen to introduce new technology, seeds, irrigation; they are aware of the market and work to meet the necessary standards where in some contexts older households do not see the need, i.e. the youth are more willing to change. In terms of market information, it was felt that the information such organisations as KACE are providing may be of greatest benefit to the traders. It was suggested that farmers really only benefit when they are working in groups (M. Mugoya pers. comm., 21 April 2011).

Finally, a respondent from Bolivia considered that through communication of price information and demand, a new individualist attitude was emerging compared to established community-based market structures. For example, farmers in the high valleys of La Paz in Bolivia use mobile phones to find prices. They then collect produce from neighbours and go to market, bypassing the traditional community structures. This would have been unthinkable five years ago (M. E. Canedo, pers. comm., 23 March 2011).

5.2.5 Innovation in public sector support for rural youth in agriculture

Targeted rural youth employment programmes

A Youth Employment Inventory has been compiled to improve the evidence base for making decisions about how to address the problem of youth employment. This includes evidence from 289 studies of interventions from 84 countries in all regions of the world (Betcherman *et al.*, 2007). While the largest number of interventions was in the OECD area, Latin America and the Caribbean also had good coverage. As the inventory does not differentiate by employment or occupational sector, we do not know the levels of support to interventions in the agriculture and agribusiness sector. However, it does distinguish programmes by their location. Few interventions (only 10 per cent of the total) are confined to rural areas. Somewhat more are targeted at urban areas (28 per cent). The majority (62 per cent) operate in both urban and rural areas although it may be surmised that the beneficiaries are more likely to be in urban than in rural areas. Despite the many donor and IFI programmes which support rural SMEs, microfinance, community-driven development, and sustainable natural resource management, only modest elements targeted youth and agriculture¹⁶ and few focused explicitly on rural youth and agriculture and agribusiness. Given the levels of youth under- and unemployment in rural areas, this low level of explicit focus on rural locations should give cause for concern.

There are some models of success and innovation. Of the 21 Youth Employment Network (YEN) Lead Countries that have developed comprehensive national action plans for youth employment, there are some examples of programmes and initiatives that focus on the agriculture sector (Box 8).

¹⁶ http://www.ifad.org/newsletter/pa/e/20_full.htm#2

Box 8 Youth Employment Network Lead Countries – examples of innovation in agriculture

To confirm Indonesia's political commitment to youth employment, the government established the Indonesian Youth Employment Network. Indonesia is creating opportunities in tourism, mass media, health, education, environmental conservation, information and communication technology, product and service industries and agriculture. Specific importance is given to the agro-industry sector as it can strengthen urban–rural linkages critical for job creation, poverty reduction and combating hunger. Indonesia also recognises that ICT can help create the necessary infrastructure for growth and jobs in all sectors, improve productivity and increase competitiveness.

Nicaragua has a programme that provides support to young people in poor rural areas. Some work on their own and others have formed cooperatives to farm agricultural products. They have become more efficient through support from civil society and government, which provide technical skills and knowledge, access to credit and new technology as well as managerial skills.

In an attempt to promote agriculture, Tanzania is also undertaking labour-intensive infrastructure development to tackle the rise in the number of school dropouts migrating from rural to urban areas in search of work. The government promotes labour-intensive infrastructure development for youth groups undertaking agricultural activities in green belts around urban centres to absorb unemployed youth. Among other initiatives, the government offers tax relief on agricultural tools and machinery and supports young people in land ownership by allocating areas for youth infrastructure development and enacting laws to protect the youth from discrimination in leasing land.

Source: United Nations Secretariat, 2007

One example of a country with a targeted rural youth employment programme and a specific focus on youth and agriculture is Ethiopia, where high level encouragement and support is given to young farmers, including the creation of model farmers (Siay, 2011). Such efforts, together with enabling the building up of small-farm assets, are considered to be key to creating a new confidence in the sector and encouraging society to value small-scale agriculture as a viable livelihood.

In South Africa the priority to create jobs for the rural youth has reached a high political profile and a comprehensive programme is now in place through the National Rural Youth Service Corps (NARYSC). This is supported through the Department of Rural Development and Land Reform to secure jobs for up to 10,000 rural youth, including jobs in the agriculture sector.

Building agriculture skills for the labour market

A situation analysis of youth employment in Ghana and Senegal identified sectors with the highest employment potential (YEN and International Youth Foundation, 2009). For Ghana these are agriculture, business process outsourcing, and banking and other financial services. For Senegal these are construction, business process outsourcing, agriculture, and import-export and security services. The study provides a detailed analysis of the business sector needs and skills requirements for each sector. Such studies are essential guides to inform sector-based youth employment enabling policies and intervention. In the case of agriculture the importance of entrepreneurial and business skills and marketing techniques were noted.

The need to combine life and rural skills including agriculture

The work of FAO on Junior Farmer Field and Life School (JFFLS)¹⁷ is gaining momentum, primarily although not exclusively in Africa. It seeks to develop youth and combine life and agricultural skills. Projects for promoting employment opportunities and entrepreneurship for rural youth through the JFFLS and the creation of youth farmers' cooperatives are being taken forward in Gaza and the West Bank, Honduras, Kenya and Uganda.

Only one initiative of the Youth Employment Network for West Africa (YEN-WA), which is dedicated to promoting the involvement of business in programmes for youth employment, is focused specifically on agriculture. This is the Child Labor Alternatives through Sustainable Systems in Education in Cote d'Ivoire (YEN-WA, undated).

Build young entrepreneurs in the agrifood sector

However, as part of the Youth Employment Network for West Africa (YEN-WA) some multi-sectoral programmes do seek to build capacity of young entrepreneurs in agribusiness, including in fresh produce exports, quality assurance services and agriprocessing (YEN-WA, undated).

Of the relatively few agencies with a focus on small-scale agriculture and rural youth, the Inter-American Development Bank (IADB), has shown some innovation in its programming. One example is the IADB loan entitled 'Innovative intervention models for the coffee sector' agreed with the Government of Colombia (CO-L1009). The goal is to make Colombian coffee growers more competitive through the adoption of sustainable institutional intervention models to improve access to productive resources, particularly for young farmers, and to attract resources to Colombia's coffee-growing sector. The project's intervention models consist of a series of attributes geared to young people with business aptitude, so as to allow them to resolve weaknesses in the factor markets and provide access to and secure resources for the coffee sector, thus increasing productivity. A second example is the IADB rural youth training programme in Paraguay (1997–2001 project TC-96-03-16-0), which promoted the participation of rural young people in the labour and production markets: specifically to hone the skills of those aged 15 to 30; improve the non-formal rural training that the training institutions offered; and to encourage a sharing of information about improved farming techniques and labour training opportunities in rural areas.

IFAD has also supported some innovative programmes with an emphasis on building youth opportunities. These include work in Madagascar on rural youth income diversification and promotion of entrepreneurship; agro-processing and high-value exports in Egypt and youth enterprise in agricultural marketing in Syria; and microfinance and training in order to start a variety of agricultural and rural enterprises for 100,000 returned migrant workers in Chongqing Province, China (Bennell, 2010).

The Youth Entrepreneurship Facility¹⁸ is an initiative to unleash African entrepreneurship through collaboration between the Africa Commission, the Youth Employment Network (YEN) and the International Labour Organization (ILO). The Facility aims to create additional jobs in East Africa (in the first instance in Tanzania, Kenya and Uganda) through youth entrepreneurship development. Its main components are the promotion of an enterprise culture, entrepreneurship education and training, access to business development and

¹⁷ http://www.fao.org/bestpractices/content/11/11_04_en.htm

¹⁸ <http://www.yefafrika.org>

affordable financial services. The Facility manages a Youth-to-Youth Fund, which is a competitive grant and capacity-building scheme that invites young women and men to propose and deliver innovative entrepreneurship solutions to youth employment challenges in their communities. It is encouraging to note that a high proportion of the grants issued to date have focused on higher value and value addition in agriculture and agribusiness including vegetable gardening, prawn farming and crab fattening, honey and lemongrass production and marketing, and agribusiness value chain development.

In Kenya, like-minded youth with a common interest may register with the Ministry of Social Service as a group with defined share holdings. Kenya's Ministry of Youth has established a Youth Development Fund that offers seed funding to registered groups against a business plan (T. Apina, pers. comm., 18 April 2011). Some groups venture into agriculture and agribusiness. An impact assessment has yet to be done on the economic sustainability of such youth enterprise initiatives.

Formal education and skills training for the labour market

Improved educational outcomes are clearly needed to ensure that young people can acquire the educational qualifications needed to secure more productive employment. More detailed country-level studies are also needed to help inform the development of appropriate labour market policies and associated educational and skills requirements to reduce poverty among young workers and address the relative disadvantage of youth versus their adult counterparts in terms of the incidence of working poverty (ILO, 2010a).

In India the Employment Generation and Marketing Mission (EGMM), a programme undertaken in Andhra Pradesh and supported by the World Bank, seeks to upgrade the skills of rural male and female youth, matching this training with specific gaps in the labour markets. However, few gaps have been identified in the agriculture sector although the modern food retail sector, including fast food, is expanding and offering employment opportunities (Shenoy *et al.*, 2010).

Universities are increasingly supporting agribusiness incubation. One such example is the Center for Agricultural Policy and Agribusiness Studies (CAPAS), Padjadjaran University, Indonesia, where graduate programmes combine formal training with support to agribusiness incubation. Examples of such agribusiness include organic stores, speciality coffee, specialised catering for health products, and some interest is expressed in bridging linkages between farmers and exporters (R. S. Natawidjaja, pers. comm., 21 March 2011).

6 Policy implications

While progress has been made in lifting millions out of poverty and in improving the nutritional and health of many rural populations, business as usual in a stepwise manner will almost certainly not be enough to make the changes necessary for the next generation. ‘The rapid change taking place within the rural economies of developing and emerging economy countries is a process unparalleled in history, whether in scale, speed or potential consequences for humanity as a whole, and this context is creating conditions of enormous risk and vulnerability for rural people as well as new opportunities which are emerging linked for example to renewable energy, provision of environmental services or food production’ (International Conference, 2010).

Observations on demographic change and trends on rural transformation must inform a rethink in public policy to minimise risk and take advantage of opportunities. The facts that: there are some 500 million small-scale farmers in developing and emerging economy countries; agriculture is a major source of livelihood and employment and certainly will remain so for the next generation; locally and globally the demands for food and food security will continue to rise; and in sheer numbers the youth population including the rural youth in these regions is the largest it has ever been and probably ever will be, affirm the need to revisit the role of small-scale agriculture for food security, livelihood provision and employment for this generation and the next.

The following outlines some of the key issues for policy consideration and identifies some knowledge gaps.

6.1 Small-scale farming and youth within the framework of wider economic transformation

Policies for agriculture, including small-scale farming, should be set within an understanding of demographics as well as longer term national economic and societal transformation. In a given country context the changes in the scale and nature of farming are inextricably linked to changes in the rural economy, and indeed in the national economy. Small-scale agriculture can be both a driver and be driven by other change factors. Any discourse on small-scale agriculture and today’s generation of young people and the farmers of the future, are inextricably linked to wider transformative processes.

Rural development in rapidly changing economy countries requires deliberate investment in rural social and economic infrastructure with particular attention being given to the sequencing of priorities. While the centrality of ensuring food security, accelerating agricultural development, and securing a relevant role and opportunities for small-scale producers and family farmers in national and global value chains must remain key, the agro-sectoral rural lens of the past needs to be replaced by a place-based lens that recognises interconnections between places at national and global levels (International Conference on rural transformation, 2010) including linking with small towns and intermediate cities.

It is also necessary to emphasise that history, for example that of Europe, cannot serve as the model for developing and emerging economy countries, which are today so heavily populated by small-scale farmers. The European transition involved the reduction of the agricultural workforce from 60 to 3 per cent of the total population over a period of a century and in a context in which the transition was able to take place without any real emergence of

structural unemployment (Rouillé D'Orfeuil, 2010). In general such combinations of conditions do not exist in the developing and emerging economy countries. It is pertinent to quote from a working paper tabled at the recent ILO 12th Africa regional meeting: 'many, if not most, economies in sub-Saharan Africa, have seen the persistence of a moderately sized manufacturing sector that has not managed to play the role of a leading sector in terms of productive employment generation. Instead, the service sector has played a major role in employment creation. Past policies have also entailed benign neglect of the agricultural sector. Rather than bemoaning the phenomenon of de-industrialisation, one needs to find pathways to durable and productive job creation in Africa that do not necessarily conform to standard models of industrial development and structural transformation'(ILO, 2011d).

Keeping the wider rural change and transformation debate centre stage in discussions on farming futures remains a challenge in many developing and emerging economy countries and within the international development discourse. Policy and institutional preferences continue to focus on a sectoral approach that is often weakly interlinked spatially, i.e. at local (municipal), sub-national and national levels to include urban–rural linkages; and across sectors, including economic and social sectors. Policies are required that address some of the gaps in sector-based thinking. These might include, for example, the interaction between small-scale agriculture and value chain development and labour markets; the interaction between farm and non-farm employment; and the interaction between rural-based labour markets and skills requirements and development. While the World Bank's Renewed Strategy for Rural Development (World Bank, 2001) brought together the interaction of factors which enable change in rural space, the recent crises in food and agriculture and the implications of climate change have refocused efforts on agriculture and food (including the World Development Report 2008 (WB, 2007); FAO, 2009a; IAASTD, 2009; Nelson *et al.*, 2010; Government Office for Science (UK), 2011; and Oxfam, 2011). While these highlight a number of entry points for action for food and agriculture with an increased focus on the questions of climate change and sustainability (Nelson *et al.*, 2010; Government Office for Science (UK), 2011), the reviews themselves may not adequately take into account the wider economic and societal changes taking place in rural areas, including those within the small-scale farming sector and the need for a longer term vision of rural change.

The 2010 IFAD Rural Poverty Report revisited the wider rural development debate. IFAD acknowledges the need for a broad approach to rural growth and provide a coherent set of entry points for action that also give priority focus to the needs of youth in such areas as skills development and capacity building. This approach moves towards answering the call for greater coherence and longer term planning for rural transformation as articulated at the International Conference (2010). There remains scope to widen this debate further.

6.2 Call for a new debate on the future of small-scale farming and agriculture

In general the prevailing debate on farming and the role of small-scale agriculture is dominated by the current status and by a focus on production. Attention must be given to the future and to alternative scenarios, which take into account the sheer numbers of small-scale farmers, their heterogeneity, and population dynamics. Business as usual, which assumes that by broad-based 'one-size-fits-all' interventions an adequate livelihood for the majority of small-scale farmers can be secured, is potentially misguided. Critical choices for differentiated groups of small-scale farmers need to be made to enable rural transformation to take place over the coming decades while minimising risk to food security and livelihoods.

Such choices need to acknowledge trade-offs and address potential negative consequences. Within a given country, informed public debate about the development paths open is needed.

Alternative visions for small-scale farming offering viable livelihoods, valued by society and contributing to national and global food security and the management the world's natural resource base, are required. This must include an understanding of the heterogeneity of small-scale farming and their trajectories within a framework of rural and intergenerational change.

The urgency of addressing these challenges cannot be over-emphasised. The sheer number of young people in parts of Asia and sub-Saharan Africa means that alternative options outside agriculture are simply unavailable today and for a generation to come at the scale required. Youth will walk away from the drudgery of agriculture unless and until farming can become more attractive – with the associated implications on unemployment and under-employment. The imperative to develop new approaches, including new investments in agriculture that can contribute to absorption of such levels of rural and indeed urban youth and provide a decent livelihood, cannot be under-estimated.

Prerequisite is that alternative visions should evolve through inclusive and informed national debate and that long-term choices be set within wider rural and national economic development and transformation. Given the short- and long-term impacts – in particular societal – associated with choices, clear elaboration of the issues in an informed public debate about the development paths open within a given country, is needed. Projections of future population growth and the scope for employment generation in the non-agricultural economy, including the pace and nature of urbanisation and rural-to-urban migration, will be essential elements in helping to inform stakeholders and to map out future scenarios for the evolution of farm sizes and associated farm investment. The voice of the farming and rural communities including that of the youth must be at the centre of the debate on rural transformation and the scale and nature of farming.

Heterogeneity of small-scale agriculture needs to be better codified if it is to be useful for the purpose of designing and implementing development strategies, policies and programmes. Section 3 outlined a simplification of the heterogeneity of smallholder agriculture for Latin America (Berdegué and Fuentealba, forthcoming). Alternative small-scale farming scenarios might further include:

- small-scale farming becoming a part-time occupation or one of a number of income sources for the household;
- the small-scale farmer increasing in scale and productivity, and becoming an entrepreneur, linked to secure and dynamic value chains to secure a decent livelihood for the household;
- an innovative mix of large- and small-scale farming, with effective regulation or mechanisms for conflict mitigation and resolution that secure small-scale farmers' rights within a dual system;
- small-scale farms getting smaller and offering very little in terms of income and ceasing to be viable as income contributors to the household.

On-farm activity at some level is likely to remain for many an essential part of the household safety net in terms of food security. However, such farmers with no or limited alternative sources of off-farm income will become increasingly dependent on social transfers.

In most countries and locations there will be a mix of farm types influenced by many factors, including access to assets, access to markets, location, crop type and alternative labour opportunities. The challenge is how the mix is managed over time and how public policy and intervention and private sector strategy and practice influence the outcomes. New institutional arrangements, which enable, for example, broad-based ownership of small and medium-size farms (possibly larger than those currently operated and expanding over time) or a dual structure where large-scale farms co-exist with many small-scale producers, may be required. Specific and focused programmes that enable youth to engage with agriculture set within this wider transformative process of change in agriculture must be given new priority.

Shared learning at all levels to accompany such processes is required. This should include innovation within the small-scale farm sector, for example, where youth have been able to secure a decent livelihood. This should be evidence based and include key factors that enable different models to work in order to inform public policy and private sector support.

Finally there is a need to understand and monitor who are the winners and losers within a process of change, and to assess social and economic risks and implications.

6.3 Agriculture and the agrifood sector offers new opportunities for youth employment

Labour statistics and policies need to look more critically at the agriculture sector and the nature and type of employment generated. Further, given the changing dynamics of the agrifood markets domestically and internationally including increased value addition within the food chain and agri-processing, more detailed studies are required of the associated labour markets, the current and future opportunities, trends and most particularly the labour skill requirements and gaps.

Labour market studies and associated labour market policies and programmes to support enterprise development rarely give explicit focus to the agriculture sector despite the level of employment generated by the sector. This needs to be rectified.

As the farm profile changes over time and new institutional arrangements are established, new and different employment opportunities within the agriculture sector will arise. These may include greater business and technical professionalisation within farming including the small-scale sector, growth and expansion of new farming institutional arrangements including cooperatives, and new input providers including in seeds and agrochemicals, pest and disease management, veterinary services, irrigation and protected agriculture, financial services, etc. These rural enterprises offer new potential sources of employment. Increased effort is required to understand the labour market needs of an increasingly professionalised agriculture sector and optimise on the employment opportunities that will come about.

Modernisation of agrifood value chains including the growth of modern retail, growth of regional and south–south trade in agricultural and food products offer many opportunities for business development and employment both directly within all stages of the value chain and indirectly such as in input supplies, transport, storage, packaging, financial services, quality assurance auditing, etc. The demand for skills in these changing and dynamic markets offers employment opportunities in both rural and urban areas. Detailed studies of these labour markets are required, their current and future opportunities, and the labour skills requirements.

Appropriate technical, vocational and apprenticeships training should be developed and made accessible to enable the youth to take up both formal and self-employment opportunities in the agriculture and agrifood sector.

6.4 Maintain political commitment and adequate funding for rural transformation and agriculture

Coordinated funding is a prerequisite to support rural transformation that places agriculture central to rural change yet recognises the interconnections between economic and social sectors and rural and urban space, as well as the demographic trends and their implications.

There are now signs that funding support to developing and emerging economy country agriculture may now be increasing. Agriculture's share of ODA is increasing, having declined steeply from 18 per cent in 1979 to 3.5 per cent in 2004 (World Bank, 2007), although it is still a low percentage of total development assistance. In many countries, development assistance is matched by new commitments from governments. The Maputo Declaration in 2003, for example, committed all member countries of the African Union to increase the share of agriculture in national budgets to at least 10 per cent. Donors are held to account against the L'Aquila commitments of July 2009 to invest in agriculture and food security, and the 2010 Copenhagen commitments to invest in climate change adaptation. Further country level coordination among development partners has improved, building on the Paris Declaration¹⁹ and the Accra Agenda for Action²⁰.

While this is welcome support to the agriculture sector, it must be taken forward within a framework that includes funding and institutional support to wider rural transformation as well as a longer term vision and debate on the scale and nature of farming. To focus investment on the status quo without a longer term rural vision and a broad national consensus on alternative models in which the different scales of farming can evolve, may be short-sighted and may not deliver the desired outcomes into the medium and long term.

6.5 Put rural youth high on the policy agenda

While acknowledging that issues of youth and youth employment are rising up the international policy agenda, there remains a low level of policy and investment intervention that focuses explicitly on rural youth and on youth employment opportunities in the agriculture and agribusiness sectors. This needs to be rectified. Both IFAD and FAO have recently reflected upon potential entry points and these can be built upon. The work of ILO through the Youth Employment Network could be encouraged to clearly benchmark rural youth within their programme.

Youth issues are gaining prominence on the political and development agendas, however issues relating to rural youth and in particular those engaged with small-scale farming and agrifood chains, are not adequately addressed. Although it is noteworthy that the 2011 Ministerial Declaration of the G20 agriculture ministers on the action plan on food price volatility and agriculture states: 'we commit ourselves to implementing a broad scope of

¹⁹ The Paris Declaration (2005) lays out a practical, action-oriented roadmap to improve the quality of aid and its impact on development. It puts in place a series of specific implementation measures and establishes a monitoring system to assess progress and ensure that donors and recipients hold each other accountable for their commitments.

²⁰ Designed to strengthen and deepen implementation of the Paris Declaration, the Accra Agenda for Action (2008) takes stock of progress and sets the agenda for accelerated advancement towards the Paris targets.

actions to boost agricultural growth. In this whole range of actions, we will give special attention to smallholders, especially women and young farmers, in particular in developing countries.²¹

Youth employment is now an integral part of the Millennium Declaration, as an important target in its own right in the Millennium Development Goals (MDGs): Target 1B ‘to achieve full and productive employment and decent work for all including women and young people’. Youth employment is therefore rising up the political agenda. In Africa, for example, the African Union has declared a Decade on Youth Development in Africa 2009–2019. Key reviews inform the debate, for example on youth in Africa (Africa Commission, 2000; UNECA, 2009), the various reports by ILO on youth (ILO, 2010a), region-specific reports of the ILO such as that on youth in Latin America (2010c) and of ADB (2008) on youth in Asia. The World Development Report 2007 (World Bank, 2006) provides a detailed analysis of development and the next generation. Yet, with the exception of the Secretariat of the Pacific Community (SPC) (2010), few of these reports specifically address the issues of youth in agriculture.

It is noteworthy that in a review of 12 Poverty Reduction Strategy Papers prepared by African countries, only two singled out youth as a special group in mainstream employment, and, even in these exceptional cases, urban youth is considered of greater concern than rural youth (Bennell, 2010). In Africa, the Comprehensive Africa Agriculture Development Programme (CAADP) process provides a unique opportunity to promote youth employment programmes in Africa, in particular in the agriculture sector.

The United Nations General Assembly encourages all United Nations Member States to prepare a National Review and Action Plan on Youth Employment. Forty-one countries (globally) submitted National Action Plans or progress reports on youth employment, demonstrating a genuine commitment and the resolve to tackle the complex challenges that young people face (United Nations Secretariat, 2007). The Lead Country Network of the Youth Employment Network (YEN), a joint policy response of the UN, the World Bank and the ILO, seeks to improve employment opportunities for young people. The goal of the network is to identify benchmarks for successful youth employment initiatives that can be shared and replicated in peer lead countries. Currently, there are 21 YEN lead countries, all of which have developed comprehensive national action plans for youth employment. In general, the agriculture sector is not given the profile that is warranted, given the scale of youth engaged in the sector, although some country action plans, for example, those of Pakistan and the Syrian Arab Republic, do present explicit rural enterprise development initiatives.

In February 2011, during the Thirty-fourth session of IFAD’s Governing Council, a high-level panel discussed key issues affecting rural young women and men in smallholder agriculture, and in the rural economy more broadly (IFAD, 2011a-c). They considered the reasons, and possible solutions, for the relative neglect of young people – men and women – in national agricultural programmes. In particular, IFAD explored how innovative and dynamic partnerships between local and international, and private and public, actors could be created to provide opportunities for the next generation of smallholder agriculturalists to participate at different levels of global value chains, and to promote a fairer global trading system.

²¹ http://agriculture.gouv.fr/IMG/pdf/2011-06-23_-_Action_Plan_-_VFinale.pdf

The FAO (2011, in preparation) recognises the importance of the informal sector and self-employment for youth and calls for specific interventions to promote rural youth employment directly around the development of self-employment options and small business creation. It is noted that the promotion of self-employment is at least potentially contradictory to the decent work framework and is certainly explicitly contrary to the aim of reducing ‘vulnerable’ employment. The authors consider possible ways out of this apparent impasse which include: supporting the development of value chains and, more generally, non-farm employment for rural youth; developing programmes aimed at expanding agriculture-based enterprises; and supporting the development of production-related youth organisations and cooperatives.

The recent joint proposal between the African Union (AU), Economic Commission for Africa (ECA), African Development Bank (AfDB) and ILO to boost youth employment in Africa through a ‘Joint initiative on job creation for youth in Africa’ (ILO, 2011e) offers a potential turning point for enhanced focus on the issue in Africa.

6.6 Reinforce and foster the private sector as champions for small-scale agriculture and youth in agriculture

National and international agribusinesses are increasingly recognising the role of small-scale farmers as valued business partners. Given the sheer numbers of small-scale farmers and the important role that small-scale agriculture will continue to play in national and global food supply and in livelihood security and employment, the role of the private sector needs to be further enabled through public policy. The private sector can play a key role in support of new business models that enable the expansion of rural and urban jobs and provide information of skills gaps and labour market needs, and direct support to capacity development. Farmers organisations themselves have a key role to play in contributing to the debate on the future of small-scale agriculture and the role of youth as the next generation of farmers – the debate which engages the voice of the farmer and the youth needs to be fostered.

The private corporate sector sees both business opportunities and corporate social responsibility considerations in their business plans as they relate to the small-scale farm sector. Pfitzer *et al.* (2009) reviewed the activities of agricultural input companies and their foundations, and the extent to which these companies have seized the opportunity to support the transformation of the small-scale farm sector. They reported some encouraging, albeit partial, developments whereby some companies were increasing their investment in support of the smallholder sector, including leveraging technology and expertise. The authors call, among other things, for more targeted ‘visions for change’ around specific smallholder regions to leverage technology and expertise and for greater learning and dialogue by the business sector to enhance their leverage potential.

The World Economic Forum 2011 presented a roadmap for ‘Realising a New Vision for Agriculture’ (World Economic Forum, 2010), which was the outcome of an 18-month process involving global and regional stakeholders. The initiative is led by 17 global companies that are Industry Partners of the Forum. To advance their vision, a roadmap outlines a framework for action to implement business-led and market-based solutions that are explicitly linked to national development priorities. The roadmap carries a key message that the private sector is ready to be a partner and driver of solutions for sustainable agriculture and commits to pushing forward real collaboration between the public and private sectors to advance smallholder farmers in developing countries. However, the authors note

that the private sector cannot accomplish these goals alone and that partnership among stakeholders and effective government leadership in particular, are critical to success. Within these debates there has been little focus explicitly on youth and on intergenerational change in farming.

Governments, working with industry, must put in place the necessary checks and balances and indeed incentives to enable the modernisation of agribusiness set within a clear framework which articulates the nature of farming including the role of the small-scale farmer intergenerationally. Even with the current number of small-scale farmers, the pace at which the opening-up of markets, globalisation, and regional and bilateral trade agreements is taking place is faster than the pace of policy interventions to enable small-scale farmers to compete. Efforts to level the playing field to enable small-scale producers to catch up and secure a decent livelihood, and to enable new business models for better productivity and market inclusion to be tested and embedded within the value chains, may now be too little and too late. This shortfall requires priority support involving close engagement with all stakeholders, in particular the private sector.

The past decade has seen a welcome growth in engagement of farmer organisations', leading and contributing to the policy and planning debate. Regional farmer organisations have a key role to play in shaping the wider agenda and in supporting shared learning between countries and regions. Such organisations should be central to future debates on intergenerational change in smallholder agriculture. The World Farmers' Organisation (WFO) formed in 2011 seeks to 'bring together national agricultural producer organisations and agricultural producer cooperative organisations to create policies and advocate on world farmers' behalf, in order to improve the economic situation and livelihood of producers, their families and rural communities'. Social movements, most notably *La Via Campesina*, are playing an increasing role in national and international policy debates on the future of small-scale agriculture, and thus intergenerational change.

At the international level and with a focus on small-scale farmers and their organisations, IFAD every two years hosts a farmers' forum. This offers a bottom-up process of consultation and dialogue between small-scale farmers and rural producers' organisations, IFAD, and governments, focused on rural development and poverty reduction. While such platforms and processes, all in their own way, contribute to policy thinking, still relatively little attention has been given to the longer term vision of farming, or to the future of youth and the next generation of farmers.

6.7 Generate evidence and monitor change over time to inform policy

Any debate on the future of small-scale agriculture, and on who will be the next generation of farmers into the longer term, must be informed by evidence. This paper has identified a number of gaps in data, some of which are beginning to be filled through the work of, for example, the ILO, WB and FAO. The lack of quantitative data on small-scale farming, rural labour markets, and on the contribution made by small-scale family farms in national and global food systems, and their critical role in household food security, should be a cause for concern.

Despite the importance of agriculture in developing and emerging economy countries, agricultural statistics systems in many countries, particularly those in Africa, are among the weakest components of national statistical systems. Specifically, most data sets are

production orientated and there is a general lack of information and data on numbers of and types of farms, on agricultural and rural households and their characteristics, and a weak capacity to link the welfare and income of the different types of rural and agricultural households with agricultural production. The World Bank (2011) notes the need for coverage of agricultural statistics to be as comprehensive as possible, and calls for a more comprehensive inclusion of, for example, farm units based on size, importance, location or other criteria. This is particularly relevant to the smallholder sector where smaller plots may be under-represented in agricultural statistics. Further current FAO figures on agricultural population (FAOSTAT) do not provide a breakdown by age groups, adding to the difficulty of monitoring change over time.

A global strategy to improve agricultural and rural statistics has been developed (World Bank, 2011) and an action plan recently agreed (FAO, 2011). This will go some way to improve the generation of evidence to inform policy including through the integration of agriculture into the national statistical system by bringing together the multiple organisations that produce agricultural and rural statistics. Integrated household surveys and panels have been and continue to be critical to complement such statistics.

Datasets on rural labour statistics in the context of national development and decent work are also limited. The ILO database does not provide age group breakdown for labour statistics in the agriculture sector. Furthermore, it does not make a distinction between rural and urban areas. One of the recent ILO priorities is to develop the rural dimension and strengthen capacity building for rural data collection systems and to develop methodologies for regular surveys (ILO, undated). The recent initiative to strengthen rural statistics will go some way towards rectifying the information shortfall (ILO, 2011c). Additionally, the United Nations Department of Economic and Social Affairs in its World Urbanisation Prospect do not publish estimates and projections on rural youth figures. Only rural population (all ages) and youth total (rural and urban) data are available, thus limiting an understanding of the profile and trend on rural youth populations.

Such data need to be enriched with survey work such as attitudinal studies on how rural youth are making key livelihood choices, their behaviours and characteristics including participation on formal institutions such as cooperatives, their use of modern technologies (mobile, internet, etc.), and their access to finance, education and services. This will help to inform where public and private sector interventions are best needed to foster and enable young people to take up a working life in agriculture and in employment along the agrifood chain should these be the paths of future livelihood choice.

Empirically based case studies on the dynamics of change and the innovations adopted by youth are essential to enrich the policy debate and to provide signals on how to create incentives to enhance beneficial multiplier effects. Once generated, effective means for sharing case studies and learning between countries and with key interest groups need to be put in place.

Finally, there is a need to monitor change in the nature of the small-scale farmer. These include the age profile over time in the different contexts, such as those of market and climate change, as well as the differential impacts of policy change on livelihoods of small-scale farmers in order to inform policy and make necessary adjustments. Here again, there is limited capacity at present.

Initiatives that can contribute to such monitoring and reflection need to be drawn together within a framework in which policymakers, development partners, academics, civil society organisations and farmer organisations can learn, debate, reflect and act. The World Agriculture Watch (WAW)²² is one such initiative that should play a key evidence gathering and monitoring role. The ongoing Living Standards Measurement Study-Integrated Surveys on Agriculture (LSMS-ISA) project and the FAO RIGA can contribute significantly to the evidence base as can the empirical research studies of, for example, the *Afrint* and RuralStruc programmes and the work of Michigan State University and IFPRI in Africa. There is also a clear case for drawing out relevant data from the LSMS more systematically.

Looking to the future and to efforts to build alternative scenarios, the trajectory of each farming scenario needs to be worked through to ensure it meets the aspirations of the next generation of farmers, provides national and global food security, and ensures the future of the rural economy. Policies and interventions, accompanied by monitoring mechanisms are needed to support proactively the desired transformations and to mitigate any negative consequences that might arise from the alternative paths selected.

6.8 Concluding remarks

The challenge now is to initiate action and strengthen collaborative efforts that bring together the disparate lines of thinking and policy discourse and to enhance the knowledge base on youth and farming in an era of rapid change. This must include the need to develop clear evidence-based country-specific strategies for the future of small-scale farming built on inclusive debate on agricultural pathways and long-term choices. Such strategies and their associated investments must meet the wider societal aims of effective rural transformation including providing a decent livelihood and food security for this generation of youth and for future generations.

Given the present and anticipated future role of agriculture in employment and the sheer number of youth in rural areas today and anticipated into the future, new models to enhance decent employment and livelihood in the agriculture sector must be developed, including support to employment opportunities along the entire agrifood market chain and the associated service sectors. These models will require supportive policy and new investments including through public–private sector partnerships.

The voices of farmers including the small-scale farmer, of rural youth and of the private sector must remain central to any dialogue and policy process.

²² World Agriculture Watch (WAW), monitoring structural changes in agriculture, and informing policy dialogue based in UNFAO, was launched in October 2011 <http://www.agriobs.org/> It builds upon the earlier work of Observatoire des Agricultures du Monde (OAM) <http://www.cirad.bf/fr/oam.php>

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Annex 2 Notes on databases used and definitions

Quantitative data for this study are derived from a range of sources including the following global databases.

The 2010 Revision of the World Population Prospects

The UN on-line database of *The 2010 Revision of the World Population Prospects*, which includes the most recent global demographic estimates and projections undertaken by the Population Division of the United Nations Department of Economic and Social Affairs of the United Nations Secretariat.

<http://esa.un.org/unpd/wpp/index.htm>

‘Population’ is de facto population in a country, area or region as of 1 July of the year indicated. Medium variant estimates have been selected. Two indicators have been analysed: ‘Total population’ and ‘Population aged 15–24.’

The 2009 Revision of the World Urbanization Prospects

The UN on-line database of *The 2009 Revision of the World Urbanization Prospects* for urban and rural population, which includes the most recent estimates and projections of the urban and rural populations of all countries in the world and of their major urban agglomerations.

<http://esa.un.org/unpd/wup/index.htm>

‘Urban population’ is de facto population living in areas classified as urban according to the criteria used by each area or country. Data refer to 1 July of the year indicated.

‘Rural population’ is de facto population living in areas classified as rural (that is the difference between the total population of a country and its urban population). Data refer to 1 July of the year indicated.

Medium variant estimates have been selected.

FAOSTAT

The *FAOSTAT* on-line database of the Statistic Division of the Food and Agriculture Organization of the UN provides time-series and cross-sectional data relating to food and agriculture for some 200 countries. It has been exploited for figures on agriculture population (both estimates and projections) and agriculture area (FAOSTAT database is available on <http://faostat.fao.org/> and FAO definitions on <http://faostat.fao.org/site/375/default.aspx>).

According to FAO definition, agriculture population is defined as ‘all persons depending for their livelihood on agriculture, hunting, fishing and forestry. It comprises all persons economically active in agriculture as well as their non-working dependents. It is not necessary that this referred population exclusively come from rural population.’

Data for ‘agricultural area’ does not mean the amount of land that is potentially cultivable but what is actually cultivated.

2000 World Census of Agriculture

The FAO *2000 World Census of Agriculture* (FAO, 2010) dataset includes the main results and information from 114 countries on structure of agriculture at country level based on the agricultural censuses conducted at national levels from 1996 to 2005.

Indicators such as ‘agricultural area’ and ‘number of holdings’ have in particular been analysed for the present study. Specific efforts have been made by the FAO Statistics Division to standardise the data of this dataset so as to make them suitable for international comparisons. However, international comparisons remain difficult due to differences in scope, coverage, or design (including conceptual difference in definition of holdings/farms) of the different agriculture censuses, which are primarily planned to meet the national requirements.

LABORSTA

The *LABORSTA* on-line database operated by the Department of Statistics of the International Labour Office (ILO) presenting labour statistics of over 200 countries. Employment and economically active population figures have been analysed in particular for the agriculture sector and for young and adult population (<http://laborsta.ilo.org>).

According to ILO, ‘Employment’ refers to ‘all persons above a specific age who during a specified brief period, either one week or one day, were in the following categories: paid employment and self-employment’.

‘Unemployment’ is defined as ‘all persons above a specified age who during the reference period were: *without work*, i.e. were not in paid employment or self-employment, *currently available for work*, i.e. were available for paid employment or self-employment during the reference period; and *seeking work*’.

The ‘economically active population’ comprises ‘all persons of either sex who furnish the supply of labour for the production of goods and services during a specified time-reference period.’

ILO Rural Labour statistics dataset

The *ILO Rural Labour statistics dataset* is a recent initiative of ILO Department of Statistics to prepare an international dataset on the rural dimension of labour statistics topics that are available internationally. The dataset includes, at the time of writing, only selected countries. The data analysed for this study are ‘Rural Economic Active Population’ and ‘Rural Unemployment’ as subsets of total employment data according to the above ILO definitions and covering exclusively rural areas. Youth defined as 19–24-year-olds is considered in the dataset.

<http://www.ilo.org/stat/lang--en/index.htm>

World Development Indicators

The World Bank's dataset *World Development Indicators* (WDI) provides a comprehensive database from officially recognised international sources including current wide-ranging global development data on people, the economy, the environment, states and markets.

<http://data.worldbank.org/data-catalog/world-development-indicators>

Annex 3 Tables

Table A1 World population trends 1960–2010 and projections to 2100 (thousands), percentage of world population and change 2010–2050

Major Areas	1960		1990		2010		2020		2050		2100		Change 2010–2050
Asia and the Pacific	1 656 613	55%	3 077 873	58%	3 968 850	58%	4 330 189	57%	4 802 087	52%	4 179 018	41%	21%
Eastern Asia	801 489	26%	1 359 149	26%	1 573 970	23%	1 622 681	21%	1 511 963	16%	1 122 895	11%	-4%
South-Central Asia	620 016	20%	1 246 396	23%	1 764 872	26%	2 009 512	26%	2 475 684	27%	2 288 981	23%	40%
South-Eastern Asia	219 336	7%	445 361	8%	593 415	9%	655 940	9%	759 207	8%	701 323	7%	28%
Oceania	15 773	1%	26 967	1%	36 593	1%	42 056	1%	55 233	1%	65 819	1%	51%
Sub-Saharan Africa	219 235	7%	489 099	9%	812 775	12%	1 033 893	14%	1 869 141	20%	3 230 429	32%	130%
Eastern Africa	81 887	3%	192 801	4%	324 044	5%	418 637	5%	779 613	8%	1 414 284	14%	141%
Middle Africa	32 013	1%	71 676	1%	126 689	2%	161 689	2%	278 350	3%	396 869	4%	120%
Southern Africa	19 724	1%	42 093	1%	57 780	1%	61 187	1%	67 327	1%	65 369	1%	17%
Western Africa	85 611	3%	182 529	3%	304 261	4%	392 379	5%	743 850	8%	1 353 906	13%	144%
Middle East and North Africa	134 335	4%	294 763	6%	441 454	6%	521 693	7%	717 825	8%	826 738	8%	63%
Middle East	66 841	2%	148 575	3%	231 995	3%	277 387	4%	395 367	4%	483 025	5%	70%
Northern Africa	67 493	2%	146 188	3%	209 459	3%	244 306	3%	322 458	3%	343 712	3%	54%
Latin America and the Caribbean	220 058	7%	443 032	8%	590 082	9%	652 182	9%	750 956	8%	687 517	7%	27%
Caribbean	20 725	1%	34 205	1%	41 646	1%	44 322	1%	47 314	1%	42 464	0%	14%
Central America	51 678	2%	113 249	2%	155 881	2%	176 389	2%	215 569	2%	211 695	2%	38%
South America	147 655	5%	295 577	6%	392 555	6%	431 471	6%	488 073	5%	433 359	4%	24%
Europe and Northern America	808 171	27%	1 001 659	19%	1 082 727	16%	1 118 571	15%	1 166 120	13%	1 201 224	12%	8%
World	3 038 413	100%	5 306 425	100%	6 895 889	100%	7 656 528	100%	9 306 128	100%	10 124 926	100%	35%

Source: Based on United Nations, World Population Prospects, the 2010 Revision

Table A2 Rural population trends 1960–2010 and projections to 2050 (thousands), percentage of total population and change 2010–2050

Major Areas	1960		1990		2010		2020		2050		Change 2010–2050
Asia and the Pacific	1 318 266	80%	2 124 712	69%	2 342 209	59%	2 355 504	54%	1 785 824	37%	-24%
Eastern Asia	620 057	77%	906 166	67%	779 263	50%	699 704	43%	410 607	27%	-47%
South-Central Asia	513 329	83%	910 062	73%	1 209 360	69%	1 295 746	64%	1 097 535	44%	-9%
South-Eastern Asia	179 574	82%	300 595	67%	342 914	58%	348 130	53%	264 749	35%	-23%
Oceania	5 306	34%	7 889	29%	10 671	29%	11 924	28%	12 933	23%	21%
Sub-Saharan Africa	184 868	84%	351 500	72%	516 044	63%	597 029	58%	674 326	36%	31%
Eastern Africa	75 952	93%	158 299	82%	249 992	77%	304 070	73%	373 936	48%	50%
Middle Africa	26 401	82%	49 072	68%	73 318	58%	82 791	51%	86 992	31%	19%
Southern Africa	11 447	58%	21 479	51%	23 947	41%	22 325	36%	15 471	23%	-35%
Western Africa	71 068	83%	122 651	67%	168 787	55%	187 843	48%	197 926	27%	17%
Middle East and North Africa	90 063	67%	141 260	48%	181 898	41%	194 101	37%	169 454	24%	-7%
Middle East	43 005	64%	59 256	40%	77 889	34%	83 877	30%	93 225	24%	20%
North Africa	47 059	70%	82 003	56%	104 009	50%	110 224	45%	76 229	24%	-27%
Latin America and the Caribbean	111 311	51%	131 267	30%	119 892	20%	112 395	17%	81 501	11%	-32%
Caribbean	12 433	60%	15 183	44%	14 034	34%	12 960	29%	8 633	18%	-38%
Central America	27 433	53%	39 411	35%	42 865	27%	42 398	24%	32 330	15%	-25%
South America	71 445	48%	76 673	26%	62 993	16%	57 037	13%	40 537	8%	-36%
Europe and Northern America	321 279	40%	287 120	29%	262 320	24%	239 570	21%	152 998	13%	-42%
World	2 025 787	67%	3 035 859	57%	3 422 362	50%	3 498 599	46%	2 864 103	31%	-16%

Source: Based on United Nations, World Urbanization Prospects, the 2009 and 2010 Revisions

Table A3 Youth population trends 1960–2010 and projections to 2100 (thousands), percentage of total population and change 2010–

Major Areas	1960		1990		2010		2020		2050		2100		Change 2010–2050
Asia and the Pacific	286 194	17%	623 050	20%	716 009	18%	670 205	15%	582 350	12%	452 355	11%	-19%
Eastern Asia	133 976	17%	286 919	21%	253 175	16%	202 632	12%	145 020	10%	120 560	11%	-43%
South-Central Asia	110 825	18%	239 589	19%	347 458	20%	354 927	18%	336 023	14%	247 493	11%	-3%
South-Eastern Asia	39 029	18%	91 872	21%	109 710	18%	106 609	16%	93 972	12%	76 638	11%	-14%
Oceania	2 363	15%	4 670	17%	5 666	15%	6 037	14%	7 335	13%	7 664	12%	29%
Sub-Saharan Africa	40 835	19%	93 733	19%	163 982	20%	206 473	20%	346 506	19%	465 896	14%	111%
Eastern Africa	15 044	18%	37 395	19%	66 728	21%	84 593	20%	144 202	18%	207 715	15%	116%
Middle Africa	5 952	19%	13 342	19%	25 563	20%	33 381	21%	51 863	19%	52 208	13%	103%
Southern Africa	3 543	18%	8 496	20%	11 795	20%	11 520	19%	10 491	16%	7 727	12%	-11%
Western Africa	16 296	19%	34 500	19%	59 896	20%	76 980	20%	139 950	19%	198 247	15%	134%
Middle East and North Africa	23 284	17%	57 165	19%	85 025	19%	88 715	17%	101 297	14%	96 593	12%	19%
Middle East	11 386	17%	28 499	19%	43 671	19%	46 754	17%	56 409	14%	57 613	12%	29%
North Africa	11 898	18%	28 666	20%	41 354	20%	41 961	17%	44 888	14%	38 980	11%	9%
Latin America and the Caribbean	39 079	18%	87 377	20%	106 186	18%	108 263	17%	92 156	12%	73 138	11%	-13%
Caribbean	3 746	18%	6 784	20%	7 313	18%	7 029	16%	5 915	13%	4 583	11%	-19%
Central America	9 190	18%	23 932	21%	29 438	19%	30 658	17%	27 923	13%	22 738	11%	-5%
South America	26 143	18%	56 660	19%	69 436	18%	70 576	16%	58 319	12%	45 817	11%	-16%
Europe and Northern America	119 186	15%	146 411	15%	141 756	13%	124 114	11%	129 621	11%	136 741	11%	-9%
World	508 578	17%	1 007 735	19%	1 212 960	18%	1 197 771	16%	1 251 931	13%	1 224 724	12%	3%

Source: Based on United Nations, World Population Prospects, the 2010 Revision. Youth population refers in this table to 15–24 year olds

Table A4 Rural youth population trends 1960–2010 and projections to 2050 (thousands), percentage of total population and change 2010–2050

Major Areas	1960		1990		2010		2020		2050		Change 2010–2050
Asia	225 481	14%	418 885	14%	417 172	11%	358 328	8%	208 850	4%	-50%
Eastern Asia	104 829	13%	189 083	14%	130 473	8%	88 554	5%	42 443	3%	-67%
South-Central Asia	88 092	14%	168 353	14%	230 401	13%	222 337	11%	140 368	6%	-39%
South-Eastern Asia	32 560	15%	61 449	14%	56 298	9%	47 437	7%	26 039	3%	-54%
Sub-Saharan Africa	33 947	15%	67 805	14%	105 800	13%	121 262	12%	122 832	7%	16%
Eastern Africa	14 102	17%	31 408	16%	51 931	16%	61 413	15%	66 393	9%	28%
Middle Africa	4 923	15%	9 240	13%	15 085	12%	17 705	11%	18 852	7%	25%
Southern Africa	2 062	10%	4 324	10%	4 736	8%	4 057	7%	2 388	4%	-50%
Western Africa	12 860	15%	22 833	13%	34 048	11%	38 087	10%	35 198	5%	3%
Middle East and North Africa	14 678	11%	25 834	9%	34 511	8%	32 637	6%	22 888	3%	-34%
Western Asia	6 429	10%	10 380	7%	14 715	6%	14 704	5%	10 801	3%	-27%
Northern Africa	8 249	12%	15 454	11%	19 797	9%	17 933	7%	12 087	4%	-39%
Latin America and the Caribbean	19 874	9%	25 922	6%	22 049	4%	19 375	3%	10 474	1%	-52%
Caribbean	2 266	11%	2 997	9%	2 452	6%	2 053	5%	1 125	2%	-54%
Central America	4 803	9%	8 368	7%	8 095	5%	7 458	4%	4 176	2%	-48%
South America	12 806	9%	14 558	5%	11 503	3%	9 864	2%	5 173	1%	-55%

Source: Van Geest, 2010 (based on United Nation, World Population Prospects, the 2008 Revision) and authors' calculations

Footnotes: Data for Oceania are not available. Estimations based on population figures for the age group 15–24 and urbanisation rates

Table A5 Agricultural population trends 1980–2010 and projections to 2020 (thousands), percentage of total population and change 1990–2010 and 2000–2010

Major areas	1980		1990		2000		2010		2020		Change 1990– 2010	Change 2000– 2010
	Population (thousands)	% of total population										
Asia and the Pacific	1608073	63%	1819363	57%	1922629	54%	1927115	49%	1888028	44%	6%	0%
Eastern Asia	776328	66%	865683	64%	880850	59%	845539	54%	783123	48%	-2%	-4%
South- Central Asia	613243	62%	701118	56%	777581	51%	819092	46%	834258	42%	17%	5%
South-Eastern Asia	213522	59%	246775	55%	257668	49%	255162	43%	245102	37%	3%	-1%
Oceania	4980	22%	5787	21%	6530	21%	7322	20%	7964	19%	27%	12%
Sub-Saharan Africa	258354	70%	320117	65%	382935	60%	450109	55%	522141	51%	41%	18%
Eastern Africa	120117	84%	156934	81%	195265	78%	237158	73%	283869	68%	51%	21%
Middle Africa	38935	73%	49417	69%	60207	63%	71350	56%	80816	50%	45%	19%
Southern Africa	9304	28%	9627	23%	9099	18%	7868	14%	6548	11%	-18%	-14%
Western Africa	89998	64%	104139	57%	118364	50%	133733	44%	150908	38%	28%	13%
Middle East and North Africa	96624	43%	100379	34%	103128	58%	99415	23%	91315	18%	-1%	-4%
Middle East	36071	32%	37751	25%	39114	21%	36136	16%	31572	11%	-5%	-8%
Northern Africa	60553	54%	62628	43%	64014	36%	63279	30%	59374	24%	1%	-1%
Latin America and the Caribbean	125193	35%	117196	26%	106357	20%	93176	16%	81580	13%	-21%	-12%
Central America	37099	40%	37488	33%	36062	27%	32372	21%	29121	17%	-14%	-10%
Caribbean	9996	34%	10264	30%	9835	26%	9285	22%	8797	20%	-9%	-6%
South America	78098	32%	69444	23%	60460	17%	51519	13%	43662	10%	-26%	-15%
Europe and North America	134173	14%	113410	11%	68667	7%	49293	5%	36092	3%	-57%	-28%
World	2222417	50%	2470465	47%	2571334	42%	2623741	38%	2618437	34%	6%	2%

Source: Based on FAO (FAOSTAT) and United Nations, World Population Prospects, the 2010 Revision

Footnote: Data for South-Central Asia for 1980 and 1990 are authors' estimations

Table A6 Employment and employment share in the agriculture sector

	Employment in agriculture (millions)			Employment shares in agriculture sector (%)		
	1999	2009	Change	1999	2009	Change
Asia and the Pacific	769.8	770.8	0.1%	52.2	44.9	-7.3
Eastern Asia	354.3	299.7	-15%	47.9	36.9	-11.0
South-Eastern Asia and the Pacific	115.8	124.5	8%	49.3	44.3	-5.0
Southern Asia	299.7	346.6	16%	59.5	53.5	-6.0
Sub-Saharan Africa	137.5	175.9	28%	62.4	59.0	-3.4
Latin America and the Caribbean	43.4	41.2	-5%	21.5	16.3	-5.2
Middle East and North Africa	24.5	30.4	24%	25.7	23.5	-2.2
Middle East	10.1	12.0	19%	22.1	19.1	-3.0
North Africa	14.4	18.4	28%	29.2	27.8	-1.4
Developed Economies and EU	24.8	17.5	-29%	5.6	3.7	-1.9
World	1038.9	1068.1	3%	40.2	35.0	-5.2

Source: ILO 2011 and authors' calculations

Footnotes: Employment: All persons above a specific age who during a specified brief period, either one week or one day, were in the following categories: paid employment and self-employment (ILO definition). Key recorded sectors are Agriculture, Industry and Services

Employment shares in agriculture sector (%) for 'Asia and Pacific' and for 'Middle East and North Africa' are calculated as average of the 'sub-regions'

Table A7 Total rural employment and youth rural employment by age cohort in Ghana and Indonesia in 2000

Age	Ghana			Indonesia		
	Rural Economic Active Population	Rural Unemployment	Unemployment Rate	Rural Economic Active Population	Rural Unemployment	Unemployment Rate
0–19	1033007	162052	16%	4938975	915326	19%
20–24	598881	62203	10%	7235240	822894	11%
25–29	648779	50171	8%	7906584	348049	4%
30–34	571944	38836	7%	7332514	133626	2%
35–39	504858	32754	6%	7101579	73823	1%
40 and above	1868195	147512	8%	24617520	151459	1%
Total	5225664	493528	9%	59132412	2445177	4%

Source: ILO Rural Labour Statistics Dataset, 2011

Table A8 Number of holdings by farm size category for selected countries, (latest year available)

Countries	Year	< 2ha		2 ha–0 ha		10–20 ha		> 20 ha		Total
China	1997	189 394 000	98%	3 666 000	1.9%	386 000		0.2%	193 446 000	
India	2000	98 077 000	82%	20 587 000	17%	1 004 000	1%	226 000	0.2%	119 894 000
Indonesia	2003	22 067 048	89%	2 801 627				11,3%	24 868 675	
Ethiopia	2001	9 374 455	87%	1 373 810	13%	10 333		0.1%	10 758 598	
Vietnam	2001	9 690 506	95%	548 947	5%	5 639		0.1%	10 245 092	
Pakistan	2000	3 814 798	58%	2 437 366	37%	260 791	4%	107 104	1.6%	6 620 059
Thailand	2003	2 120 062	37%	3 400 208	59%	243 286	4%	28 963	0.5%	5 792 519
Philippines	2002	3 330 777	68%	1 436 689	30%	88 685	2%	11 616	0.2%	4 867 767
Brazil	1996	983 330	20%	1 419 043	29%	701 417	14%	1 756 075	36%	4 859 865
Egypt	1999	4 353 053	96%	180 491	4%	8 340		0.2%	4 541 884	
Mozambique	2000	2 556 589	83%	476 606	16%	3 939	0.1%	648	0.02%	3 064 715
Colombia	2001	831 269	41%	528 385	26%	225 238	11%	436 999	22%	2 021 891
Morocco	1996	762 033	53%	485 435	34%	125 169	9%	58 996	4.1%	1 431 633
Senegal	2001	163 758	37%	232 882	53%	34 326	8%	6 071	1.4%	437 037

Source: Authors' calculations based on FAO, 2010

Footnotes: Instead of < 2ha, it is < 3 ha for Morocco and Colombia and <2.1 for Egypt; instead of 2 ha–10 ha, it is 2.1 ha–12.6 ha for Egypt; instead of > 20 ha it is > 25 ha for Philippines

Table A9 Agricultural area by farm size category for selected countries, (latest year available)

Countries	Year	< 2ha		2–10 ha		10–20 ha		> 20 ha		Total ha	Mean Farm Size (ha)
Brazil	1996	918 142	0.3%	6 964 053	2%	35 237 833	10%	310 491 218	88%	353 611 246	73.0
India	2000	61 935 000	39%	76 367 000	48%	13 220 000	8%	7 872 000	5%	159 394 000	1.3
Colombia	2001	1 036 343	2.0%	2 941 975	6%	3 127 283	6%	43 599 846	86%	50 705 447	25.0
Pakistan	2000	3 165 066	15%	9 590 507	47%	3 324 310	16%	4 326 891	21%	20 437 546	3.1
Ethiopia	2001	6 676 591	60%	4 217 585	38%	153 072			1%	11 047 248	1.0
Philippines	2002	2 463 026	25%	5 058 392	52%	1 192 188	12%	957 187	10%	9 670 793	2.0
Morocco	1996	1 075 089	12%	2 905 810	33%	1 880 472	22%	2 870 852	33%	8 732 223	0.9
Egypt	1999	2 157 576	58%	1 047 786	28%	545 338			15%	3 750 700	0.8
Senegal	2001	152 011	8%	1 105 310	59%	458 886	24%	161 477	9%	1 877 684	4.3

Source: Authors' calculations based on FAO, 2010

Footnotes:

- 'Agricultural area' is the area reported by the different national censuses collected by FAO, 2010. It corresponds to the areas including arable land, permanent crops and permanent meadows and pastures
- Instead of < 2ha, it is < 3 ha for Morocco and Colombia and <2.1 for Egypt; instead of 2 ha–10 ha, it is 2.1 ha–12.6 ha for Egypt; instead of > 20 ha it is > 25 ha for Philippines

Table A10 Agricultural area (1,000 ha) and agriculture population (1,000) in selected countries

	1980	1990	2000	2008
China				
Agricultural area	434 220	531 398	532 203	522 544
Agriculture population	728384	825056	848357	833906
Agricultural area / Agricultural population	0.6	0.6	0.6	0.6
India				
Agricultural area	180355	181040	182573	179708
Agriculture population	433983	497345	553461	582555
Agricultural area / Agricultural population	0.4	0.4	0.3	0.3
Indonesia				
Agricultural area	38000	45083	44777	48100
Agriculture population	78584	90320	90345	87834
Agricultural area / Agricultural population	0.5	0.5	0.5	0.5
Egypt				
Agricultural area	2445	2648	3291	3542
Agriculture population	25507	24915	24315	23879
Agricultural area / Agricultural population	0.1	0.1	0.1	0.1
Kenya				
Agricultural area	25580	26770	26671	27100
Agriculture population	13364	18636	23718	27764
Agricultural area / Agricultural population	1.9	1.4	1.1	1.0
Senegal				
Agricultural area	8841	8869	8755	9154
Agriculture population	4531	5759	7276	8660
Agricultural area / Agricultural population	2.0	1.5	1.2	1.1
Brazil				
Agricultural area	224278	241608	261406	264500
Agriculture population	43974	34989	27620	22406
Agricultural area / Agricultural population	5.1	6.9	9.5	11.8
Bolivia				
Agricultural area	33562	35455	36999	36819
Agriculture population	2764	3046	3556	3925
Agricultural area / Agricultural population	12.1	11.6	10.4	9.4

Source: FAOSTAT

Table A11 Numbers of holders of agricultural land classified by age groups in selected countries in Africa: 1990 Round of Agricultural Censuses

Countries	Census year	Total number of holders	Number of holders reporting age classified by age groups									Average age of holders (years)
			under 25 years	25 to 34 years	Under 34 years %	35 to 44 years	45 to 54 years	35-54 years %	55 to 64 years	65 years and over	55 and over years %	
Burkina Faso	93	866 031	23 259	128 984	17.6	184 236	197 777	44.0	163 540	168 235	38.4	50
Congo, D. R.	90	4 479 600	380 766	806 328	26.5	<i>1 093 022</i>	<i>1 079 584</i>	48.5	582 348	537 552	25.0	45
Ethiopia	89/92	6 192 670	<i>532 570</i>	<i>1 449 085</i>	32.0	<i>1 548 168</i>	<i>1 176 607</i>	44.0	<i>619 267</i>	866 973	24.0	44
Guinea	89	431 277	23 345	21 374	10.0	21 531	52 567	17.0	22 832	289 628	73.0	64
Guinea Bissau	88	84 221	1 822	11 781	16.0	15 911	15 309	37.0	16 580	22 818	47.0	53
Lesotho	89/90	229 300	800	24 000	11.0	49 800	54 800	46.0	47 800	52 100	43.0	53
Swaziland	93	73 745	<i>1 475</i>	<i>7 375</i>	12.0	<i>16 961</i>	<i>19 911</i>	50.0	<i>14 749</i>	<i>13 274</i>	38.0	51
Tanzania	94/95	3 869 529	156 726	905 021	27.5	908 775	796 263	44.0	589 771	512 973	28.5	46
Uganda	91	1 704 721	<i>170 472</i>	<i>272 755</i>	26.0	<i>340 944</i>	<i>409 133</i>	44.0	<i>318 034</i>	193 383	30.0	46
Zambia	90	518 597	32 717	123 102	30.0	95 237	104 952	38.6	90 967	71 622	31.4	46

Source: FAO 1990 Round of Agricultural Censuses

Footnotes: Data in Italics are estimated (by interpolation) by FAO Statistical Division for those countries using different age groups than those recommended by FAO

Table A12 How will your children mainly obtain land in this village? (2008 data)

	Ethiopia	Ghana	Kenya	Malawi	Mozambique	Nigeria	Tanzania	Uganda	Zambia	Total
They will be allocated land not previously cultivated	1%	10%	0%	5%	40%	23%	19%	4%	41%	16%
They will be allocated family land now under fallow	12%	20%	0%	6%	12%	20%	8%	4%	16%	12%
They will inherit land already under cultivation	71%	47%	94%	77%	29%	44%	17%	58%	12%	51%
They will rent or borrow land	17%	23%	4%	8%	2%	9%	9%	5%	2%	9%
They will purchase land	0%	0%	2%	5%	17%	4%	47%	29%	29%	12%
Do not know, missing	0%	0%	0%	0%	2%	0%	0%	0%	0%	0%
Total number of cases	475	546	300	397	400	432	125	395	426	3496

Source: Afrint, 2011 Results from Question d681 of the Afrint II Micro-Level Household Surveys

The Knowledge Programme

Small producer agency in the globalised market

The Knowledge Programme Small Producer Agency in the Globalised Market aims to map, elicit and integrate knowledge on the dilemmas confronting small-scale producers in global, regional and national markets. The programme works with different actors to bring new voices, concepts and insights into the global debate. It thereby seeks to support the development community, including policy makers, producer organisations and businesses in their search for better informed policies and practices. The programme is lead by the Humanist Institute for Development Cooperation (Hivos) and the International Institute for Environment and Development (IIED), and integrates a global learning network, convened by Mainumby Ñacurutú in Bolivia.

Small-scale farming and youth in an era of rapid rural change

This is the second in a series of papers from the Knowledge Programme. The paper focuses on developing and emerging economy regions of the world, providing an overview of trends in small-scale farming and agrifood markets, demographic changes and trends in employment – particularly that of youth. It reflects on the aspirations of rural youth and identifies some of the drivers and innovations that have engaged youth in agriculture – and which might help to inform and shape the future. It identifies some emerging policy implications that address small-scale farming and youth in an era of rapid change, including knowledge gaps which, if filled, could better inform the debate on the future of small-scale agriculture and on who will be the next generation of farmers.

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